DDM to DOCOVA Migration Process

DOCOVA Document Management System

DLI.tools Inc.
Last Updated: September 17, 2011

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Introduction:

This guide is designed to provide you with a guide to performing a Domino.doc (DDM) to DOCOVA migration.

To start let's define some key terms:

> **Domino.doc**, **Dom.doc**, and **DDM**, are all terms for the Domino Document Manager product from IBM/Lotus.
>
> **DOCOVA** and **DOCOVA Document Manager** are terms for the ECM (Enterprise Content Management) system from DLI.tools
>
> **DOCOVA Migration Manager** and **Migration Manager** are terms for the DOCOVA Migration Manager utility from DLI.tools

DDM and DOCOVA are both products that operate within the IBM/Lotus Domino environment. As such a migration from DDM to DOCOVA is a relatively seamless process.

Assumptions:
This guide assumes a familiarity with the DOCOVA system. Familiarity with DDM is an asset but not required. It is also assumed that base installation and configuration of DOCOVA has been completed.

1. Requirements

A DDM to DOCOVA migration requires the following items.

- ☐ Lotus Notes 7.x or 8.x client workstation within local network of server hosting DDM environment and DOCOVA environment (migration workstation)
- ☐ Physical or VPN access to the Lotus Notes client workstation (migration workstation)
- ☐ Lotus Notes user ID with Manager rights and full visibility to the DDM and DOCOVA environments
- ☐ Free storage on the DOCOVA server equivalent to the DDM data being migrated
- ☐ Free storage on the client workstation (migration workstation) being used for migration equivalent to the DDM data being migrated
- ☐ DDM API software installed on the migration workstation

2. Identification of Data to Migrate

The first step in a DDM migration is to identify the DDM data that will be migrated. In some cases existing DDM data may be retired rather than migrated, or alternately the migration may be staged in such a way that only a segment of the DDM data will be migrated at a time.

DDM data is structured in Libraries, File Rooms, and File Cabinets.

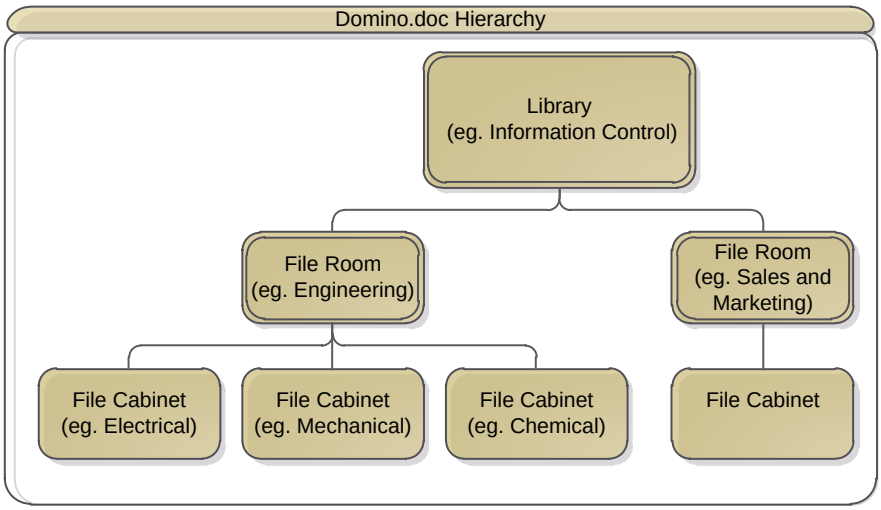


Figure: DDM Structure

Review with the client which Libraries, File Rooms and File Cabinets should be targeted for migration. This list will act as the basis for the migration process to follow.

3. Analyse Existing DDM Environment

The DDM Analyser tool from Time Technology LLC environment is used to perform an analysis of the existing DDM environment for the elements targeted for migration.

3.1 Analyser Installation

Deploy the TTL_DDM_Analyser_V4.ntf template (or later version number if a later release than V4 is available) provided in the file set included with this guide. The analyser can be run from either a local machine or on a server.

Sign the template with an appropriate ID. Typically an administrator id.

Create a database from this template.

The user who runs the IIUI DDM Migrator will need full access to the Dom.doc environment (Member of the DDM Site Administrators group and the Library Administrators group).

If exporting to Excel then Excel needs to be present too on the client machine of the user who runs the analysis.

If links are to be followed in the audit log then it is advisable to have the dom.doc desktop enabler installed on the users' client machine.

The Analyser defaults to Demo / Limited mode which restricts analysis to 3 Cabinets, 3 Binders or 100 Documents (the analysis stops once any of these limits are reached). To enable full analysis mode contact DLI.tools to obtain a license key (DLI.tools will co-ordinate obtaining a license key for DDM Analyzer from Time Technology LLC).

3.1 Configure DDM Analyser

Before running an analysis it is necessary to configure the DDM Analyser tool. The following are the basic steps required to configure the Analyzer. Additional documentation and information on more advanced reporting options are available within the DDM Analyser tool by selecting Help, Using Database.

Open the DDM Analyzer database and select the Analyse button on the main menu. This will open a configuration section in which to configure the following options.

Analysis Output Filepath:
Enter the filepath where the analysis results will be placed on the local machine where the Notes Client is running. (eg. C:\TEMP\DDM)

Analysis Output Filename:
Enter the filename to be used for the analysis results. Eg. "Analysis". The run date and time will be added to the name specified here so the resulting file would be along the following lines:

"Analysis_YYYYMMDDatHHMM.xxx" and also Analysis_YYYYMMDDatHHMM_Error.xxx for the error log if output is to an Excel file.

Analysis Parameters	(last run on 20/04/2011 11:30:35)
Analysis Output Filepath	c:\temp\ddm
Analysis Output Filename	Analysis

Figure: Analysis Output Files

Analysis Output Type:
Select whether to output to an Excel file or comma separated file.
Excel should be the default option as this will also allow additional metadata to be output if entered and also an additional file will be created for the error log.
The CSV file option was included in case the client machine does not have Excel available. Note: if using the csv option, all error logs will still be created but will only be available within the audit log section of the analyser database.

Type of Excel file:
This is only available if the Excel option above was selected and allows you to specify the suffix of the file, either .xls for pre Excel 2007 or .xlsx for Excel 2007 or newer. Choose the format that corresponds to the version of Excel installed on the client running the analysis.

It is recommended that Excel 2007 or newer is used for Analysis as this allows up to 1 million rows of data on a single sheet. Earlier versions only allowed 65,000 which may cause problems when analysing large DDM installations.

Process additional metadata:
Default this option to No.
See the Analyser help for more information on enabling this option and its uses.

Analysis Output Type	◉ Excel (.xls) ○ Comma Separated (.csv) *(sample filename: c:\temp\ddmAnalysis_20114709at2147.xlsx)*
Type of Excel file	◉ .xlsx ○ .xls
Process any additional metadata defined per document type	◉ No ○ Yes

Figure: Analysis Output File Type

DDM Server:
Enter the Domino server name where the DDM library is located. Once you move away from this field the fully qualified internet host name will be added (for use when creating URL's in the Excel error file). This name is looked up from the DDM address book automatically.

DDM Library Filepath:
Enter the path and name of the DDM library (this will usually be found in the DomDoc library and will be named along the following line xxx.....xxxLib.nsf).

Demo / Limited Output:
This option determines whether you are running in demonstration mode which limits the functionality to 3 Cabinets, 3 Binders and 100 Documents to be analysed - as soon as one of these thresholds are exceed then the analysis stops.

If you select "No" for demo mode then you will need a key. Please contact DLI.tools to co-ordinate obtaining a key from TTL. The key is limited to your Domino server and the domino server name will need to be sent to TTL to generate the key. Once a key is obtained there are no limits imposed on the resulting analysis. Once you have a key, enter the details in to the key field and press the validate button to ensure the key works.

DDM Server	DominoServer1/Acme Fully qualified internet host name: dominoserver1.acme.com
DDM Library Filepath	DomDoc\ddmlibrary.nsf
Demo / Limited output	(•) Yes ( ) No

Figure: DDM Server and Path

Process Type:
This selection allows you to select areas of DDM to process. You can analyse the entire Library, a specific File Room within the Library, a specific Cabinet within a File Room, or a number of Binders within a Cabinet.

Use the select button to select the required settings, selections will pop up where you can drill down to specific Cabinets and Binders.

When selecting Binders, if there are no Binders available to select then this is probably due to there being no Binder Categories set. Use the Cabinet selection in these circumstances.

Validate cabinets:
If you select the entire library or File Room, an additional button will appear to validate the Cabinets. On pressing this button, the selected DDM environment will be checked to see if any Cabinets are no longer available for general use. This situation may occur when the Cabinet has not been completely deleted from the DDM system, because some databases were in use at the time of deletion. If any of these Cabinets are detected they will be displayed clearly on this screen and will be ignored for the analysis - **THESE SHOULD BE REMOVED BEFORE ANY MIGRATION.** Once the cabinets have been validated the "Run Analysis" button will be available at the top of the form.

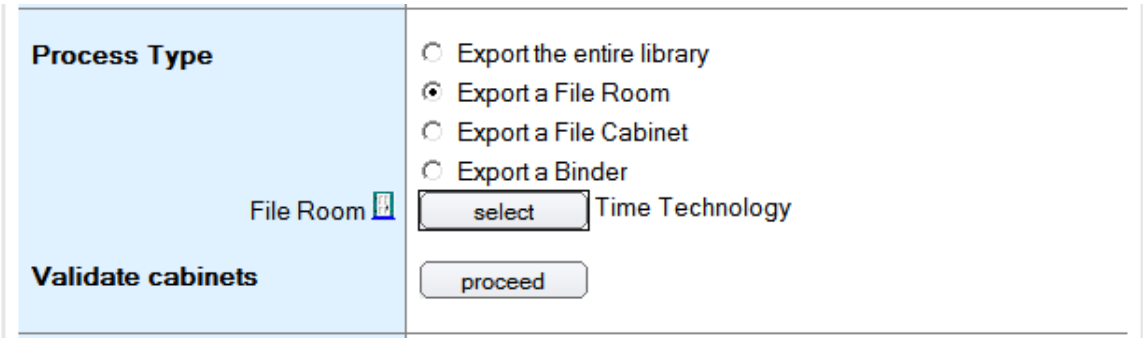


Figure: Analysis Process Type

Analysis Type:
The default option to use is "Analysis", this will analyse the DDM environment selected and output details accordingly. This option is best for general analysis.

The second option allows additional checking of the Document Title for bad or potentially bad characters. This option is not typically required as the IIUI DDM Migrator typically handles conversion of invalid document titles and trimming of long document titles.

Documents to process:
These options allow you to select which documents to process.
The default option is to enable processing for all documents.
The Latest version is not configurable and therefore the latest version of documents in DDM will always be processed. The other options allow you to additionally process All Versions as well as documents flagged as work in progress.

3.2 Run Analysis

Once the Analyser has been configured an analysis can be run by selecting the Run Analysis button at the top of the configuration page.

Figure: Running Analysis

If no Run Analysis button is visible, you will need to first validate the cabinets by selecting the proceed button next to the Validate Cabinets label.

Depending upon the type of analysis and the size of the DDM installation the analysis may take some time to complete. A demo analysis should complete in a short period of time.

The analysis will generate two output files. One containing the analysis results. The second containing a log of any warnings/errors related to DDM documents/binders.

3.3 Review Analysis Results

The output analysis file will be located in the directory/path specified with the filename as described in the configuration (eg. Analysis_YYYYMMDDatHHMM.xlsx). Open the analysis results file in Excel.

This is a sample output of the Excel format:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Library	Fileroom	Cabinet	Binder Cate	Binder Cate	Binder Cate	Binder	Document Title	Version	Draft	Doc Type	Size Mb	is Normal	is Special	is Normal	is Doclink	is Bookma	is Conflict	Last Modif
12	Time Technology	Time Technology	DDM-DM-TEST6				binder3		1	0	-No Type-	0.01	1	0	0	0	0	0	Mike Davey/
13	Time Technology	Time Technology	DDM-DM-TEST6				Default Binder												
14	Time Technology	Time Technology	DDM-DM-TEST6				Default Binder		1	0	-No Type-	0.01	1	0	0	0	0	0	Mike Davey/
15	Time Technology	Time Technology	DDM-DM-TEST6	bcat1	bcat2	bcat3\b4\b5													
16	Time Technology	Time Technology	DDM-DM-TEST6	bcat1	bcat2	bcat3\b4\b5	more than 3 categories												
17	Time Technology	Time Technology	DDM-DM-TEST6	bcat1	bcat2	bcat3\b4\b5	more than 3 categorie		1	0	-No Type-	0.01	1	0	0	0	0	0	Mike Davey/
18	Time Technology	Time Technology	DDM-DM-TEST6	bcat1	bcat2	bcat3\b4\b5	more than 3 categorie		1	0	-No Type-	0.01	1	0	0	0	0	0	Mike Davey/
19	Time Technology	Time Technology	DDM-DM-TEST6	bcat5	bcat6														
20	Time Technology	Time Technology	DDM-DM-TEST6	bcat5	bcat6		multiple binders												
21	Time Technology	Time Technology	DDM-DM-TEST6	bcat5	bcat6		multiple binders		1	0	-No Type-	0.01	1	0	0	0	0	0	Mike Davey/
22	Time Technology	Time Technology	DDM-DM-TEST6	bcat5	bcat6		multiple binders		1	0	-No Type-	0.01	1	0	0	0	0	0	Mike Davey/
23	Time Technology	Time Technology	DDM-DM-TEST6	bcat1	bcat2														
24	Time Technology	Time Technology	DDM-DM-TEST6	bcat1	bcat2		sample												
25	Time Technology	Time Technology	DDM-DM-TEST6	bcat1															
26	Time Technology	Time Technology	DDM-DM-TEST6	bcat1			single binder category												
27	Time Technology	Time Technology	DDM-DM-TEST6	bcat1			single binder category		1	0	-No Type-	0.01	1	0	0	0	0	0	Mike Davey/
28	Time Technology	Time Technology	DDM-DM-TEST6	bcat1			single binder category		1	0	-No Type-	0.01	1	0	0	0	0	0	Mike Davey/
29	Time Technology	Time Technology	document limits																

Figure: Excel Analysis Report

The main fields are as follows:

Library name	- the name of the DDM Library
Fileroom name	- the name of the File Room within the Library
Cabinet name	- the name of the Cabinet within the File Room
Binder Category 1	- the name of the Binder Category in this Cabinet (first level) * see note below
Binder Category 2	- the name of the Binder Category in this Cabinet (second level) * see note below
Binder Category 3	- the name of the Binder Category in this Cabinet (third level) * see note below
Binder name	- the name of the Binder in this Cabinet
Document Title	- the name of the Document being processed
Version	- the version number of the Document
Document Type	- the type of Document
Size in Mb	- the size of the Document
Normal document flag	- this indicates that the Document being processed is a normal document
Special Email document flag	- this indicates that the Document being processed has the metadata / field "FromEmail" set to "1" and the "filename" metadata / field is not blank (i.e. this indicates the document is a mail type created from the option "move to document manager UI" and is the actual attachment)
Normal Email document flag	- this indicates that the Document being processed has the metadata / field "FromEmail" set to "1" and the "filename" metadata / field is blank (i.e. this indicates the document is a mail type created from the option "move to document manager UI" and does not contain the attachment)
Doclink document flag	- this indicates that the Document being processed has the metadata / field "Form" set to "Doclink" (i.e. an intra-cabinet bookmark)
Bookmark document flag	**-** this indicates that the Document being processed has the metadata / field "Document_Cabinet" set to "Bookmark" (i.e. an inter-cabinet bookmark)
Conflict document flag	- this indicates that the Document being processed is a replication/save conflict or another document

To get a quick analysis summary of the data, create a pivot table on a new sheet after selecting the entire sheet as follows:

	A	B	C	D	E	F	G
1							
2	Fileroom	Sales and Marketing					
3	Cabinet	Sales and Marketing					
4	Binder	(All)					
5							
6		Data					
7	Binder Category	Sum of Size Mb	Sum of is Normal Doc	Sum of is Special Email	Sum of is Normal Email	Sum of is Doclink	Sum of is Bookmark
8	Contracts	1	1	0	0	0	0
9	Contracts\Materials	2	4	0	0	0	0
10	Contracts\Resources	3	5	0	0	0	0
11	Marketing						
12	Marketing\Bid Packages	3	4	0	0	0	0
13	Marketing\Literature	0	1	0	0	0	0
14	Marketing\Resources	1	2	0	0	0	0
15	Marketing\Resources\Phase1	1	2	0	0	0	0
16	Marketing\Resources\Phase2	1	2	0	0	0	0
17	**Grand Total**	**10**	**21**	**0**	**0**	**0**	**0**

Figure: Analysis Metrics

You can then drill down to required File Rooms, Cabinets, Categories and Binders to analyse the sizes and number of documents.

Key Metrics:
The following are some key metrics to generate and make note of;

- Count of File Rooms
- Count of File Cabinets
- Count of Binders and Binder Categories
- Count of Documents
- Count of unique Document Types
- Size of All Documents

These metrics can be used to gauge the volume of data to be migrated, complexity of the structure, and make some rough estimates as to the time required to migrate.

Migration Processing Time Estimate:
The TimeEstimates.xlsx file included with this guide can be used as a comparison guide of DDM migration processing times. This file is updated periodically with statistics from prior migrations. The data in this file can be used to provide a rough approximation as to the complexity of a migration and resulting time to migrate.

	A	B	C	D	E	F	G	H	I	J
1	Previous Projects:	Library:	Binders:	Documents:	Size:	IIUI Time (Hours):	IIUI Docs/Min:	DOCOVA Time (Hours):	DOCOVA Docs/Min:	Total Docs/Min:
2	Prior DDM Migration	Sales & Marketing	295	1,306	8GB	1.25	17	1.50	15	8
3	Prior DDM Migration	Manufacturing	2,321	6,552	3GB	2.50	44	3.00	36	20
4	Average:			7,858		3.75	35	4.5	29	16
5										
6	Time to Migrate Estimate:	Documents:	Av. IIUI Docs/Min:	IIUI Time (hours):	Av. DOCOVA Docs/Min:	DOCOVA Time (hours):	Total Time (Hours):	Number of Sites:	Time Per Site (Hours):	
7	New Project	10,000	35	4.8	29	5.7	10	1.00	10	

Figure: Migration Processing Time Estimate

To use the migration estimation tool, open the file and enter the total number of documents to be migrated (as reported by the Analyser into cell B7.

Time to Migrate Estimate:	Documents:
New Project	10,000

Figure: Documents to Migrate

Enter the number of different sites (eg. different divisions or departments) involved in the migration into cell H7 if applicable. This field is useful for estimating an average per division/group if data will be imported in segments for a variety of divisions. Or enter a value of 1 if data will be imported in a combined fashion at the same time.

The spreadsheet will then make a rough approximation of the time required to process the data for migration based on an average of previous migrations.

IIUI Time (hours):	Av. DOCOVA Docs/Min:	DOCOVA Time (hours):	Total Time (Hours):
4.8	29	5.7	10

Figure: Estimated Migration Processing Time

Error/Warning Log:
The output analysis error file will be located in the directory/path specified with the filename as described in the configuration (eg. Analysis_YYYYMMDDatHHMM_Error.xlsx). Open the analysis error log file in Excel.

This is a sample output of the Excel format:

	A	B	C	D	E	F	G	H	I	J	K	
1	Library	Fileroom	Cabinet	Binder Cate	Binder	Error / V	Error Co	Error Description	Document Title	Vers	Doc	URL to open in Browser
2	Time Tech	Client			CAS	warning	52	Potential bad character in Binder Category Name	Projects\Test\Test2\Test3\Test4\Test5\Test6			http:
3	Time Tech	Client			Default Binder	error	50	Empty String in Binder Category Name.				http:
4	Time Tech	Client				warning	52	Potential bad character in Binder Name ('ffghfh\fdgdfgfd').	ffghfh\fdgdfgfd			http:
5	Time Tech	Client			ffghfh fdgdfgfd	error	50	Empty String in Binder Category Name.				http:
6	Time Tech	Client				warning	52	Potential bad character in Binder Name ('3619: R&A Archiving').	3619: R&A Archiving			http:
7	Time Tech	Client				warning	52	Potential bad character in Binder Name ('Applications Audit: 3135').	Applications Audit: 3135			http:
8	Time Tech	Client				warning	52	Potential bad character in Binder Name ('IPA Audit Database: 3537').	IPA Audit Database: 3537			http:
9	Time Tech	Client				warning	52	Potential bad character in Binder Name ('Staff File: 3355').	Staff File: 3355			http:
10	Time Tech	Client				warning	52	Potential bad character in Binder Name ('Email Extraction definition: 3147').	Email Extraction definition: 3147			http:
11	Time Tech	Client			3536 - Capital	error	50	Empty String in Binder Category Name.				http:
12	Time Tech	Client			3588 - CS Job	error	50	Empty String in Binder Category Name.				http:
13	Time Tech	Client			Default Binder	error	50	Empty String in Binder Category Name.				http:
14												

Sheet1 Sheet2 Sheet3

Figure: Excel Error Log

The main fields are as follows:

Excel Report Field:	Description:
Library name	- the name of the DDM Library
Fileroom name	- the name of the File Room within the Library
Cabinet name	- the name of the Cabinet within the File Room
Binder Category	- the name of the Binder Category in this Cabinet
Binder	- the name of the Binder in this Cabinet
Error/Warning	- error or warning depending on severity of issue
Error Code	- error code (see list below)
Error Description	- short description of the error or warning
Document Title	- the name of the Document being processed
Version	- the version number of the Document
Document Type	- the type of Document
URL to open in browser	- url link to the DDM document

**** Note on Binder Categories.***
Dom.doc allows up to 3 levels of Binder Category for each Binder, these are split by the backslash delimiter "\". If more than three are entered then dom.doc simply adds the additional levels to the end of the third level. For migration the backslash in these instances will be reported as a potential issue when migrating.

In addition to this, multiple categories can also be selected by using the semi-colon ";" delimiter in Binder Categories within Dom.doc. If this occurs then the analyser will log this event as a warning for that binder as there is no logical way to display this event in the spreadsheet hierarch without repeating the document structure, any additional Binder Categories will not be displayed in the spreadsheet.

Some of the warnings are created as the final use of the data may cause a problem, for example if a document exceeds 265 characters this is flagged as a warning as some operating systems have this value as the maximum numbers of characters available in a folder directory or filename.

Other examples include some characters which may cause a problem, for example square brackets may cause a problem if used in folders but may not be a problem for field names.

Error Codes and descriptions:

Code:	Error:	Description:
009	Cabinet document was not found when trying to open....	This cabinet could not be processed.
010	Failure connecting to Binder Index Database to get Binder Document database	Documents in this binder cannot be processed.
013	Could not open Binder document database....	Documents in this binder cannot be processed.
014	Multiple Binder Categories	Indicates that the Binder contains multiple Binder Categories for that Binder (only the first binder category will be displayed within the spreadsheet). As DOCOVA uses binder categories to generate container folders, if a document has multiple distinct binder categories, DOCOVA will only migrate documents to the first binder category in the list.
050	Empty string in.....	This signals that the item under test is empty. Depending on what is being tested and how this is going to be used post migration this may be a problem.
051	Bad character in filename of attachment	This is reported if the following characters have been identified in the filename; ASCII 127 – delete Any character less than ASCII 32 (usually reserved characters or line breaks / tabs etc.) Any of these characters: / \ > < ? | " * : **** These errors can be safely ignored in most cases as the IIUI migrator that will be used during the migration will strip out invalid filename characters.**
052	Potential bad character in …	A character found may potentially be a problem for the migrating system. These are: ASCII 127 - delete Any character less than ASCII 32 (usually reserved characters or line breaks / tabs etc.) Any of these characters: / \ > < ? | " * : ' % [ ] **** These errors can be safely ignored in most cases as the IIUI migrator that will be used during the migration will strip out invalid characters.**
053	String over 265 characters in	This may cause a problem either during migration as some operating systems do not allow such lengths. **** These errors can be safely ignored in most cases as the IIUI migrator that will be used during the migration will truncate long attachment file names.**

If any other unexpected errors occur there will not be a specific code but they will be highlighted as an error and where this error occurred.

4. Extracting DDM Data

The next step in the migration process is to extract the DDM data to a temporary location for processing. Existing DDM document meta-data will be extracted to a temporary database in this step. In addition, existing file attachments will be extracted to a temporary location on the file system in this step.

The extraction of DDM data will be conducted using the IIUI DDM Migrator from Innovative Ideas Unlimited Inc. The IIUI DDM Migrator is designed to assist in the migration of Domino.doc environments to other systems. It extracts the document and attachment meta data along with the library taxonomy to a separate database or xml extract, and extracts attachments to the file system.

4.1 Installing the IIUI DDM Migrator

Copy the **iiuiDDM_Quickr migrator85.nsf** and **migrator85workingtemplate.ntf** files (or later version number if a later release than 85 is available) provided in the file set included with this guide to the DDM server.

The IIUI DDM Migrator must be installed on a Domino server (ideally the DDM server) and run from a Lotus Notes client with access to the DDM server. For performance reasons, the Migrator should be run from a Notes client placed as close on the network to the DDM server as possible—such as a laptop placed in the server room.

Sign the databases with an appropriate ID. Typically an administrator id with rights to;

- Run restricted LotusScript agents
- Run unrestricted LotusScript agents
- Create templates
- Create new databases

The user who runs the IIUI DDM Migrator will need full access to the Dom.doc environment (Member of the DDM Site Administrators group and the Library Administrators group).

Modify the ACLs of both databases to allow access only the user(s) involved with the migration. Default and Anonymous should both be set to No Access to ensure non unauthorized access to extracted data.

The IIUI DDM Migrator tool requires registration for use. A registration key must be obtained from Innovative Ideas Unlimited, Inc. Registration keys for the basic utility are free of charge and available by completing the form located at http://www.iiui.com/migrate
After submitting the required information, an email will be sent with a registration key.

To obtain a registration key contact DLI.tools (DLI.tools will co-ordinate obtaining a registration key for IIUI DDM Migrator from Innovative Ideas Unlimited).

Entering Registration Key

1. Open IIUI_DDM_Quickr Migrator 85.nsf on the Domino server
2. Click the Registration action on the upper right side of the screen.
3. Complete fields on the registration form **exactly** as they were previously submitted (required values are included in the confirmation email you received with the registration key). Note

that all values are case and space sensitive. Use the calendar icon to select the expiration date to ensure it is entered in local date format set on the operating system.

4. Click the Save/Close action

4.2 Creating a Migration Profile

The first step in extracting DDM data is to create a Migration Profile. Within the IIUI DDM Migrator select the “Create Export Profile” link on the left hand side menu.

Figure: Create Export Profile

4.2.1 Migrator Profile Tab

Profile Name
Enter a short unique descriptive name for the Migration Profile in the Profile Name field. Typically the Profile Name relates to the DDM Library, File Room, or File Cabinet being migrated.

Figure: Profile Name Field

Destination
The Migrator Profile tab contains options for outputting to either XML or Quickr. You can select either Quickr or XML.

Figure: Destination Field

Library Information Section
The Library Information section contains details of the DDM Library being migrated.

Library Information	
Library Name	Migrator
Library Server	Domino701/Domino701
Library Path	domdoc\migratorlib.nsf
Library URL	http:// matt.iiui.com/domdoc/migratorlib.nsf

Figure: Library Information Section

Library Name
The Library Name field containst the name of the DDM Library to be exported. eg. Sales and Marketing

Library Server
The Library Server field contains the Domino server name where the DDM Library being migrated resides. eg. DomDoc1/Acme

Library Path
The path to the DDM library database. eg. domdoc\SalesMarketingLib.nsf

Library URL
The url to the DDM library being migrated. eg. http://domdoc1.acme.com/domdoc/salesmarketinglib.nsf

Working Database Section
The Working Database section contains information identifying the location of the working database.

Working Database	
Template Server	Domino701/Domino701
Template Path	Migrator\Dev\export85.ntf
Working Db Server	Domino701/Domino701
Working Db Path	m85\Securityz5

Figure: Working Database Section

Template Server
Enter the Domino server name where the working template (i.e. migrator85workingtemplate.ntf) is installed. eg. DomDoc1/Acme

Template Path
Enter the file path and file name of the working database template. (eg. migrator\migrator85workingtemplate.ntf)

Working Db Server
Enter the Domino server name where the working database should be created. (eg. DomDoc1/Acme)

Working Db Path
Enter the file path and file name of the working database to be created from the template. (eg. migrator\workingsalesmarketing.nsf)

Quickr Server Section
If selecting Quickr as the destination instead of XML you will be prompted to enter a value in the Quickr Server field. Enter a dummy host name in the field. The migrator does not validate this host name for the stages we require so a dummy host name will work fine.

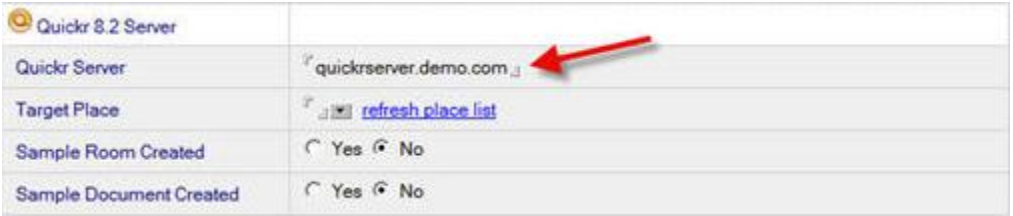


Figure: Quicr Section

The remaining Quickr configuration fields can be ignored.

4.2.2 Migration Options Tab

The Migration Options tab allows for the selection of specific DDM Library data to migrate.

Export Type Section
The Export Type field allows the sub selection of DDM Library data to migrate.
The options are;

- Export the entire library
- Export a File Room
- Export a File Cabinet
- Export a Binder

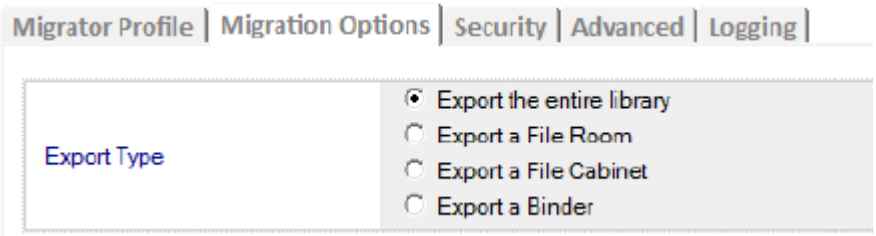


Figure: Export Type Section

The choice here will depend upon the decisions made earlier in section 2 - Identification of Data to Migrate. If the decision was made to migrate an entire DDM Library then choose “Export the entire library”, otherwise choose one of the more granular options. If multiple file rooms, cabinets or binders will be migrated it may be necessary to create multiple Migration Profiles.

Other considerations when answering this question are the stages or phases of migration. If data is going to be migrated in phases (eg. Sales and Marketing first, Engineering second, etc.) then it may be necessary to perform the data extracts in separate chunks so that only the data needed for the near term migration is extracted presently.

Depending upon the selection in Export Type, an additional field may display prompting for the name of the File Room, File Cabinet, or Binder to export.

Figure: Export Type Field

Directory and Path

The IIUI DDM Migrator extracts file attachments from Domino.doc to the local workstation file system for use in importing to an alternate system such as DOCOVA. The location of the directory where these file attachments should be stored is specified on the Migration Options page. Enter the drive and directory path where extracted documents and data will be stored. Be sure that the drive/directory specified has enough free space to accommodate the DDM data selected for export.

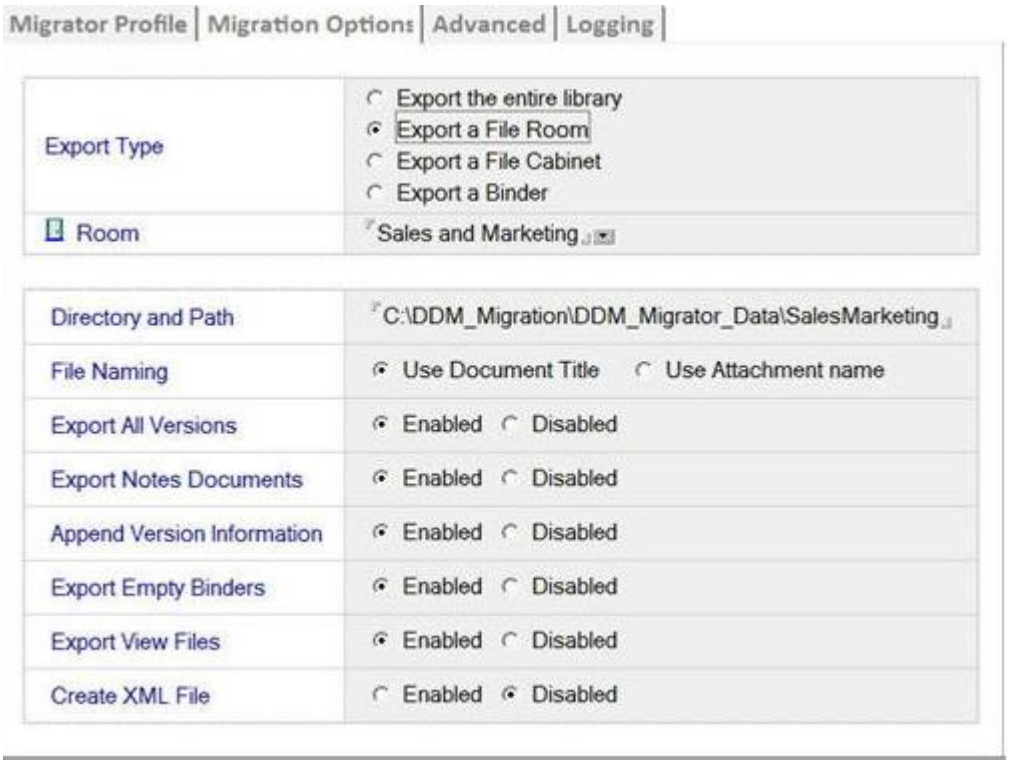


Figure: Migration Options

In addition to the File Room to export and the location to store the file attachments, the following settings are configured in this section.

File Naming

Select the "Use Document Title" option. This will cause file attachments to be named using the DDM document title when they are exported.

Export All Versions

Enable this option in order to extract all versions of a document from Domino.doc in order to maintain a complete version history in DOCOVA.

Export Notes Documents

Enable this option in order to extract documents even if they don't contain attachments.

Append Version Information

Enable this option in order to include version information as part of the export.

Export Empty Binders

Enable this option in order to create folders for each binder category/binder entry in Domino.doc, even empty ones.

Export View Files

Enable this option so that Document View Files are included in the extract. Document View Files are versions of attachments that are used for viewing/display.

Create XML File

Disable this option as the XML data is not needed since DOCOVA can read document data directly from the working database.

4.2.3 Validating Configuration

After filling out the migrator profile and migration options pages, return to the first tab and select the "Process Current Step" button. This validates the configuration options entered. A prompt will display confirming that the required configuration options have been entered.

Figure: Validating Configuration

4.3 Export DDM Taxonomy

The next step after validating the migration profile is to export the DDM Taxonomy. The DDM Taxonomy will list the structure and layout of the DDM library/file rooms/file cabinets/binders.

Install Domino.doc API

Before exporting the taxonomy be sure that the workstation being used to do the extract has the Domino.doc API installed. The Domino.doc API is used to perform some elements of the extract and if it is not installed the error message “Cannot create automation object” will display.

Figure: Error if Domino.doc API is missing

If the API is not installed, you can install it using the **ddsetup.exe** file included with this guide. The ddsetup.exe file is the “Doc Manager Desktop Enabler” package provided as part of Domino.doc. Run the setup program (ddsetup.exe) on the client running the migrator and select **Custom installation** and choose to only install the **API components**. (Note: it is recommended to not install any of the other components beyond the API as it may interfere with existing software such as Microsoft Office)

After installing the Domino.doc Doc Manager Desktop Enabler API you will need to reboot the workstation.

Exporting Taxonomy

Select the Process Current Step button to start the Export DDM Taxonomy process.
This process searches the selected File Cabinet or File Room and extracts the directory/folder structure of all binders and generates the DDM taxonomy in the working database. An example of the output of the Export DDM Taxonomy process is shown in the image below.

Figure: Sample Export DDM Taxonomy Output

After the taxonomy is created you can review the results in the DDM Export View in the Working Database.

Review the output and discuss with the client how the taxonomy will map onto the DOCOVA structure.

4.4 Create Document Stubs

After exporting the taxonomy the next step is to extract the document data.
Return to the IIUI Migrator and open the migration profile and run the "Create Document Profiles" step.
This process will read the individual DDM document entries and export them to the working database and extract the file attachments to the local file system location specified.

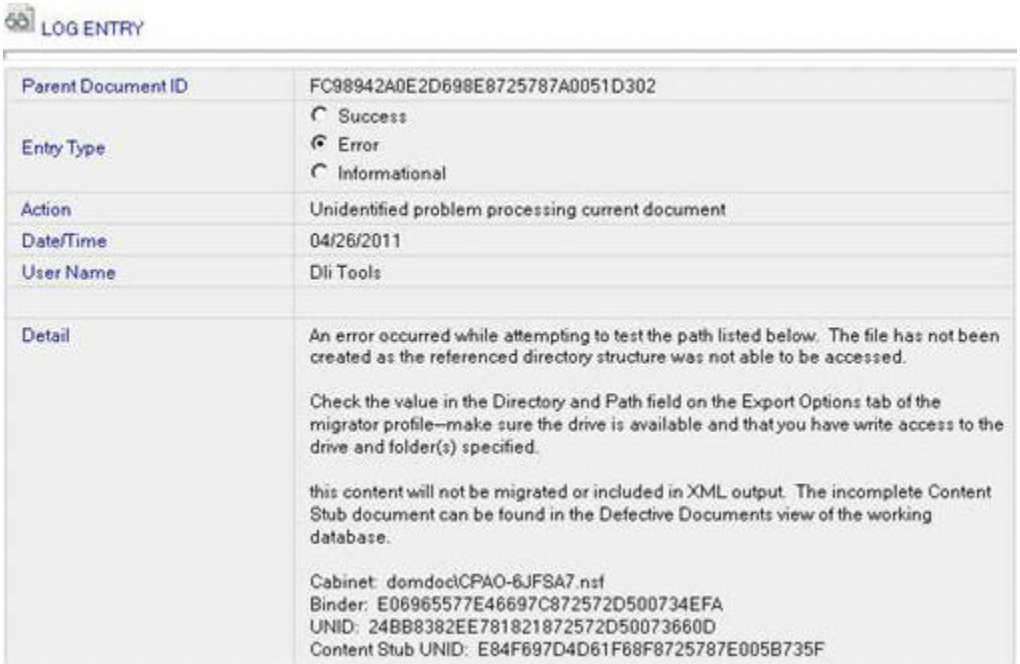
Figure: Creating Document Stubs

Reviewing Errors

If any errors were encountered during the document stub creation process a prompt will display directing you to review the logs.

Figure: Error During Export

The error log will contain a record of each DDM document that could not be exported. The following is a sample image of an error log entry.



LOG ENTRY

Parent Document ID	FC98942A0E2D698E8725787A0051D302
Entry Type	Success Error Informational
Action	Unidentified problem processing current document
Date/Time	04/26/2011
User Name	Dli Tools
Detail	An error occurred while attempting to test the path listed below. The file has not been created as the referenced directory structure was not able to be accessed. Check the value in the Directory and Path field on the Export Options tab of the migrator profile–make sure the drive is available and that you have write access to the drive and folder(s) specified. this content will not be migrated or included in XML output. The incomplete Content Stub document can be found in the Defective Documents view of the working database. Cabinet: domdoc\CPAO-6JFSA7.nsf Binder: E06965577E46697C872572D500734EFA UNID: 24BB8382EE781821872572D50073660D Content Stub UNID: E84F697D4D61F68F8725787E005B735F

Figure: Error Log Entry

The information at the bottom of the error log entry is important for tracing the specific document in DDM that generated the error. The log entry provides the File Cabinet, Binder, and document UNID for the document being processed.

Using the UNID listed in the log entry it is possible to open the **all documents by unid** view in the referenced File Cabinet and perform a search to find the matching source records based on the UNID listed. Once located, the nature of the error can be further researched and a determination made if a fix can be made to the DDM document, or if the data will need to be migrated manually.

Reviewing Attachment Data

The Document Stub creation process will extract all file attachments to the local file system in the directory specified. Review the directory contents to confirm that the attachments were created successfully.

5. Configuring DOCOVA

Before importing data into DOCOVA it is necessary to do some configuration to allow it to accept the incoming data properly.

5.1 Copying DDM Subforms

Domino.doc (DDM) allows for the inclusion of custom meta-data fields on document types through the use of custom subforms. These subforms contain fields and text information associated with a document.
DOCOVA allows for the re-use of existing DDM subforms. By copying the custom subforms used in DDM to DOCOVA and making some alterations a developer/administrator is able to migrate their existing DDM customization to DOCOVA.

The first step is to identify those document types that will be migrated that use custom sub forms. The results of the TTL Analyser product can be used to identify the number of unique document types being migrated. Review these document types and copy any custom subforms they may have from DDM into the DOCOVA Library Master database.

It may be useful to create a list of document types and their associated subform(s) for reference; Example:

Document Type:	**Subform Name:**
Contract	sfContractInfo
Non Disclosure Agreement	
Policy Document	sfHRData
…	…

The specific steps to copy a subform and make design changes to a subform will not be covered as part of this guide. Please refer to IBM/Lotus Domino Developer documentation for additional information on copying and editing subforms.

5.2 Configuring Document Types

Both DDM and DOCOVA have the concept of Document Types. Document Types can be used for different categories/classes of documents and may each have different meta-data fields, different workflow, etc.

Review the list of DDM document types that will be migrated and create a DOCOVA document type for each by doing the following;

i) Open the DOCOVA System Administration database to the Settings > Document Types section.

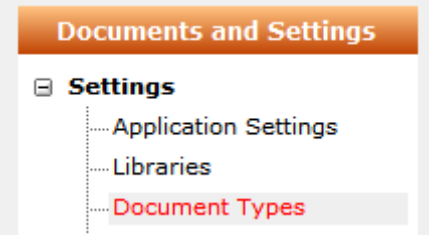


Figure: Document Types

ii) Select the New Document Type button.
A new Document Type Settings form will display.

iii) Configure General Settings.
Select Custom as the General type.
Enter a name for the Document Type (using the same name as DDM is recommended for continuity).

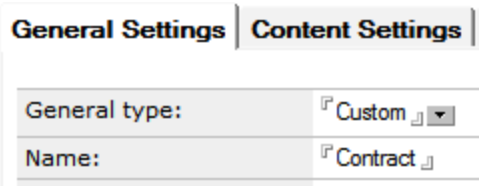


Figure: Document Type Name

iv) Configure Content Settings.
If the document type has a custom subform associated with it, select “Custom subform 1” as one of the Section order entries, and enter the name of the subform in the “Custom Subform 1” field.

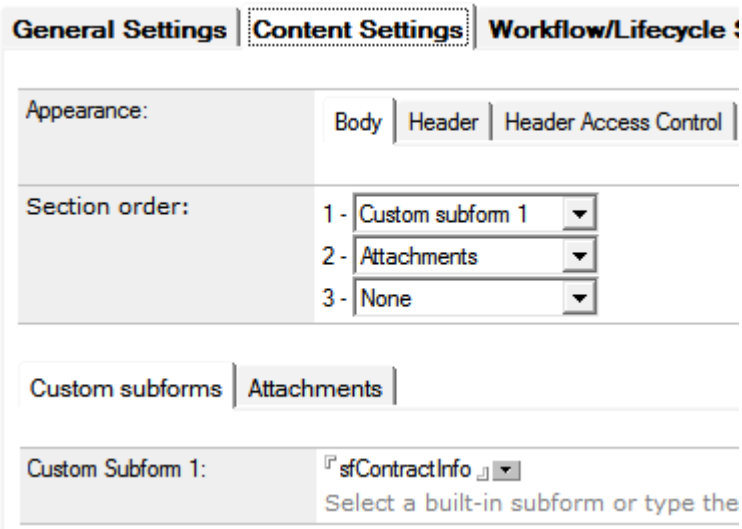


Figure: Content Settings

v) Configure Workflow/Lifecycle Settings
Enable document lifecycle option.
Enable document versioning.

Enable strict versioning.

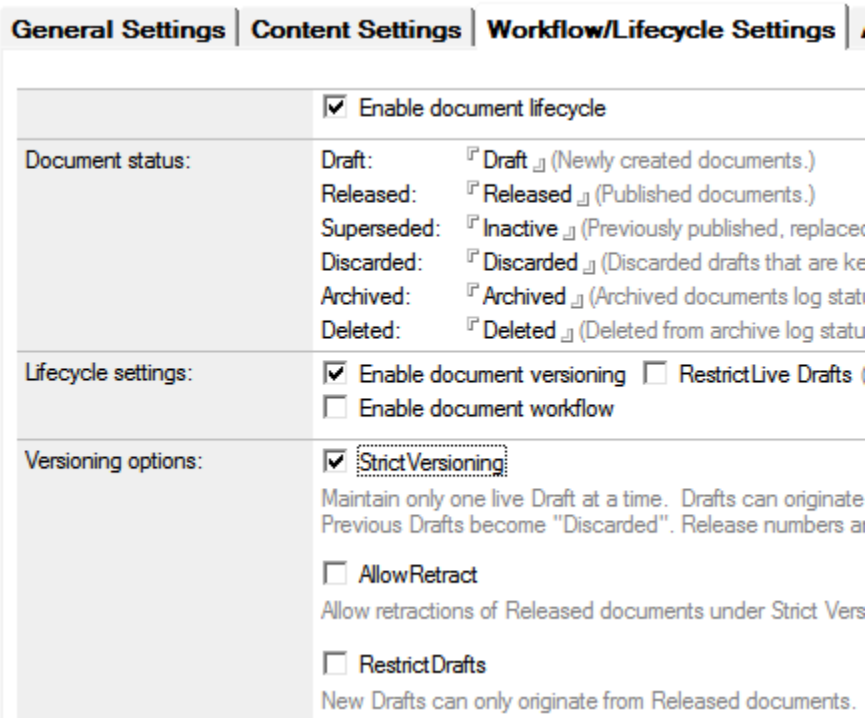


Figure: Workflow/Lifecycle Settings

Strict Versioning:

The "strict versioning" option is a feature in DOCOVA which closely mirrors the features available in Domino.doc (DDM).
One of the aspects of strict version control is that the numbering scheme for versions corresponds to major version numbers (eg. 1.0, 2.0, 3.0 etc.) for all released versions of documents.
Minor revision numbers (eg. 1.1.0, 1.1.1, 2.0.1, etc.) are reserved for unpublished or draft versions of documents.
Only a single published version of a document can exist at any point in time.

In order to match existing DDM data to a numbering and versioning scheme when imported into DOCOVA it is strongly recommended to enable strict versioning in any document types being migrated.

vi) Save the new document type.

vii) Repeat the process for any additional document types being migrated.

5.3 Creating Libraries

Before initiating the DOCOVA Migration Module import process you must first have one or more DOCOVA Libraries set up and configured.

When determining the number and type of DOCOVA libraries to create one of the key things to take into consideration is the number of File Cabinets within DDM. Typically a File Cabinet within DDM maps onto a library in DOCOVA.

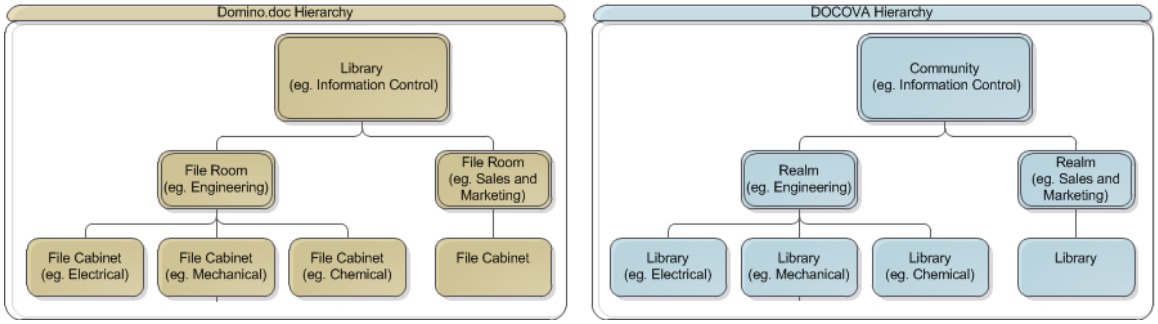


Figure: DDM Structure Compared to DOCOVA

Another consideration when deciding how many libraries to create is the number of documents contained within each file cabinet. For file cabinets containing a small number of documents it may be advantageous to combine them into a single library.

The IIUI DDM Analyser report can be useful in determining a count of the number of File Cabinets as well as the number of documents contained within each File Cabinet.

Once you have determined the number of Libraries you need, you can create the Libraries in the DOCOVA Administration section by going to the Documents and Settings > Libraries area of DOCOVA and selecting New Library.

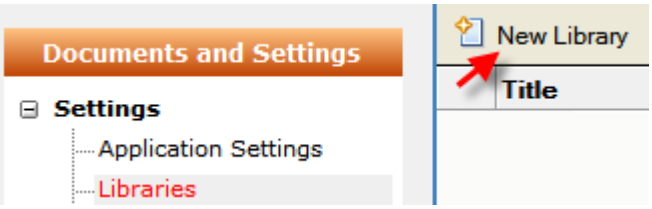


Figure: New Library Button

Typically you will want to name the DOCOVA Library the same as the File Cabinet being migrated.

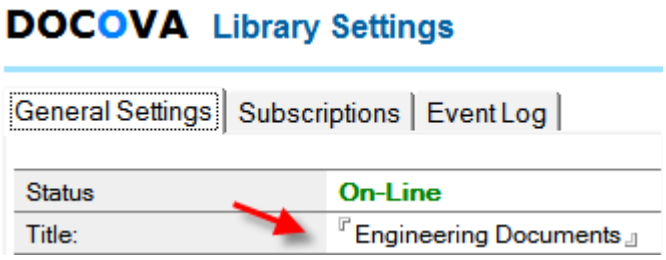


Figure: Library Name

Communities and Realms:
In Domino.doc File Cabinets are grouped into File Rooms which are then grouped into Libraries. DOCOVA allows for the mapping of Libraries into Realms which are further grouped into Communities. This ability allows clients to easily mirror their DDM environment in a migrated DOCOVA environment.

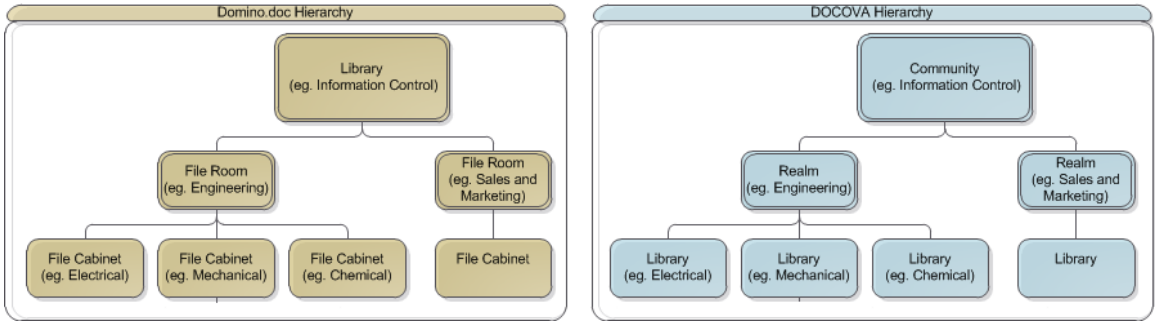


Figure: DDM Structure Compared to DOCOVA

The use of Communities and Realms is optional. To enable Communities and Realms configure the Library profile document with entries in the Community and Realm fields. You can enter a Community or a Community and Realm, or none.

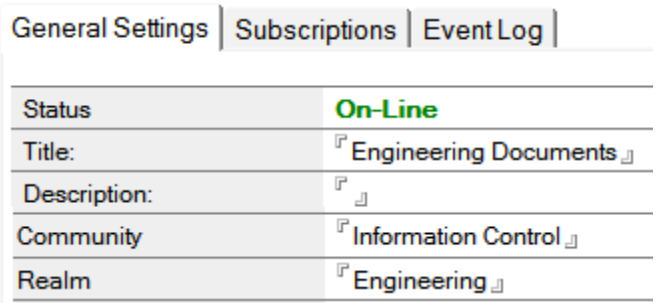


Figure: Communities and Realms

Consult the DOCOVA documentation for additional information on creating a new Library.

6. Importing Data to DOCOVA

The next step is to take the extracted DDM data and move it into DOCOVA using the libraries and document types configured.

To do this we will use the "DOCOVA Migration Manager".

Figure: DOCOVA Migration Manager

The DOCOVA Migration Manager essentially does a reversal of what the IIUI Migrator does, but instead of taking data out of DDM into a secondary source, it takes the data from the secondary source and puts it into DOCOVA.

The DOCOVA Migration Manager re-creates the folder structure and Taxonomy based on the data extracted from DDM. As well, it imports the associated DDM documents and files and sets all of the required security and status information.

6.1 Installing the DOCOVA Migration Manager

Locate the DocovaMigration.nsf (DOCOVA Migration Manager) database supplied with the file set included with this guide. Deploy the database to the Domino server where the migration is taking place (ie. same server as the IIUI DDM Migrator)

Sign the database with an appropriate ID. Typically an administrator id.

The user who runs the DOCOVA Migration Manager will need full access to the IIUI DDM Migrator databases as well as the DOCOVA installation.

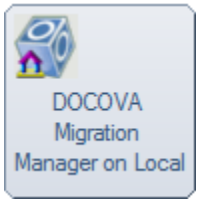


Figure: DOCOVA Migration Manager Database

6.2 DOCOVA Migration Manager Application Settings

Open the DOCOVA Migration Manager database and select the Application Settings link on the side menu.

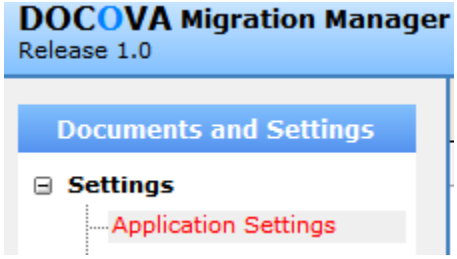


Figure: Application Settings

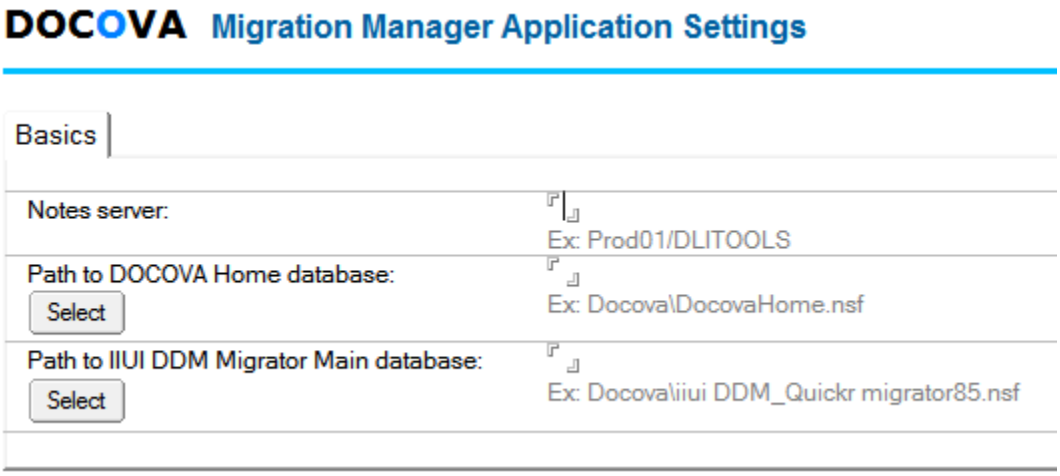


Figure: Application Settings

Notes server

Configure the Domino server name where the DOCOVA Migration Manager database is installed. eg. DominoServer1/Acme

Path to DOCOVA Home database

Use the Select button to choose the DOCOVA System Administration database. eg. Docova\DocovaHome.nsf

Path to IIUI DDM Migrator Main database

Use the Select button to choose the IIUI DDM Migrator Main database. eg. Docova\iiui DDM_Quickr migrator85.nsf

6.3 Configure Document Type Mappings

Document Types within DDM are mapped onto corresponding Document Types within DOCOVA. The connection between what Document Types in DDM correspond to what Document Types in DOCOVA is configured in the Document Type Mappings section.

For example, the DDM “Information Control Document” document type is mapped onto a corresponding Document Type of the same name that has been configured in DOCOVA.

In addition, custom field mappings can be set up to copy specific values from the DDM documents to corresponding fields on the DOCOVA document (eg. Marketing Part Number and Project Number)

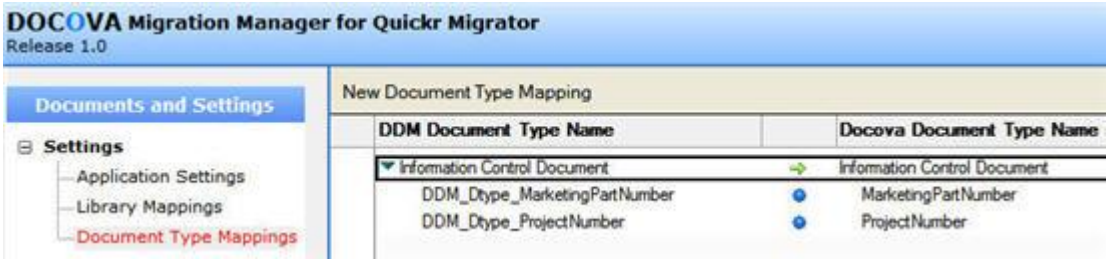


Figure: Document Type Mappings

Open the DOCOVA Migration Manager database and select the Document Type Mappings link on the side menu.

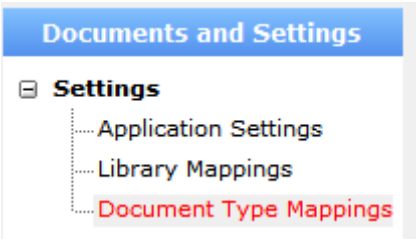


Figure: Document Type Mappings

Step1 – Create Document Type Mappings

Select New Document Type Mapping button at the top of the view.

Figure: Document Type Mapping

DOCOVA Document Type Mapping

DDM Document Type Name:	Contract Ex: Request
migrates to	
DOCOVA Document Type Name: Select	Contract Ex: File Document
DOCOVA Document Type Key:	DK-6E9E94B20CBDC1138525700B0043DC07 Ex: DK-46CDAC85766489DC852577370074788A

Figure: Document Type Mapping

DDM Document Type Name

Name of the Document Type in DDM as reported by TTL DDM Analyser.

DOCOVA Document Type Name

Name of the Document Type configured in DOCOVA. Use the Select button to choose the DOCOVA Document Type and automatically set the Document Type Key.

DOCOVA Document Type Key

Document Type Key of Document Type configured in DOCOVA.

Save the Document Type Mapping.

Step2 – Create Field Mappings

DOCOVA Migration Manager will migrate standard DDM fields and meta data. However, for any custom meta data (ie. information configured through the use of custom subforms on the document types) additional field mappings need to be created to tell the Migration Manager where to map the data within DOCOVA.

The information about what custom fields are configured for DDM document types can be determined by reviewing the Document Stub entries in the IIUI DDM Migrator working database.

Field mappings apply to a Document Type Mapping. Open the Document Type Mapping created and select the New Field Mapping button.

New Field Mapping

Figure: Field Mapping

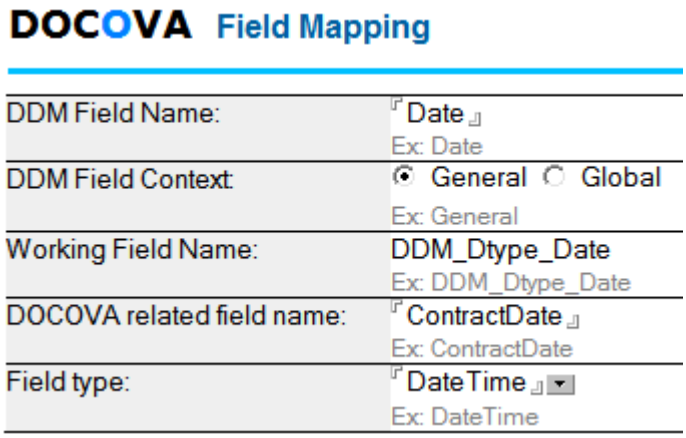


Figure: Field Mapping

DDM Field Name

Enter the field name of the DDM field as it is configured in DDM.

DDM Field Context

Select the scope of the custom field type in DDM.

General means that the field was configured and available on a File Cabinet specific Document Type subform.

Global means that the field was configured and available on a Global Document Type subform.

DOCOVA related field name

Enter the name of the custom field as configured in DOCOVA.

Field type

Select the data type of the field as it will be stored in DOCOVA.

Save the Field Mapping.

Repeat the above process for any remaining custom fields associated with the document type.

6.4 Configure Library Mappings

Following the configuration of the document type mappings the next step is to configure the library mappings that tell the DOCOVA Migration Manager what DOCOVA Libraries correspond to each DDM File Cabinet. For example, mapping the DDM File Cabinet Manufacturing to the DOCOVA Manufacturing library.

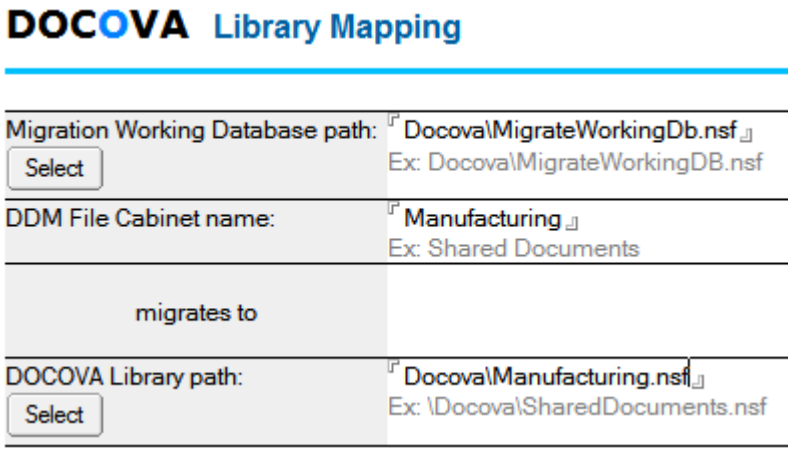


Figure: Library Mapping

A Library Mapping should exist for each File Cabinet that is being imported. Otherwise errors will be generated during the import. Typically a File Cabinet will be mapped to its own individual Library, but it is possible to map multiple File Cabinets to the same DOCOVA Library (in cases where the File Cabinets don't contain a lot of data and you want to consolidate the information into a common Library).

To create a new Library Mapping, open DOCOVA Migration Manager and select the Library Mappings link in the side menu.

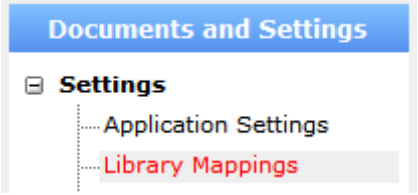


Figure: Library Mappings

Next, select either the New Library Mapping button to manually create a single Library Mapping entry. This will display a single new Library Mapping form to enter mapping information.

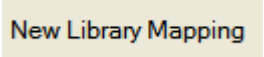


Figure: New Library Mapping

Or alternately, select the Import > Cabinets for Mapping button to scan the contents of the IIUI DDM Migrator Working Database for a list of File Cabinets and create stub Library Mapping documents for each File Cabinet.

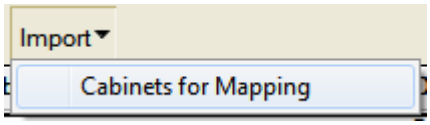


Figure: Import File Cabinets for Library Mapping

Once the Library mapping stubs are created by the Import process, they can be edited to configure the destination DOCOVA Library information.

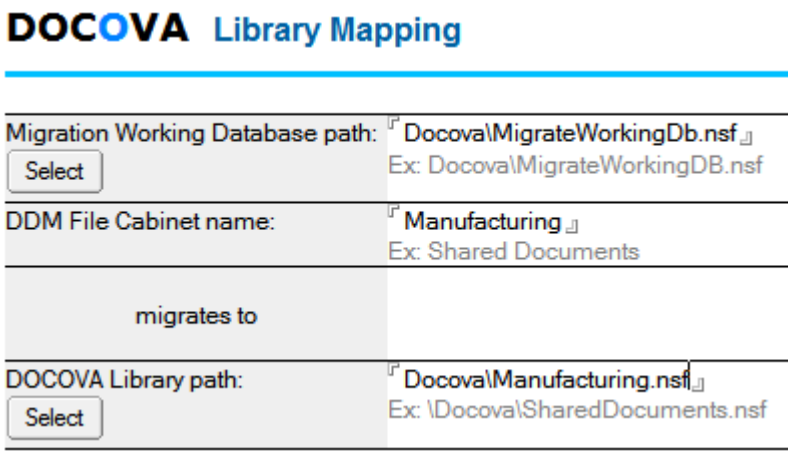


Figure: Library Mapping

Migration Working Database path

Enter the path and file name of the IIUI DDM Migration Working Database being imported. Use the Select button to choose the working database.

DDM File Cabinet name

Name of the DDM File Cabinet being migrated.

DOCOVA Library path

Directory path and file name of the DOCOVA Library that the DDM File Cabinet is being imported to. Use the Select button to choose the DOCOVA library

Once saved, the Library Mapping entry will display in the view along with any other library mapping entries.

Migrator DDM Cabinet		DOCOVA Library
Manufacturing	→	Docova\Manufacturing.nsf
Sales and Marketing	→	Docova\SalesAndMarketing.nsf

Figure: File Cabinet to DOCOVA Library Mapping

6.5. Importing Data

Once DOCOVA Migration Manager has been configured with library mappings and document type and field mappings we are then ready to import the data to DOCOVA.

To import data do the following;

Step 1 - Select the Library Mapping record(s) to import

Place a check mark next to the library mapping entries that you want to import.

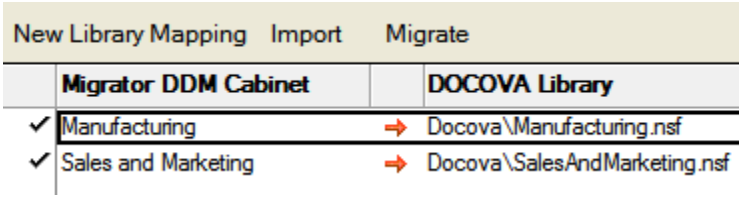


Figure: Select Library Mappings to Import

Step 2 – Select Migrate > Clean Working Documents for selected mappings

In some cases data extracted from DDM to the IIUI DDM Migrator Working Database can contain invalid characters/data that make it problematic to import data into DOCOVA. For example, the presence of newline characters in binder categories, binder names, or document titles can cause problems.
The Clean Working Documents option scans through the working documents in the IIUI DDM Migrator and performs some cleaning function on the data. Only data for the DDM Cabinets selected is cleaned.

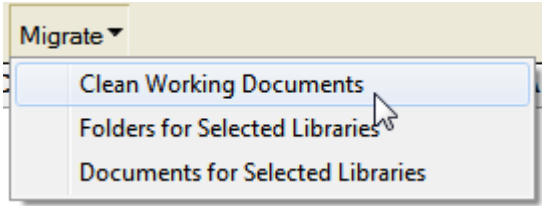


Figure: Clean Working Documents

Step 3 - Select Migrate > Folders for Selected Libraries

The Migrate Folders for Selected Libraries process creates the folder structure within the destination library based on the DDM taxonomy information contained in the IIUI DDM Migrator working database.
Only data for the DDM Cabinets selected is migrated.

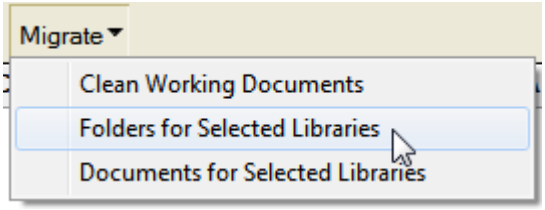


Figure: Migrate Folders

There are a couple of things to note about the way that DOCOVA handles DDM binders/categories. The folder structure in DOCOVA is created based on the binder category and binder names contained within DDM. Any entries that do not have a category assigned appear under the "(Not Categorized)" folder which is created in DOCOVA to hold them.

In DOCOVA documents always belong to a folder/taxonomy.

The following image shows a sample Domino.doc (DDM) hierarchy.

One thing to note is that the levels labelled "Binder Category" are simulated by DDM using a delimited category entry (eg. Manufacturing\Current). This makes it difficult to maintain consistency. DOCOVA on the other hand has the ability to create multiple folder levels.

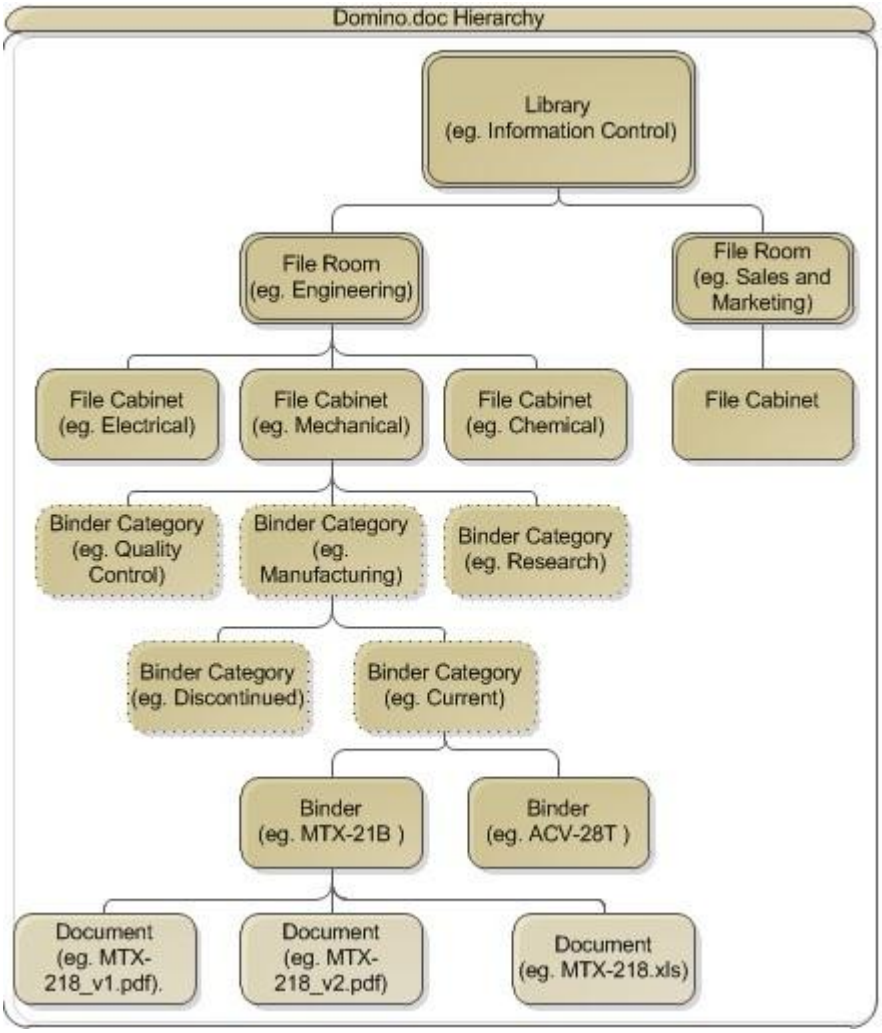


Figure: Domino.doc Hierarchy

The following image shows the same sample hierarchy as it can be configured in DOCOVA using the Communities and Realms feature discussed earlier. DDM Libraries are mapped to Communities. DDM File Rooms are mapped to Realms. DDM File Cabinets are mapped to DOCOVA Libraries. DDM Binder Categories and Binders are mapped to Folders. DDM Documents are mapped to DOCOVA Documents.

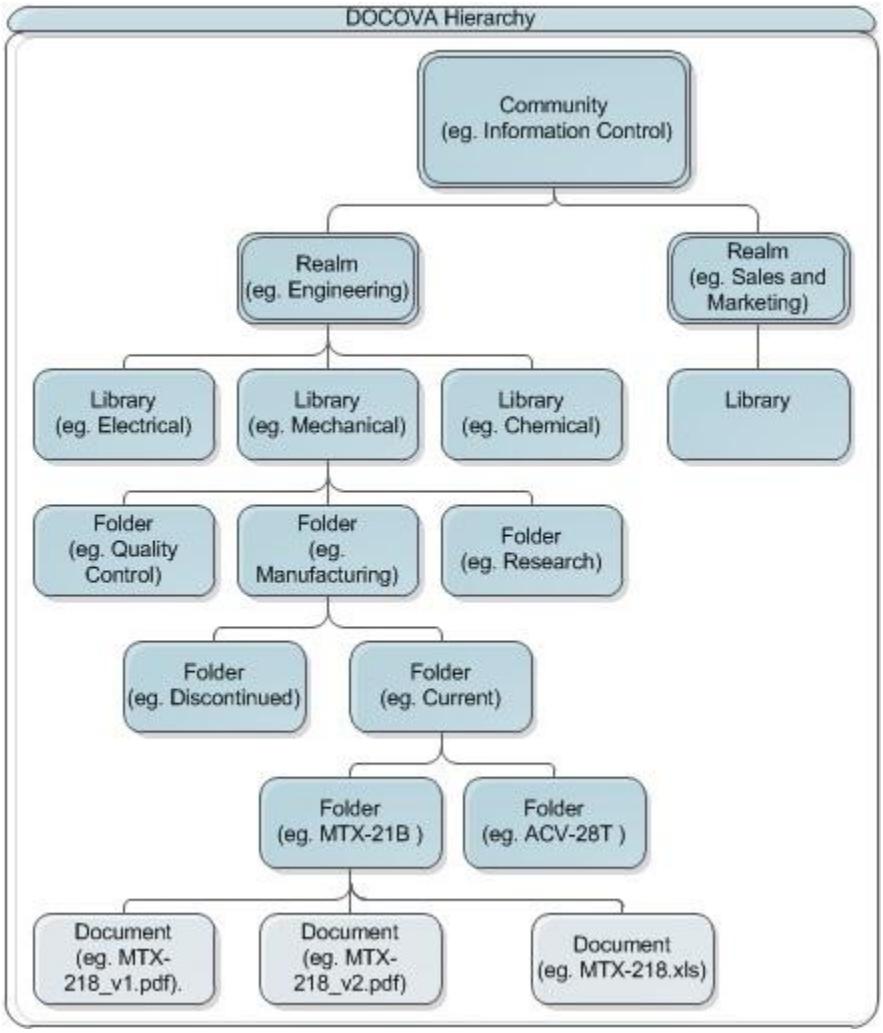


Figure: DOCOVA Hierarchy

The nice thing is that DOCOVA doesn't enforce the use of Communities and Realms, unlike DDM which required Library and File Rooms which in many cases made for an overly complex taxonomy for many companies.

One of the key items of interest to customers migrating from DDM to DOCOVA is the ability to streamline and simplify their taxonomies. DOCOVA allows for the migration of the DDM data without losing any fidelity but allows for the easy manipulation and re-organization of information post migration to simplify and improve information classification.

Step 4 – Migrate > Documents for Selected Libraries

The Migrate Documents for Selected Libraries process creates documents within the destination library based on the DDM documents contained in the IIUI DDM Migrator working database.

Only data for the DDM Cabinets selected is migrated.

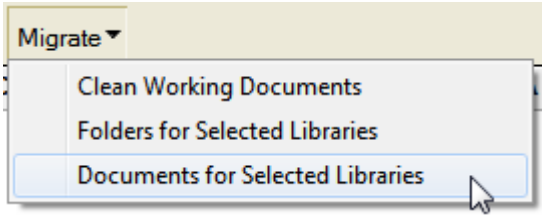
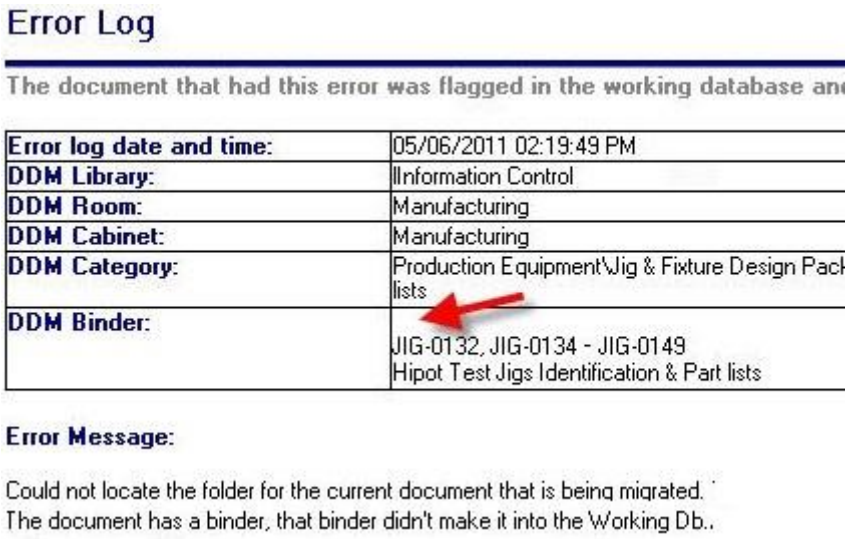


Figure: Migrate Documents

The import process typically takes a comparable amount of time to the amount of time it took to extract data from DDM to the IIUI DDM Migrator Working database. The time to extract and import is dependent primarily on the number of binders and documents rather than the total size of the data.)

Step 5 – Review Migration Errors

The DOCOVA Migration Manager will log any exceptions in the Error Logs view. Following the import review the error log to see if any errors were generated. Review the error message and details of the DDM data being migrated.



Error Log

The document that had this error was flagged in the working database an

Error log date and time:	05/06/2011 02:19:49 PM
DDM Library:	Information Control
DDM Room:	Manufacturing
DDM Cabinet:	Manufacturing
DDM Category:	Production Equipment\Jig & Fixture Design Pack lists
DDM Binder:	JIG-0132, JIG-0134 - JIG-0149 Hipot Test Jigs Identification & Part lists

Error Message:

Could not locate the folder for the current document that is being migrated.
The document has a binder, that binder didn't make it into the Working Db..

Figure: Migration Error

Depending upon the number of errors and type of errors it may be necessary to delete the migrated data from DOCOVA and re-perform the migration after resolving the issue that caused the error.

Alternately, if the number of documents skipped by the migration are low, it may be simpler to migrate those documents manually.

If the number of documents skipped by the migration is too large to handle manually but not large enough to require a full re-import, it may be advisable to re-import a specific binder. To do this we can use the feature in the IIUI Migrator to target a specific Binder. Create a new migration profile that targets just the DDM binder to be re-imported and extracts the data to a different working database and a different local storage path.

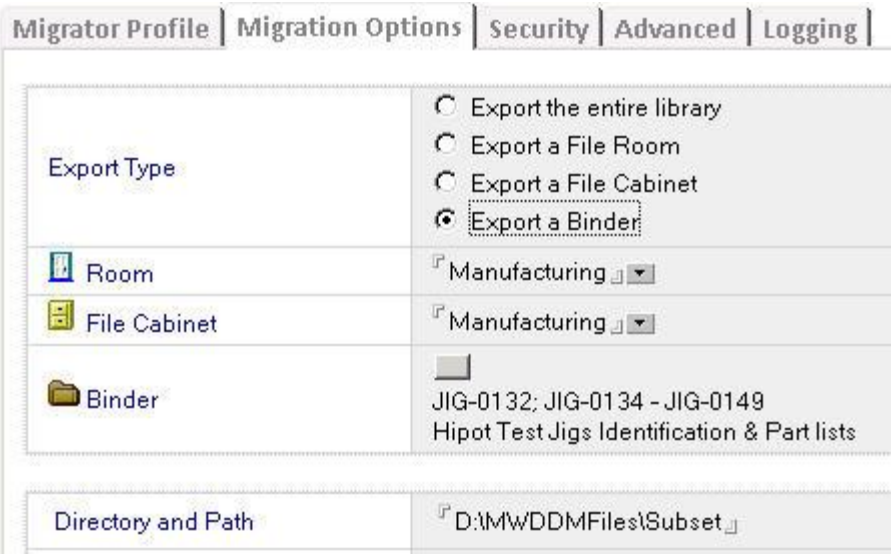


Figure: Targeting a Specific Binder

This will generate an extract containing just the binder taxonomy and the documents contained in the binder.

Perform any cleanup that might be necessary on the data within the Working database before re-importing it. (eg. run custom agents against the data to make modifications)

Delete the existing folder in DOCOVA (if it had been created from previous ‘bad’ data).

Delete the Binder Category records in the working database. This is required because we don’t want the import to try and re-create those Folders in DOCOVA. The only folder we wanted created is the one that we deleted from DOCOVA.

This should result in a working view that contains the File Cabinet taxonomy information and just the single binder chosen.

Modify the DOCOVA Migration Manager library mapping to point to the new working database containing the binder and documents, and then re-run the migration of folders and documents to DOCOVA.

7. Reviewing Final Migrated Data

The completion of this process should result in a migrated folder structure within DOCOVA that matches the DDM taxonomy. In addition, the DOCOVA folders should contain the migrated documents.

Figure: Migrated Folders

Figure: Migrated Documents

Review the resulting folder structure and migrated documents to ensure that they match the expected results.

Once the data is within DOCOVA re-arranging the folder structure taxonomy can be done easily by cutting/pasting folders and documents, and by renaming folders.