



Yaz Client

Version 18.01 and Later

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Abstract

The `yaz_client` is a freeware Z39.50 (Z39) client, developed by the Index Data company. It lets you check your Z39 server and any Z39 target.

1 How to run `yaz_client`

There are two ways to run `yaz_client`:

- From the UNIX prompt, type **UTIL, N, 3, 4**.

or

- Type `yaz_client` from the command line.

The `yaz_client` prompt `z>` appears.

2 How to check a Z39 target using `yaz_client`

To get help on `yaz_client`, from the `yaz_client` prompt, type `?`:

```
z>?
```

The following list, which provides help on correct syntax, appears:

```
open ('tcp'|'osi')':'[<tset>'/'<host>[':'<port>]
quit
find <query>
delete <setname>
base <base-name>
show <rec#>['+'<#recs>['+'<setname>]]
scan <term>
sort <sortkey> <flag> <sortkey> <flag> ...
sort+ <sortkey> <flag> <sortkey> <flag> ...
authentication <acctstring>
lslb <largeSetLowerBound>
ssub <smallSetUpperBound>
mspn <mediumSetPresentNumber>
status
setnames
cancel
format <recordsyntax>
elements <elementSetName>
close
attributeset <attrset>
querytype <type>
refid <id>
itemorder <item>
update <item>
```

2.1 Key to Commonly Used Commands

open - Opens connection with the target

Syntax: `open tcp:host:port`

Example: 'open tcp:ram34:9919'

quit - Quits `yaz_client`

find - Sends find query to the target

Syntax: find <query>

where <query> is <rpn>

where <rpn > is <complex > or < simple > or <attr> <rpn>

where <complex> is <operator> <rpn> <rpn>

where <operator> is '@and' or '@or' or '@not'

where <simple> is <term> or <set>

where <term> is single word or several double quoted words

where <set> is @set <setname>

where <attr> is @attr <bib-1 attr type> = <bib-1 attr value>.

Examples:

Andersen – search for records with “Andersen”

"Hans Andersen" – search for records with “Hans Andersen”

@attr 1=1 andersen – search for records with “andersen” in personal name
(Use attr = 1)

@attr 1=4 @attr 4=2 duckling - search for records with “duckling” in title
(Use attr = 4); the search is by words (Structure attr = 2)

@and @attr 1=1 andersen @attr 1=4 @attr 4=2 duckling – search for records with “andersen” in personal name (Use attr =1) and “duckling” in title
(Use attr = 4); the search in title is by words (Structure attr = 2)

delete - Deletes set from the target

Syntax: delete <setname>

base - Defines target base for all subsequent operations

Syntax: base <base name>

show - Shows record from the last created result set.

Syntax: show [<record number> + [number of records to show]]

Examples:

show –show next (or first) record from the set

show 1 – show record number 1 from the set

show 3 – show record number 3 from the set

show 3+5 – show 5 records starting from the record number 3 from the set.

scan - Sends scan query to the target

Syntax: scan <query>

The query is as for find. Logical operators are not used for scan.

Example:

@attr 1=1 “andersen” - scan from record with personal name (Use attr = 1)
equal to “andersen”

sort - Sends sort request for last created set

Syntax: sort <sortkey> <flag> <sortkey> <flag> ...

where <sortkey> is <sort attribute> or <sort string>

where <sort attribute> is 1 =<bib-1 Use attr value>

where <sort string> is sort key defined by target

where <flag> is 2 chars –

First char should be **s** (sort case sensitive) or **i**(sort case insensitive)

Second char should be <(ascending) or >(descending)

Examples:

sort 1=4 i< - sort by title (Use attr = 4), case insensitive in ascending order

sort Title s> - sort by title, case sensitive in descending order

authentication - Target authentication string. If required, this should be entered before the open command

Syntax: authentication <authentication string>

setnames -

Disables set naming if it is enabled;

Enables set naming if it is disabled;

In initial state set naming is enabled;

Must be entered (if needed) before **find** command.

format - Defines record format requested from target; should be entered before **show** command;

Syntax: format <record format> -

where <record format> is **usmarc**, **mab**, **sutrs**, **xml** and so on.

elements - defines elements set name for record returned by target.

Syntax: elements <elementSetName>, for example, 'elements F' for full record syntax

close - Close connection with the target

3 Example of working with a Z39 target

Let us assume that `z39_server` is running on `ram34:9919` and that base `USM01` is accessed via this server.

To open a connection with this server, type:

```
Z> open tcp:ram39:9929
```

The response displays:

```
Connecting...Ok.
Sent initrequest.
Connection accepted by target.
ID      : YAZ (id=81)
Name    : GFS / Aleph Server
Version: YAZ 1.6 / ALEPH 525.15.2
```

To perform a Find operation, type:

```
Z> base USM01
Z> find @attr 1=4 history
```

The response displays:

```
Sent searchRequest.
Received SearchResponse.
Search was a success.
Number of hits: 197, setno 1
Records returned: 0
```

There are 197 hits, result set number 1 is created in the target.

To perform a Present operation from this result set, we type:

```
Z> format USMARC
Z> show 3
```

The response displays:

```
001 99089311
003 DLC
005 20000920084421.0
008 991207s2000 nyu b 101 0 eng
010 $a 99089311
020 $a 031223256X (cloth)
040 $a DLC $c DLC $d NhCcYBP
043 $a e-uk---
050 00 $a PN5118 $b .N67 2000
082 00 $a 072/.09/04 $2 21
245 00 $a Northcliffe's legacy : $b aspects of the British popular
press, 1896-1
996 / $c edited by Peter Catterall, Colin Seymour-Ure, Adrian Smith.
260 $a New York, N.Y. : $b St. Martin's Press in association with
Institute o
f Contemporary British History, $c 2000.
300 $a xii, 237 p. ; $c 23 cm.
```

```

490 1 $a Contemporary history in context
500 $a Papers of a conference held in 1996 at the Institute of
Historical Res
earch to mark the centenary of the founding of the Daily mail.
500 $a Issued in association with Institute of Contemporary
British History.
504 $a Includes bibliographical references and index.
600 10 $a Northcliffe, Alfred Harmsworth, $c Viscount, $d 1865-1922
$v Congresse
s.
650 0 $a Press $z Great Britain $x History $y 20th century $v
Congresses.
700 1 $a Catterall, Peter, $d 1961-
700 2 $a Seymour-Ure, Colin, $d 1938-
700 1 $a Smith, Adrian, $d 1952-
710 2 $a Institute of Contemporary British History.
830 0 $a Contemporary history in context series
049 $a BXMM $b 9170056742
980 $a 20020101 $b 6500 $e 5428 $f 480903 $g 1
981 $b YBP-2002

```

We see record #3 from the last result set in USMARC format as defined by the target.

To perform a Present operation for this record in OPAC format type:

```

Z> format OPAC
Z> show 3

```

The following response displays:

```

[USM01]Record type: OPAC
Unknown record representation.
{
  OID: 1 2 840 10003 5 102
  {
    {
      bibliographicRecord {
        OID: 1 2 840 10003 5 10
        bibliographicRecord choice
        OCTETSTRING(len=1488) 30 31 34 38 38 .. 32 1E 1D
      }
      holdingsData {
        holdingsAndCirc {
          localLocation 'Education Library'
          shelvingLocation 'Educ Teaching Center'
          callNumber 'PN5118 .N67 2000'
          copyNumber '1.0'
          volumes {
            {
            }
          }
        }
        circulationData {
          {
            availableNow TRUE
            availableThru 'Sent to binder'
            itemId '9170056742'
            renewable FALSE
            onHold FALSE
          }
        }
      }
    }
  }
}

```

```
}  
  }  
} }
```

To perform a Sort of this set, type:

```
Z> sort Title i<
```

The response displays:

```
Received SortResponse: status=success
```

The set is sorted by Title; and the sort is case-insensitive in ascending order.

To perform a Scan, type:

```
Z> scan @attr 1=4 history
```

The response displays:

```
Received ScanResponse  
20 entries, position=1  
* History (2)  
History and description of the town and parish of Ashton-under-Lyne  
in the  
county of Lancaster, and the village of Dukinfield in the county of  
Chester (2)  
History as an academic discipline (1)  
History of academic libraries (1)  
A history of accounting in the United States / (1)  
History of Africa (1)  
The history of ALEPH Tortures (1)  
History of America (2)  
History of America continues (1)  
A history of American public high schools / (1)  
History of Argentina (1)  
History of Argentina in the 20th century (1)  
History of Atlanta (1)  
History of Austria (1)  
History of Canada (1)  
History of Canadian culture and society (1)  
History of dog and duck food (1)  
History of economic development (1)  
History of England (1)  
History of England in the 12th century(1)
```