



System Librarian's Guide - ADAM

Version 22

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1 General Setup

1.1 Oracle Text

For fulltext indexing of objects (z91), the component ‘Oracle text’, also referred to as *context*, and the Oracle user “ctxsys” are needed.

Normally, ‘Oracle text’ will be installed automatically. If the instance was aborted, ‘Oracle text’ has to be installed later.

The following command will check if ‘Oracle text’ is available on your system:

```
$ORACLE_HOME/ctx/bin/ctxhx
```

Output:

```
/exlibris/app/oracle/product/920/ctx/bin/ctxhx - Converts the input file to plain text or html file.
```

```
Usage: /exlibris/app/oracle/product/920/ctx/bin/ctxhx InputFile OutputFile
      [FallbackCharacterSet
      [OutputCharacterSet
      [H | T
      [Meta | Nometa
      [TimeOut
      [Heuristic | Fixed]]]]]]
```

Where: "InputFile" is the file to be converted to HTML or TEXT.
"OutputFile" is where to place the converted file.
"FallbackCharacterSet" is the character set of InputFile which is assumed to be plain-text when the format is not supported. Default fallback character set is ASCII8.
"OutputCharacterSet" is the character set of OutputFile. Default character set is ISO8859-1.
"H | T" is to define the output format as HTML or plain text. Default output format is HTML.
"Meta | Nometa" is to enable/disable meta data extraction. Default is Nometa.
"TimeOut" is the polling interval in integral seconds to determine whether to terminate by force. Supported range is 0..42949672. Default is 0 to disable time-out.
"Heuristic | Fixed" is the type of time-out. Default is Heuristic.

1.2 Storage Directories for Objects (tab_z403_directory.<lng>)

Every digital object has to be stored in a directory in the file system of the ALEPH server unless you link to an object on a remote server by entering a URL.

This directory must include the following subdirectories:

- View
- Index
- Thumbnail
- Backup

The table tab_z403_directory.<lng> defines the storage directories for objects on the ALEPH server. The table may be placed in the BIB library’s tab directory. If so, it is possible to store the objects in different subdirectories, if more than one BIB library is active on the same ALEPH installation. The table tab_z403_directory.<lng> may also be placed in the directory \$alephe_tab if storing related to a specific BIB library is not needed.

All of the storage directories which are defined in `tab_z403_directory.<lng>` have to be created manually on the server.

The maximum number of files per directory is defined by the parameter *max_no_storage_files* in `$aleph_root/aleph_start` file. The following is an example of how to set this parameter:

```
setenv max_no_storage_files 1000
```

The default value (if the variable is not defined) is 1000.

ADAM automatically creates new sub-directories under the defined storage directory, if the maximum number of files is reached. The directory names are numeric (starting with 1). The first 1000 objects are automatically stored in directory /1. Subsequent objects are stored in directory /2 and so on.

See the following example:

```
! 1          2          3          4
!!!!-!!!!!![...] -!!!!!![...] -!!!!!![...]
ALEPH VIEW      Zentraler Speicher      $aleph_dev/demo_objects/usm01/view
ALEPH INDEX      Index (Allgemein)      $aleph_dev/demo_objects/usm01/index
ALEPH THUMBNAIL Thumbnail (Allgemein) $aleph_dev/demo_objects/usm01/thumbnail
ALEPH BACKUP      Backup (Allgemein)      $aleph_dev/demo_objects/usm01/backup

MAB50 VIEW      Primaerer Speicher      $aleph_dev/demo_objects/mab50/view
MAB50 THUMBNAIL Thumbnails      $aleph_dev/demo_objects/mab50/thumbnail
MAB50 INDEX      Index      $aleph_dev/demo_objects/mab50/index

MEDUC VIEW      MEDUC Speicher      $aleph_dev/demo_objects/mab50/meduc/view
MEDUC THUMBNAIL MEDUC Thumbnails      $aleph_dev/demo_objects/mab50/meduc/thumbnail
MEDUC INDEX      MEDUC Index      $aleph_dev/demo_objects/mab50/meduc/index
```

Key to the table:

- Column 1: 1) Sublibrary code, e.g. MEDUC. Storage directories for objects, which are assigned to a specific sublibrary
 2) Code of the ADM library, e.g. USM50. Storage directories for objects, which are assigned to the ADM library
 ALEPH storage directories for objects where the field “Cat. sublibrary” is empty
- Column 2: Usage type of the object.
 Valid options: INDEX, VIEW, THUMBNAIL, BACKUP *)
- Column 3: Description of the storage directory, appears in the pull down list in the GUI
- Column 4: Pathname to the storage directory

Usage type of objects:

BACKUP: When loading objects with the service adam_02, copies may remain in the specified directory. These objects have the usage type BACKUP.

INDEX: An object was automatically built by ADAM when performing the Indexing function.

VIEW: Usage type of all objects that are displayed in the OPAC.

THUMBNAIL: An object was automatically built by ADAM when performing the Thumbnail function.

1.3 File Types of Objects (tab_z403_extension.<lng>)

The table \$alephe_tab/tab_z403_extension.<lng> includes definitions for file types of objects. Depending on the file extension, some parameters must be determined, e.g. the icon that represents the object in the OPAC or the permission to create thumbnails or to perform a full text indexing of an object.

Example:

1	2	3	4	5	6	7	8	9
asf	asf	f-tn-movie.jpg						
avi	avi	f-tn-movie.jpg						
bmp	bmp	f-tn-image.jpg		Y	100k	convert		
djv	djv	f-tn-image.jpg						
djvu	djvu	f-tn-image.jpg						
doc	doc	f-tn-doc.jpg		Y	100k		gen	
ead	ead	f-tn-text.jpg						
gif	gif	f-tn-image.jpg		Y	100k	convert		
html	html	f-tn-link.jpg						
ip2	ip2	f-tn-image.jpg						
ipg	ipg	f-tn-image.jpg						
jpg	jpg	f-tn-image.jpg		Y	100k	convert		
mid	mid	f-tn-sound.jpg						
mp3	mp3	f-tn-sound.jpg						
mpg	mpg	f-tn-movie.jpg		N				
mpeg	mpeg	f-tn-movie.jpg		N				
pdf	pdf	f-tn-pdf.jpg					gen	
ppt	ppt	f-tn-ppt.gif		Y	100k			
ram	ram	f-tn-sound.jpg						

rtf	rtf	f-tn-doc.jpg		gen
sid	sid	f-tn-image.jpg		
tif	tif	f-tn-image.jpg		
txt	txt	f-tn-text.jpg	N 100k	txt
url	url	f-tn-link.jpg		
wav	wav	f-tn-sound.jpg		
wmv	wmv	f-tn-sound.jpg	N	
xls	xsl	f-tn-xcel.jpg		
xml	xml	f-tn-XML.jpg	Y 100k	
#####		f-tn-unknown.jpg		

Structure of the table:

- Column 1: Object's file extension (max. 5 characters)
- Column 2: File type's description (max. 20 characters)
- Column 3: File name of the icon used in the OPAC. The icons must be located in *\$salephe_root/www_f_<lng>/icon* They will be displayed in the brief list and the full view in the OPAC. The maximum number of icons being displayed in brief list and full view depends on the value of the variable "www_short_max_no_ext_links" in *\$salephe_root/www_server.conf*. If no specific icon is stated, a standard icon will be used, which is defined in the last line of the table (##### in Column 1)
- Column 4: Defines if a new browser window is opened when calling an object. Default value is Y.
- Column 5: Immediate display of the object. Value is Y or N. Defines if an object is immediately displayed in the GUI when the ALEPH browser is in use. This definition depends on the object's size. (see column 6)
- Column 6: Object size (only applies in conjunction with column 5)
Defines from which object size the immediate display in the GUI will be suppressed. The size may be stated in kilobytes (K), megabytes (MB) or gigabytes (GB).
- Column 7: Program that is used for creating thumbnails.
Valid value: convert
If you want to create thumbnails from objects, the value 'convert' must be set in Column 7 for those objects. If this column is left empty, the **Thumbnail** button in the Object List is deactivated.
- Column 8: Program that is used for Fulltext indexing.
Valid value: gen
The entry 'gen' in Column 8 must be set for all objects for which a fulltext indexing should be performed. If this column is left empty, the **Indexing** button in the Object List is deactivated.
- Column 9: Viewer
If you want to use an external viewer for displaying objects, the pathname to the viewer's executable file must be entered here. If this column is left empty, the default plugin of the browser will be used.

1.4 Create Objects (pc_tab_exp_field.<lng>)

The table pc_tab_exp_field.<lng> contains selective lists for fields of the Object Form. This table is located in tab-directory of your ADM library (lib50/tab). The following values must be filled in:

```

!           1           2           3           4
!!!!!!!!!!!!!!!!!!!!!!!!!!!!-----!-!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!-
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!>
OBJECT-USAGE-TYPE      L View              VIEW
OBJECT-USAGE-TYPE      L Thumbnail            THUMBNAIL
OBJECT-USAGE-TYPE      L Indexing Text        INDEX
!*
OBJECT-CHAR-SET        L ISO Latin              iso8859-1
OBJECT-CHAR-SET        L Cyrillic 1251          windows1251
OBJECT-CHAR-SET        L Cyrillic 8859          iso8859-5
OBJECT-CHAR-SET        L Hebrew                iso8859-8
!*
OBJECT-RESOLUTION      L High Resolution        high
OBJECT-RESOLUTION      L Low Resolution         low
OBJECT-RESOLUTION      L Medium Resolution      medium
!*
OBJECT-COPYRIGHT-OWN   L Public                 PUBLIC
OBJECT-COPYRIGHT-OWN   L Local                  LOCAL
!*
OBJECT-COPYRIGHT-TYP   L Registered             REGISTERED
OBJECT-COPYRIGHT-TYP   L Copyrighted            COPYRIGHTED
OBJECT-COPYRIGHT-TYP   L Licensed               LICENSED
OBJECT-COPYRIGHT-TYP   L Public Domain          PUBLIC
OBJECT-COPYRIGHT-TYP   L Contractual            CONTRACT
OBJECT-COPYRIGHT-TYP   L Donated                DONATED
!*
OBJECT-COPY-NOTICE-T   L Free for all           FREE
!*

```

Key to the table:

- Column 1: Internal code for GUI field
- Column 2: ALPHA
Always "L".
- Column 3: Description which is displayed in the dropdown list
- Column 4: Code for the entry in the dropdown list. Only internal codes can be used.

The internal codes represent the following fields:

- **OBJECT-USAGE-TYP**
The entries define the dropdown list for the object's Usage Type. Note that the usage type is connected to system functionality. Valid options are VIEW; THUMBNAIL, and INDEX.
- **OBJECT-CHAR-SET**
The entries define the dropdown list for the field 'Character set' (Technical Data Tab), which is used for full text indexing. Definitions in table ./alephe/unicode/tab_character_conversion_line have to be defined for each character set which is in use. These lines define the required character conversion.

See the following example:

```
iso8859-1      ##### # line_sb2line_utf 8859_1_to_unicode
```

The following character sets are supported by the indexing routines:

- ISO8859-1
- ISO8859-2
- ISO8859-3
- ISO8859-4
- ISO8859-5
- ISO8859-6
- ISO8859-7
- ISO8859-8
- ISO8859-9
- Gb2312
- Big5
- Shiftjis
- Windows1250
- Windows1251
- Windows1252
- Windows1253
- Windows1253
- Windows1254
- Windows1255
- Windows1256
- Windows1257
- Koreanhangul
- Windows874#
- Unicode

- OBJECT-RESOLUTION

The entries are used to define the dropdown list which contains the resolution for image objects in tab “Technical Data”.

- OBJECT-COPYRIGHT-OWNER

This option is used for the dropdown list Copyright Owner in the Copyright tab

- OBJECT-COPYRIGHT-TYP

This option is used for the dropdown list Copyright Type in the Copyright tab.

- OBJECT-COPY-NOTICE-T

This option defines the dropdown list for Copyright Notice type in the Copyright tab. Note that the code in column 4 of the table corresponds with the suffix to the file `media-permission` in `$alephe_root/www_f_<lng>`.

1.5 ADAM-SUPPORT Setup in tab100

The ADAM-SUPPORT switch of tab100 is used to define whether ADAM objects should be replicated as physical digital objects or not.

Relevant values: Y (default) or N.

N – If a local system does not have a full ADAM license, it is recommended to set ADAM-SUPPORT=N in order to receive the links to the objects as part of the bibliographic record instead of physical digital objects.

Y – Local libraries that have a full ADAM license should set: ADAM-SUPPORT=Y (default value).

The ADAM-SUPPORT switch can be defined locally per library (for example, at `./xxx50/tab/tab100`) or on a global level at `./alephe/tab/tab100`.

2 Displaying Objects in the ALEPH Client

2.1 Display in the Record Manager

Objects are linked to a record in the bibliographic library (lib01). In the Record Manager (lower part of the left frame) of the Cataloging module, the nodes for each object are displayed. The display of these nodes is similar to the display of items. The display of objects may be under the BIB record or under ADM record:

Display related to the BIB record	Display related to the ADM record
<ul style="list-style-type: none"> [-] MAB01 - 1238 <ul style="list-style-type: none"> [-] OBJECTS <ul style="list-style-type: none"> [-] jpg - Cover [-] MAB60 <ul style="list-style-type: none"> [+] HOL - MEDUC / ML / 000000044 [+] MAB50 - 1238 [+] MAB50 - 2562 	<ul style="list-style-type: none"> [-] MAB01 - 1238 <ul style="list-style-type: none"> [-] MAB60 <ul style="list-style-type: none"> [+] HOL - MEDUC / ML / 000000044 [-] MAB50 - 1238 <ul style="list-style-type: none"> [+] ITEMS [-] OBJECTS <ul style="list-style-type: none"> [-] jpg - Cover [+] MAB50 - 2562

This is defined by the variable `item_object_tree_style` in the file `$alephe_root/pc_server_defaults`. The following values are valid:

```
setenv item_object_tree_style 1
```

The objects displayed are related to the ADM record.

```
setenv item_object_tree_style 2
```

The objects displayed are related to the ADM record, if the stated sublibrary in the field 'Cat. Sublibrary' is assigned to the ADM library or if the field is left empty.

```
setenv item_object_tree_style 3
```

The objects displayed are related to bibliographic record (option 4), and to the ADM record (option 2).

```
setenv item_object_tree_style 4
```

The objects are displayed related to the BIB record.

2.2 Display of the Objects List

The display of the Objects List is defined in `pc_tab_col.<lng>`, which is located in the `tab-` directory of your BIB library (`lib01`).

Filename/URL	Title	Type	Size	Show in OPAC
\$aleph_dev/demo_objects/usm01/view/1/cayenne1_front.jpg	Cover	VIEW	20 KB	Y
\$aleph_dev/demo_objects/usm01/thumbnail/1/cayenne1_front_tn.jpg	Cover	THUMBNAIL	2 KB	

New

Duplicate

Delete

Thumbnail

Indexing

! 1 2 3 4 5 6 7 8 9 10

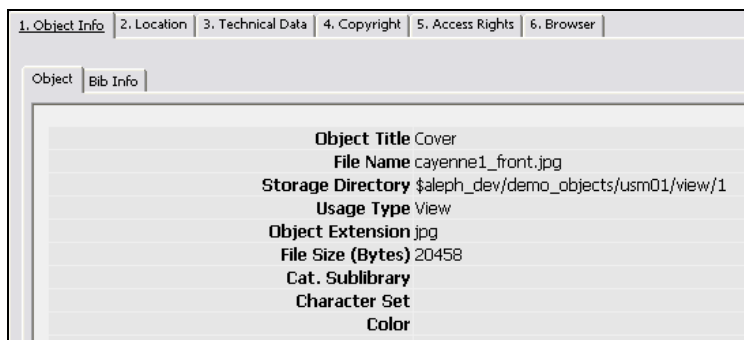
```

!!!!!!!!!!!!!!!!!!!!!!!!!!!!-!!-!!!!!!!!!!!!!!!!!!!!!!!!!!!!-!!-!!!-!!-!!!-!!-!!!-!!!-!!! [...]
PC_OBJECT_LIST      L Dateiname/URL      01 035 01 C01
PC_OBJECT_LIST      L Titel              02 035 01 C01
PC_OBJECT_LIST      L Typ                03 010 01 C01
PC_OBJECT_LIST      L Größe              04 010 01 C01
PC_OBJECT_LIST      L Anzeigen im OPAC  05 010 01 C01

```

2.3 Display of Object Details

Some windows in the GUI are generated from HTML files. Those HTML files are located in the directory `pc_display_<lng>` in the ADM library. The display of the object details is defined by the file “object-expand“.



3 Displaying Objects in the OPAC

3.1 apache_media

For displaying objects in the OPAC, the directory `apache_media` must be created. In addition, you have to define the variable “`setenv APACHE_MEDIA`” in file `$alephe_root/aleph_start`. This directory contains temporary files and should be cleared regularly, for example, by using [Util X/6].

aleph_start

```
setenv APACHE_MEDIA      ${ALEPH_MOUNT}/a${ALEPH_VERSION}_${ALEPH_COPY}/apache_media
```

Create a softlink (apache)

Create a softlink in the directory `$httpd_root/htdocs/exlibris/aleph/a18_1` that links to the directory ‘`apache_media`’. The command is:

```
ln -s <target directory as defined in aleph_start> <source directory>
```

See the following example:

```
surprise-a18(1) >>pwd
/exlibris/aleph/a18_1/alephe/apache/htdocs/exlibris/aleph/a18_1
surprise-a18(1) >>ls -l
total 6
drwxrwxr-x   6 aleph   exlibris   512 Nov 20 02:07 aleph/
lrwxrwxrwx   1 aleph   exlibris   34 Nov 20 02:07 apache_media ->
/exlibris/aleph/a18_1/apache_media/
lrwxrwxrwx   1 aleph   exlibris   25 Nov 20 02:07 tmp ->
/exlibris/aleph/a18_1/tmp/
```

3.2 tab_buf_z403 and tab_expand

For displaying objects in the OPAC, define the following line in table `./[BIB_library]/tab/tab_buf_z403`.

```
!   1                               2                               3
!!!!!!!!!!!!-!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!-!!!!!!!!!!!!!!!!!!!!>
##### get_buf_z403_media                               VIEW
```

In addition, further entries in this table are necessary for displaying the fields 655 (electronic address, MAB) and 856 etc. (MARC) which contain URLs.

For MAB environment:

```
##### get_buf_z403_bib                               655#1,,,D,
```

For USM environment:

```
##### get_buf_z403_bib                               856##,,Y,*Y,
##### get_buf_z403_bib                               856##,,Y,-,U,
##### get_buf_z403_bib                               505##,,u,*U,
##### get_buf_z403_bib                               520##,,u,*D,
```

```
##### get_buf_z403_bib      530##,,u,* ,D,
##### get_buf_z403_bib      545##,,u,* ,D,
##### get_buf_z403_bib      552##,,u,* ,D,
##### get_buf_z403_bib      555##,,u,* ,D,
##### get_buf_z403_bib      583##,,u,* ,D,
```

In a MAB environment, the table `./[BIB_library]/tab/tab_expand` must contain the following definitions for displaying objects:

```
BUF-Z403    expand_doc_mab
```

3.3 Brief list OPAC (`www_tab_short.<lng>`)

Two new columns must be defined through `./[BIB_library]/tab/www_tab_short.<lng>` for displaying thumbnails and icons for objects in the brief list of the OPAC.

```
! 2 3 4 5 6 7 8 9 10 11 12 13
!-!-!!!!!!-[...] -!!![...] -!!-!!-!!!!!!-!!-!-!!!!!!-!!-!-!!!!!!-!!!!!!-[...]
[...]
7 L Photo          00 00 0040 S          ## TN
8 L Media          00 00 0040 S          ## MED
```

Note: It might be necessary to activate the additional columns through the files `short-a-head` and `short-a-body` in `$alephe_root/www_f_<lng>`.

3.4 Full View in the OPAC (`edit_doc_999.<lng>`)

The table `./[BIB_library]/tab/edit_doc_999.<lng>` must contain the following line for displaying objects in the Full view:

```
!
!1 2 3 4 5 6 7 8 9 0 11 2 13 4 15 16
!!-!!!!!!-!-!!!!!!-!!-!!-!!!!!!-!!-!-!!!!!!-!!-!-!!!!!!-!!-!-!!-!!
## MED##          D LDigital Object          Y M          E
```

3.5 Extended Object Information (`tab_z403_info.<lng>`)

In the Full view of a bibliographic record, each object which is linked to the BIB is displayed with an icon and the title of the object. Basic information will be displayed if the icon is highlighted with the mouse.

Full View of Record

Choose format: [Standard format](#) [Catalog card](#) [Name tags](#) [MARC tags](#)

Record 2 out of 2

	1.Person	● Rowling, J. K.
	Title proper	● Harry Potter and the Sorcerer's Stone (Book 1)
	1.Publisher	● Scholastic Trade
	Date of publ.	1999
	ISBN	0590353403
	Digital Object	Front Cover
		Amazon Link
		Front Cover
		Front Cover
		Harry Potter and the Sorcerer's Stone (Book 1)
	Amazon-Link	

Choose format: [Standard format](#) [Catalog card](#) [Citation](#) [Name tags](#) [MARC tags](#)

The table \$alephe_tab/tab_z403_info.<lng> determines which information from the object's metadata is displayed.

See the following example:

```
!      1                      2                      3
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!-!!!!!!!!!!!!-!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!![...]
z403-title                      Title:^
z403-f-filename                  Filename:^
z403-object-extension            File Extension:^
z403-original-filename           Original Filename:^
z403-object-size                 SIZE          Object Size:^
z403-note-1                      File type:^
z403-update-date                 DATE          Last Update:^
```

Key to the table:

- Column 1: Field of z403 record that shall be displayed
- Column 2: Object type.
This column defines whether the type of the object is to be converted into a formatted display.
Values:
DATE – for date fields
SIZE – for the object size
- Column 3: Prefix for the display.

3.6 Options for Displaying Thumbnails (tab100)

The parameter THUMBNAİL-LINK defines whether the thumbnail can be used as a link for displaying the object in the Full view. It is set in ./[BIB_library]/tab/tab100 located in the tab-directory of your BIB library (lib01). Valid values are 1 or 2 (default: 1).

THUMBNAİL-LINK=1

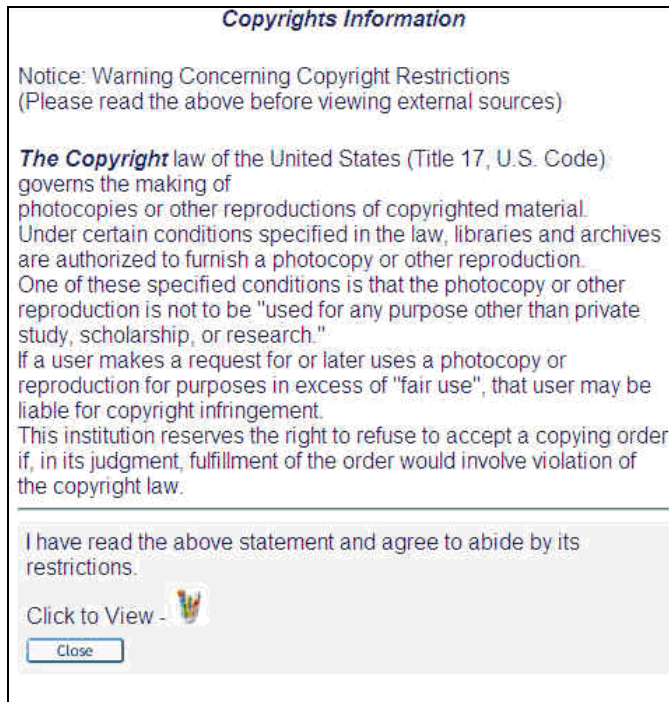
If a thumbnail is linked to an object, the object will be displayed by clicking on the thumbnail. If no object is linked, the object will be displayed in the Full view.

THUMBNAIL-LINK=2

Thumbnails cannot be used for displaying objects.

4 Copyright Notes in OPAC

You may determine if a copyright window will be displayed before users can access objects.



The related HTML file is \$alephe_root/www_f_<lng>/media-permission.

You may design different pages for Copyright Notices by copying the file “media-permission” and adding specific suffixes, e. g. media-permission-**free**.

The field **Copyright Notice Type** in the GUI (Copyright Tab) defines which notice will be displayed. The field is connected to the table ./[ADM_library]/tab/pc_tab_exp_field.<lng>. The internal code is “OBJECT-COPY-NOTICE-T”:

!	1	2	3	4
!!!!!!!!!!!!!!!!!!!!!!!!!!!!	-----!	!!!!!!!!!!!!!!!!!!!!!!!!!!!!	!!!!!!!!!!!!!!!!!!!!!!!!!!!!	[...] - !!!!!!!!!!!!!!!!!!!!! [..]
OBJECT-COPY-NOTICE-T	L Free			FREE

The entry in Column 4 must be identical with the suffix of the file “media-permission”.

6 Services

Detailed instructions how to run these services can be found in the GUI online help.

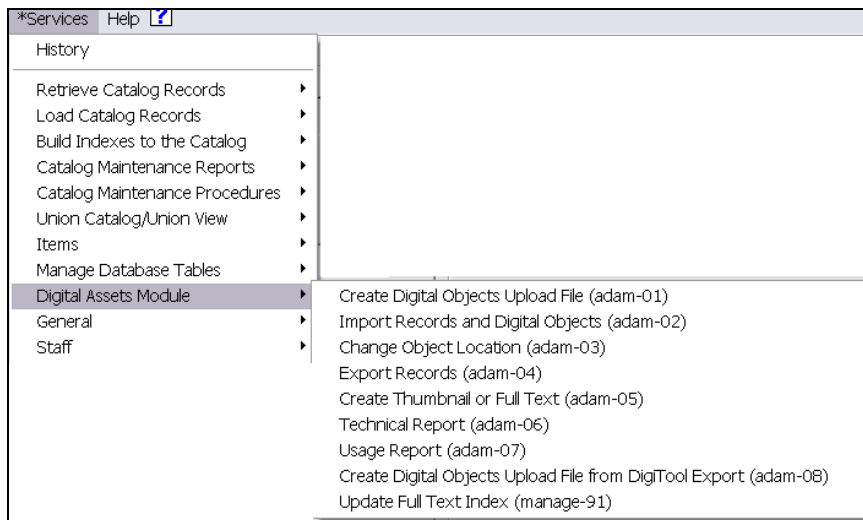
6.1 Services for Import and Export

ALEPH offers batch-services to import and export digital objects and their corresponding metadata. While descriptive metadata (bibliographic) is stored as part of the bibliographic record (z00), the technical metadata is stored in its own Oracle table, z403.

Both import and export are based on XML-Files that contain specific sections for descriptive metadata and technical metadata.

To upload objects into the system, it is usually necessary to run two services (adam-01 and adam-02). Both are part of the services menu in the Cataloging module.

- adam-01: Create Digital Objects Upload File
Accumulates descriptive and technical metadata into XML-File based on template.
- adam-02: Import records and Digital Objects
Loads the XML-File, which has been created by using adam-01, into the database.



6.1.1 Create Digital Objects Upload File (adam-01)

This service is used to create an XML-file which is required to upload files into the system that do not have descriptive metadata (bibliographic records) or technical metadata (z403). The XML-File created by this service contains descriptive and technical metadata generated by using a template (z403_template.xml) that may be edited by the user.

The XML-file created by this service may be taken to load objects and metadata into the system using service adam-02. An example of an XML template that can be edited by the user can be found in `./[BIB_library]/tab`.

The XML-File contains different sections for descriptive (`<record>`) and technical metadata (`<z403>`).

The following is an example for the XML-file

```
<?xml version="1.0" encoding="UTF-8"?>
<file>
<record xmlns="http://www.ddb.de/professionell/mabxml/mabxml-1.xsd">
<leader>00798nM2.01200024|||||h</leader>
  <datafield tag="100" ind1=" ">
    <subfield code="a">Verfasser</subfield>
  </datafield>
  <datafield tag="331" ind1=" ">
    <subfield code="a">Titel</subfield>
  </datafield>
</record>

<z403>
  <z403-doc-number></z403-doc-number>
  <z403-sequence></z403-sequence>
  <z403-derived-from-sequence></z403-derived-from-sequence>
  <z403-title></z403-title>
  <z403-f-directory></z403-f-directory>
  <z403-f-filename></z403-f-filename>
  <z403-original-file-name></z403-original-file-name>
  <z403-object-extension></z403-object-extension>
  <z403-object-size></z403-object-size>
  <z403-u-path></z403-u-path>
  <z403-usage-type>VIEW</z403-usage-type>
[...]
```

As a result of service adam-01, another XML file is generated that contains the descriptive and technical metadata and a relative path to the digital objects. This XML file has the same name as the directory it is in plus the file extension “xml”. For example, if the directory that contains the objects and the template is named createxml, the XML result of adam-01 will be createxml.xml. It can be used for the actual upload with the adam-02 service.

Note that the XML file will contain the digital object’s file name as the title if no explicit title is specified in the <record>section of the template.

The standard is that per each object one descriptive record will be created. Uploading multiple objects with just one descriptive record can be done by editing the XML file. Limit the <record> section to only one appearance within the XML file by deleting further <record>sectors.

6.1.2 Import Records and Digital Objects (adam-02)

The screenshot shows a web-based interface titled "Import Records and Digital Objects (adam-02) - MAB01". The interface is organized into several sections. On the left, there are input fields for "Input Directory", "Report File Name", and "Output File for Logging System Numbers", each with a file selection icon. Below these are three sections of radio buttons: "Create Backup" (Yes/No), "Create Thumbnail" (Yes/No), and "Create Index" (Yes/No). Further down are two sections of radio buttons: "* No. of Catalogers Currently Working" (Multi-user/Single user) and "* Fix Routine" (None). Below these are two dropdown menus: "* Character Conversion" (None) and "Cataloger Name". There are also two empty input fields for "Cataloger Level". At the bottom left, there are fields for "Runtime" (Today), "At: [] O'clock:", and "Library: MAB01". On the right side, there are four buttons: "Submit", "View History", "Cancel", and "Help". Below these buttons are two checkboxes: "Add to History" and "Print To ADM Lib".

This service takes the XML file generated with adam-02 or any other XML file with appropriate format and content and runs the upload into the system. This service creates records in z00 (bibliographic) and z403 (technical metadata) according to the definitions in the XML file.

Note that the XML file to be loaded is required to have the same name of the directory it is in plus the file extension “XML”, otherwise it will not be loaded.

It is possible to upload digital objects to existing bibliographic records without changing the descriptive metadata (bibliographic). For this purpose, edit the XML file generated with

p_adam_01 or delivered in an appropriate format and leave all field tags in <record> sectorempty and add the following line to the <record>sector in the template.

```
<?xml version="1.0" encoding="UTF-8"?>
<file>
<record xmlns="http://www.ddb.de/professionell/mabxml/mabxml-1.xsd">
  <controlfield tag="SYS">NNNNNNNNN</controlfield>
</record>
```

NNNNNNNNN is a variable for the record's system number. For example
<controlfield tag="SYS">000050018</controlfield>
will upload objects to bibliographic record with system no. 000050018.

Note that if the system-number does not exist in the catalog, no object will be uploaded.

6.1.3 Export Records (adam-04)

This service exports Z00 (descriptive) and Z403 (technical metadata) Oracle records in the defined XML format which is similar to the XML-format that is used for import. In addition, the service allows exporting not only the metadata but also the objects itself.

You can limit this service on a range of records contained in an input file created by service p-ret-01. Note that the output directory will automatically be created as subdirectory to the library's export directory.

6.2 Other Services

6.2.1 Change Object Location (adam-03)

Digital objects are stored in a defined storage directory on the server. If you want to move objects from one directory to another directory when, for example, adding another disk to the server, you can use this batch server to transfer the objects to a new destination directory.

Enter the source directory that contains the objects that should be transferred, the destination directory that is designed to be the new storage directory for the objects, and the library on which you wish to run the service.

6.2.2 Create Thumbnail or Full Text (adam-05)

Thumbnails for image objects and full text for text objects can either be created by using the functions in the objects lists or by using this service. Especially when working with a huge amount of new records, it may be reasonable to create thumbnail and full text with the batch service instead of updating the objects one by one.

To run this service you can define a range of records or use an input file that may be created by ret-01.

6.2.3 Technical Report (adam-06)

This batch service is used to create a statistical report. It counts all Z403 records and prints a summary.

The technical report includes the following information:

- Total number of objects
- Number of objects per usage type
- Number of objects per ADM
- Total Storage
- Storage per directory
- Storage per extension

6.2.4 Usage Report (adam-07)

This service is designed for monitoring of user accesses. It generates a detailed breakdown of accesses sorted by various criteria. You can limit this report on a range of date.

The screenshot shows a web interface titled "Usage Report (adam-07) - MAB01". It features several input fields and controls:

- Report File Name:** A text input field with a file icon on the right.
- * Date (From):** A date input field containing "11/09/2006".
- * Date (To):** A date input field containing "11/10/2006".
- Sort Field 1:** A dropdown menu with "User ID" selected.
- Sort Field 2:** A dropdown menu with "Object" selected.
- Report Format:** A dropdown menu with "User ID | Object | Doc No. | Title | Date | Time" selected.
- Runtime:** A dropdown menu with "Today" selected.
- At:** A time input field with "O'clock:" next to it.
- Library:** A dropdown menu with "MAB01" selected.
- Buttons:** "Submit", "View History", "Cancel", and "Help".
- Checkboxes:** "Add to History" (checked) and "Print To ADM Lib" (checked).

6.2.5 Create Digital Objects Upload File from DigiTool Export (adam-08)

This service can be used to convert exported DigiTool data (digital entities) into a format which can be handled by adam-02 service. The objects and XML files have to be transferred to the ADAM import directory in order to be available for adam-08. It is only possible to convert data of usage type "VIEW".

The screenshot shows a web interface titled "Create Digital Objects Upload File from DigiTool Export (adam-08) - ...". It features several input fields and controls:

- * Input Directory:** A text input field with a file icon on the right.
- Check relations:** Radio buttons for "No" (selected) and "Yes".
- Report File Name:** A text input field with a file icon on the right.
- Runtime:** A dropdown menu with "Today" selected.
- At:** A time input field with "O'clock:" next to it.
- Library:** A dropdown menu with "MAB01" selected.
- Buttons:** "Submit", "View History", "Cancel", and "Help".
- Checkboxes:** "Add to History" (checked) and "Print To ADM Lib" (checked).

6.2.6 Retrieval of ADAM Records (Z403) (adam-10)

This service enables you to retrieve z403 records based on contents of specific z403 fields. You can also retrieve records which have no digital objects linked or duplicate z403 records. The service produces an output file which contains Z403-REC-KEYs. This file may be used as input file for service p_adam_11 and also as an additional filter for a new run of p_adam_10 himself.

The table pc_tab_exp_field.<lng> contains selective lists for fields of the service. The following values can be user-defined:

```
!!
!! For P-ADAM-10-SORT you can use (= Z403-.....)
!! REC-KEY, F-FILIE-NAME, OPEN-DATE, UPDATE-DATE, EXPIRY-DATE
!! and all values of COL.4 of P-ADAM-10-FIELD
!! in any combinations to define a set of sort-keys
!!
P-ADAM-10-SORT          L Record Key                      REC-KEY
P-ADAM-10-SORT          L Storage directory | File Name      F-DIRECTORY|F-
FILENAME
P-ADAM-10-SORT          L Cataloger | Usage type | Object title  CATALOGER|USAGE-
TYPE|TITLE

P-ADAM-10-USAGE         L VIEW                                VIEW
P-ADAM-10-USAGE         L INDEX                                INDEX
```

P-ADAM-10-USAGE	L THUMBNAIL	THUMBNAIL
P-ADAM-10-FIELD	L Object title	TITLE
P-ADAM-10-FIELD	L Storage directory	F-DIRECTORY
P-ADAM-10-FIELD	L Object extension	OBJECT-EXTENSION
P-ADAM-10-FIELD	L URL	U-PATH
P-ADAM-10-FIELD	L Usage type	USAGE-TYPE
P-ADAM-10-FIELD	L Cat. Sublibrary	SUB-LIBRARY
P-ADAM-10-FIELD	L Note 1	NOTE-1
P-ADAM-10-FIELD	L Note 2	NOTE-2
P-ADAM-10-FIELD	L Note 3	NOTE-3
P-ADAM-10-FIELD	L Note 4	NOTE-4
P-ADAM-10-FIELD	L Note 5	NOTE-5
P-ADAM-10-FIELD	L Cataloger	CATALOGER
P-ADAM-10-FIELD	L Character Set	CHARACTER-SET
P-ADAM-10-FIELD	L Guest	GUEST
P-ADAM-10-FIELD	L Copyright type	COPYRIGHT-TYPE
P-ADAM-10-FIELD	L DigiTool PID	PID

Key to the table:

- Column 1: Internal field code
- Column 2: ALPHA
Always "L".
- Column 3: Description which is displayed as value in the dropdown list
- Column 4: Code for the entry in the dropdown list. Only internal codes can be used!

The several internal codes represent the following fields:

P-ADAM-10-SORT

The entries define the dropdown list for the sort type



P-ADAM-10-USAGE

The entries define the dropdown list for the different object types.



P-ADAM-10-FIELD

The entries define the dropdown list for the different fields.



6.2.7 Deletion of ADAM records (Z403) (adam-11)

This service enables you to delete z403 records and their corresponding digital objects that are stored in the local file system. If the input file contains z403_rec_keys from records that have z403_usage_type=VIEW, the corresponding thumbnails and index files will be also deleted. The input file can be generated with p-adam-10.

6.2.8 Update Full Text Index (manage-91)

This service updates the Full Text Index of the database. This procedure locks the ALEPH system and should only be run when the library is closed.

There are two options on how to run this service:

- **Rebuild entire Full Text index** - rebuilds the entire Full Text index, deleting and rebuilding the tables.
- **Update Full Text index** - updates the Full Text index without deleting the tables.

7 Setup of Additional Oracle Tables

For managing digital objects in ALEPH, three additional Oracle tables have to be set up. The tables are called **z403**, **z91** and **z56**.

7.1 Z403

The technical metadata of the digital objects are handled by the z403 table. The z403 is created in the BIB library.

The following is the structure of the z403 table.

Name	Null?	Type
Z403_REC_KEY	NOT NULL	CHAR(15)
Z403_DERIVED_FROM_SEQUENCE		NUMBER(6)
Z403_TITLE		VARCHAR2(500)
Z403_F_DIRECTORY		VARCHAR2(100)
Z403_F_FILENAME		VARCHAR2(100)
Z403_ORIGINAL_FILE_NAME		VARCHAR2(200)
Z403_OBJECT_EXTENSION		CHAR(5)
Z403_OBJECT_SIZE		NUMBER(9)
Z403_U_PATH		VARCHAR2(2000)
Z403_USAGE_TYPE		VARCHAR2(20)
Z403_SUB_LIBRARY		CHAR(5)
Z403_NOTE_1		VARCHAR2(500)
Z403_NOTE_2		VARCHAR2(500)
Z403_NOTE_3		VARCHAR2(500)
Z403_NOTE_4		VARCHAR2(2000)
Z403_NOTE_5		VARCHAR2(2000)
Z403_OPEN_DATE		NUMBER(8)
Z403_UPDATE_DATE		NUMBER(8)
Z403_CATALOGER		CHAR(10)
Z403_CHARACTER_SET		VARCHAR2(100)
Z403_COLOR_SETTING		VARCHAR2(100)
Z403_RESOLUTION		VARCHAR2(100)
Z403_DIMENSIONS		VARCHAR2(100)
Z403_COMPRESSION_RATIO		VARCHAR2(100)
Z403_CREATION_DATE		NUMBER(8)
Z403_CREATION_HARDWARE		VARCHAR2(100)
Z403_CREATION_SOFTWARE		VARCHAR2(100)
Z403_COPYRIGHT_CONTACT		VARCHAR2(20)
Z403_COPYRIGHT_OWNER		VARCHAR2(100)
Z403_COPYRIGHT_TYPE		VARCHAR2(100)
Z403_COPYRIGHT_NOTE		VARCHAR2(2000)
Z403_COPYRIGHT_NOTICE		CHAR(1)
Z403_COPYRIGHT_NOTICE_TYPE		CHAR(10)
Z403_DISPLAY_LINK		CHAR(1)
Z403_DISPLAY_CODE		CHAR(5)
Z403_EXPIRY_DATE		NUMBER(8)
Z403_GUEST		CHAR(1)
Z403_IP_ADDRESS		VARCHAR2(200)
Z403_COURSE		VARCHAR2(200)
Z403_USER_STATUS		VARCHAR2(50)
Z403_RESTRICT_SUB_LIBRARY		CHAR(5)
Z403_NO_OF_COPIES		NUMBER(3)
Z403_VIEW_TIME		NUMBER(3)
Z403_ITEM_LIBRARY		CHAR(5)
Z403_ITEM_DOC_NUMBER		NUMBER(9)
Z403_ITEM_SEQUENCE		NUMBER(6)
Z403_ENUMERATION_A		VARCHAR2(20)
Z403_ENUMERATION_B		VARCHAR2(20)
Z403_ENUMERATION_C		VARCHAR2(20)
Z403_CHRONOLOGICAL_I		VARCHAR2(20)

7.2 Z91

The z91 table is also created in the BIB library, as well as in all other bases where the indexing process UE-01 is running. This table contains the indices of the fulltext indexing of text-based objects like MS Word or PDF files.

Name	Null?	Type
Z91_REC_KEY	NOT NULL	CHAR (9)
Z91_FLAG		CHAR (1)
Z91_FILE_NAME		VARCHAR2 (256)

7.3 Z56

The z56 table is created in the vir01 library and limits access for the object by allowing only a certain number of simultaneous accesses of digital objects in the OPAC.

If an object is opened in the OPAC, a session will be registered and any further session will be compared to the entry in the field, z403_NO_OF_COPIES. If the defined limit is exceeded, the patron cannot open the object. A session will be automatically terminated after 10 min., if it is not terminated by the patron before that.

Name	Null?	Type
Z56_REC_KEY	NOT NULL	CHAR (30)
Z56_SESSION_ID		CHAR (50)
Z56_TIME		CHAR (10)
Z56_CLIENT_ADDRESS		VARCHAR2 (20)
Z56_CLIENT_TYPE		CHAR (1)

8 ADAM scan jobs

Note:

Using the Scan Interface is subject to purchasing a special license.

The following configurations are required in order to implement the ADAM Scan Jobs functionality:

- tab100

To activate the ALEPH Scan Interface, add the following parameter to the tab100 table of the BIB library:

CREATE-SCAN-JOB=Y

- pc_tab_exp_field.lng

The selection menus for scan parameters have to be added to the pc_tab_exp_field.lng table of the BIB library. For example:

```
!      1                      2  3                      4
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!-----!-!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!-!!!!!!!!!!!!!!!!!!!!
OBJECT-RESOLUTION      L High Resolution      high
```

OBJECT-RESOLUTION	L Low Resolution	low
OBJECT-RESOLUTION	L Medium Resolution	medium
OBJECT-TYPE	L Table of Contents	toc
OBJECT-TYPE	L Cover	cov
OBJECT-COLOUR	L Black & White (Text)	bw
SCAN-JOB-STATUS	L New	NEW

- edit_doc_999.lng

To display the tag "SCJ" in the record's full view, a definition for SCJ tag has to be added to the edit_doc_999.lng table of the BIB library. For example:

```
## SCJ          D LScan Job      Y   E
```

- pc_display_lng/scan-job-expand

Scan Job Details are displayed in a separate window which can be opened from the Search Tab's Full Record display, by double-clicking the tag SCJ. The display is based on XML format. Definitions are in the form "scan-job-expand".

- tab_expand

Information about the scan job must not be provided in internal format, but rather in external format, for example to replace the codes of the sublibrary into normal text. The new expand routine "expand_doc_bib_scj" must be used to create an external field (e.g. 076) which contains the following subfields:

```
$$a      Owner of the scan job (normal text)
$$b      Order Number
$$c      Object type
$$d      Color
$$e      Resolution
```

The "expand_doc_bib_scj" routine must be defined in the tab_expand table of the BIB library, for expand menu "WWW-X". The parameter CODE= can be used to define the external field which will contain the scan job details. For example:

```
! 1          2          3
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
WWW-X      expand_doc_bib_scj          CODE=076
```

6. Using the Scan Interface is subject to the following staff permission:

Object Control\Create Scan Job

9 Create Thumbnails

Thumbnails are created in the GUI by the ImageMagick software (which is OpenSource). This software is included in the Aleph Installation Kit.