



# Preservation Guide

Version 7.0

## CONFIDENTIAL INFORMATION

The information herein is the property of Ex Libris Ltd. or its affiliates and any misuse or abuse will result in economic loss. DO NOT COPY UNLESS YOU HAVE BEEN GIVEN SPECIFIC WRITTEN AUTHORIZATION FROM EX LIBRIS LTD.

This document is provided for limited and restricted purposes in accordance with a binding contract with Ex Libris Ltd. or an affiliate. The information herein includes trade secrets and is confidential

## DISCLAIMER

The information in this document will be subject to periodic change and updating. Please confirm that you have the most current documentation. There are no warranties of any kind, express or implied, provided in this documentation, other than those expressly agreed upon in the applicable Ex Libris contract. This information is provided AS IS. Unless otherwise agreed, Ex Libris shall not be liable for any damages for use of this document, including, without limitation, consequential, punitive, indirect or direct damages.

Any references in this document to third-party material (including third-party Web sites) are provided for convenience only and do not in any manner serve as an endorsement of that third-party material or those Web sites. The third-party materials are not part of the materials for this Ex Libris product and Ex Libris has no liability for such materials.

## TRADEMARKS

"Ex Libris," the Ex Libris Bridge to Knowledge , Primo, Aleph, Voyager, SFX, MetaLib, Verde, DigiTool, Rosetta, bX, URM, Alma , and other marks are trademarks or registered trademarks of Ex Libris Ltd. or its affiliates.

The absence of a name or logo in this list does not constitute a waiver of any and all intellectual property rights that Ex Libris Ltd. or its affiliates have established in any of its products, features, or service names or logos.

Trademarks of various third-party products, which may include the following, are referenced in this documentation. Ex Libris does not claim any rights in these trademarks. Use of these marks does not imply endorsement by Ex Libris of these third-party products, or endorsement by these third parties of Ex Libris products.

Oracle is a registered trademark of Oracle Corporation.

UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Ltd.

Microsoft, the Microsoft logo, MS, MS-DOS, Microsoft PowerPoint, Visual Basic, Visual C++, Win32, Microsoft Windows, the Windows logo, Microsoft Notepad, Microsoft Windows Explorer, Microsoft Internet Explorer, and Windows NT are registered trademarks and ActiveX is a trademark of the Microsoft Corporation in the United States and/or other countries.

Unicode and the Unicode logo are registered trademarks of Unicode, Inc.

Google is a registered trademark of Google, Inc.

# Table of Contents

---

	Updates to This Guide.....	7
<b>Part I</b>	<b>Introduction</b>	
<b>Chapter 1</b>	<b>Introducing Rosetta Preservation .....</b>	<b>11</b>
	Purpose of the Preservation Module .....	11
	Preservation Sub-modules .....	11
	<i>Format Library</i> .....	12
	<i>Risk Analysis</i> .....	12
	<i>Preservation Planning</i> .....	12
	<i>Preservation Execution</i> .....	12
	Preservation Terminology .....	13
	Process Flow .....	14
	<i>Advanced Preservation Workflow</i> .....	14
	<i>Basic Preservation Workflow</i> .....	16
	Staff Roles .....	16
	Consortial Versus Institutional Scope.....	16
	Format Library Updates .....	17
<b>Part II</b>	<b>Preservation Libraries</b>	
<b>Chapter 2</b>	<b>Format Library .....</b>	<b>21</b>
	The Format Library.....	21
	Updating a Format Library Version .....	22
	Format Library Audit Trail .....	24
	Working with Formats.....	26
	<i>Viewing and Editing Formats</i> .....	28
	Managing Local Risk identifiers.....	39
	Editing the Global Format Library.....	43
	<i>Adding and Editing Global Formats</i> .....	43
<b>Chapter 3</b>	<b>Application Library .....</b>	<b>53</b>
	Application Library .....	53
	<i>Accessing the List of Applications</i> .....	53

	<i>Viewing or Editing Application Details</i> .....	55
	Global Application Library .....	63
	<i>Applications in the Global Library</i> .....	64
	<i>Actions from the Global Applications Page</i> .....	65
<b>Chapter 4</b>	<b>Significant Properties</b> .....	<b>71</b>
	Significant Properties in the Local Library .....	71
	<i>Viewing Significant Properties</i> .....	72
	Significant Properties at the Global Library Level.....	73
	<i>Adding and Editing Significant Properties</i> .....	74
<b>Chapter 5</b>	<b>Classification Group Library</b> .....	<b>77</b>
	Classification Groups .....	77
	<i>Classification Groups</i> .....	78
	Global Classification Group Library.....	82
	<i>Editing Global Classification Groups</i> .....	84
<b>Chapter 6</b>	<b>Metadata Extractor Library</b> .....	<b>87</b>
	Introducing the Metadata Extractors Library.....	87
	List of Metadata Extractors .....	87
	Managing Custom Metadata Extractors .....	89
 <b>Part III Risk Analysis</b>		
<b>Chapter 7</b>	<b>Risk Analysis Overview</b> .....	<b>93</b>
	Risk Analysis and Preservation.....	93
	Types of Risks .....	93
	Identifying Risks .....	94
	<i>Ongoing Risk Identification</i> .....	94
	<i>Risk Identification Scheduled Process</i> .....	94
	<i>Ongoing Risk Analysis</i> .....	95
	Generating Risk Reports.....	95
	<i>Risk Reports</i> .....	95
	Preservation Sets.....	95
<b>Chapter 8</b>	<b>Risk Analysis and Reports</b> .....	<b>97</b>
	Risk Identification.....	97
	Scheduling Risk Analysis .....	98
	<i>Scheduling the Risk Analysis Report Job</i> .....	98

---

	<i>Cancelling the Risk Analysis Report Job</i> .....	100
	Global Risks .....	101
	<i>View</i> .....	102
	<i>Research Set</i> .....	102
<b>Chapter 9</b>	<b>Creating Preservation Sets</b> .....	<b>105</b>
<b>Part IV Plan Configuration</b>		
<b>Chapter 10</b>	<b>Plan Configuration Overview</b> .....	<b>111</b>
	Plan Configuration in Preservation .....	111
	Configuration Stages.....	111
	Preservation Plan Components .....	112
<b>Chapter 11</b>	<b>Configuration Procedures</b> .....	<b>115</b>
	Preparations for Creating a Plan .....	115
	Building a Preservation Plan.....	115
	<i>A Plan from a Preservation Set</i> .....	116
	<i>Evaluation Criteria</i> .....	121
	Adding Plan Alternatives.....	125
	Editing Alternatives .....	134
	Descriptor File.....	135
	<i>Generation</i> .....	135
	<i>Contents</i> .....	136
	<i>Validation</i> .....	138
<b>Part V Testing and Execution</b>		
<b>Chapter 12</b>	<b>Preservation Testing</b> .....	<b>141</b>
	Preparing Preservation Plans.....	141
	<i>Planning and Testing Process Flow</i> .....	141
	<i>Viewing Risk Reports</i> .....	142
	<i>Creating a Preservation Set</i> .....	144
	<i>Creating a Preservation Plan</i> .....	147
	Testing a Preservation Plan.....	148
	<i>Creating a Test Set</i> .....	148
	<i>Viewing and Editing a Preservation Plan</i> .....	152
	<i>Adding Alternatives</i> .....	156
	<i>Running a Test</i> .....	162

<b>Chapter 13</b>	<b>Preservation Plan Execution .....</b>	<b>173</b>
	Executing a Preservation Plan .....	173
	Evaluating Execution Results .....	180
<b>Chapter 14</b>	<b>Resolving Technical Issues .....</b>	<b>185</b>
	Handling Technical Issues During Testing.....	185
	<i>Handling Technical Issues at a Non-Validation Stage .....</i>	<i>186</i>
	<i>Handling Technical Issues at the Validation Stage .....</i>	<i>187</i>
	Handling Technical Issues During Plan Execution .....	189
 <b>Part VI Storage Migration</b>		
<b>Chapter 15</b>	<b>Storage Migration .....</b>	<b>193</b>
 <b>Part VII Basic Preservation Plan</b>		
<b>Chapter 16</b>	<b>Basic Preservation Plan.....</b>	<b>199</b>
	Creating a Preservation Set .....	199
	Creating a Preservation Plan – Basic Workflow .....	201
	Executing the Basic Preservation Plan.....	205
<b>Appendix A</b>	<b>Preservation Action Flow Diagram .....</b>	<b>207</b>

---

## Updates to This Guide

This guide is being reissued due to the following changes:

- The description of the Alternative Type row in **Table 27 Alternative Wizard Step 1 Fields** on page 128 was updated.
- **Figure 146 List of Execution History Page** on page 183 was updated.
- **Figure 149 List of Problematic IEs** on page 187 was updated.



# Part I

---

## Introduction

This part contains the following:

- **Chapter 1: Introducing Rosetta Preservation** on page 11



# 1

---

## Introducing Rosetta Preservation

This section includes:

- **Purpose of the Preservation Module** on page 11
- **Preservation Sub-modules** on page 11
- **Preservation Terminology** on page 13
- **Process Flow** on page 14
- **Staff Roles** on page 16
- **Consortial Versus Institutional Scope** on page 16
- **Format Library Updates** on page 17

### Purpose of the Preservation Module

Rosetta's Preservation module provides an environment in which large stores of digital data can be stored and managed.

The Preservation module supports all the preservation-related activities in Rosetta. The purpose of these activities is to

- provide the institution with the tools to describe the possible risks in the repository
- locate the population at risk
- create plans to eliminate these risks, and
- execute these plans for the material at risk.

### Preservation Sub-modules

The solution contains the following sub-modules:

- **Format Library** on page 12

- **Risk Analysis** on page 12
- **Preservation Planning** on page 12
- **Preservation Execution** on page 12

## Format Library

The Format Library allows the institution to describe in greater detail information related to formats, format properties, and applications. Using this network of information, the institution can then determine the risks associated with each format.

Another motivation for the Format Library is to establish the mechanism of a global knowledge base that will be maintained by all Rosetta users and manage the format-related information. For every institution that implements Rosetta, there will be a local copy of the set of libraries in which the relations between the formats, applications, and risk identifiers can be managed. This way, there will be no need to recreate the entire knowledge base for each institution.

## Risk Analysis

The Risk Analysis sub-module controls the processes (both automated and manual) that are performed to measure the risk status of the repository. Based on the results of these processes, users can create sets of objects that will be handled by the Preservation Planning sub-module.

## Preservation Planning

The Preservation Planning sub-module provides Preservation Analysts with the tools to:

- gather and track information regarding preservation activities
- perform tests and evaluations
- make decisions regarding the best approach to take in order to preserve objects that are at risk

## Preservation Execution

The Preservation Execution sub-module creates new representations for the IEs that contain files at risk. At the end of the process, a new version of each IE is created and the latest version of each representation is risk-free.

This functionality is also used in the greater Rosetta application for adding one representation to one IE at a time. This is called Add Representation and is performed in the Web Editor. (For more information, see the *Rosetta Staff User's Guide*.)

## Preservation Terminology

The following key terms are used throughout this guide.

### Application Library

The Application Library contains all of the data regarding applications: name, ID, license end-date, and so forth. Each application can be related to one or more formats. The Application Library is managed globally (exposed to all installations of Rosetta) and some information is managed in each installation. The connections between the Format Library and the Application Library are managed locally, but new applications (as new formats) should be added or removed in the global libraries.

### Bitstreams

Since files at risk can be stored in Rosetta as part of byte streams (for example, a WARC file that contains many HTML and image files), the preservation plan should be able to create sets that can include these files and process them.

### Classification Group

Since significant properties are usually shared between multiple formats, the classification group is a way to aggregate these common properties so that they will be connected to all the relevant formats.

### Format Library

The Format Library contains all of the data regarding formats: name, description, related applications, related risks, and sustainability factors. Some of the information is managed globally (exposed to all installations of Rosetta) and some of it can be managed locally (stored within the local DB of the institution). In the local library, data can be added but not removed.

### Preservation Plan

The preservation plan is a structured workflow used by the Preservation Analyst (PA) to handle objects that are at risk. The workflow takes the PA through the stages of gathering documentation and general information, creating the preservation set, defining the suggested alternatives, running tests, and summarizing the results.

### Preservation Plan Alternative

Advanced preservation plans can have more than one alternative in order to ensure success. For example, the same plan may have two migration utilities that convert the source format to the target format. Each one of these is saved as

an alternative, and the workflow allows the user to evaluate each utility and add information that is relevant for the utility being evaluated.

For basic preservation plans, no alternatives are needed.

### Preservation Plan Execution

After the institution signs off on the plan, the plan can be executed with no need to go through testing and defining the exact material. The plan's execution can be scheduled in advance or launched immediately.

### Preservation Set

A Preservation set is a set of intellectual entities (IEs) that is defined during the first stage of the preservation planning. The set starts as a logical set and becomes an itemized set every time a preservation plan is executed.

### Risk Grading

This routine processes each file that is loaded into the repository and checks whether or not it is at risk. The risk grading is part of the SIP processing, but it can run separately as part of the process automation mechanism.

### Risk Identifiers List

The Risk Identifiers List displays all the risks that can be identified by the system. The risk can be either a query on the file attributes that put the file at risk (existing technical metadata) or a tool that extracts the technical metadata that describes the problem. Each format can be related to one or more risk identifiers.

## Process Flow

There are two preservation workflows available:

- Advanced – Includes performing a format risk analysis and defining alternative preservation plans.
- Basic – You create a set of files, select a migration tool, and execute the plan. No format risks or alternative plans are necessary.

### Advanced Preservation Workflow

The following diagram shows the various aspects of the Advanced Preservation Workflow:

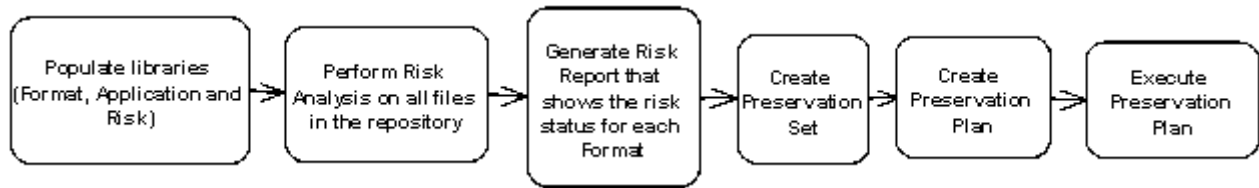


Figure 1: Advanced Preservation Workflow

The following is an explanation of the stages depicted in the above diagram:

- **Populate Libraries (Format, Application, Classification, and Risk)** – Each of these libraries can be managed through the UI.
- **Perform a Risk Analysis** – The risk analysis process is part of the SIP processing so that each file that is inserted into the repository is measured for risks. The process can be run for the files that are already in the repository as well.
- **Generate a Risk Report** – The report is generated on demand or by schedule and shows the risk status of the repository. Opening this report is the first step in creating a preservation plan.
- **Create a Preservation Set** – From the risk report, the flow moves the analyst toward creating a preservation set that is based on a format and a risk. The set can be honed or narrowed down by adding conditions to the search query.
- **Create a Preservation Plan** – Once a preservation set is created, the analyst can create a plan that is built around the preservation set.
- **Execute the Preservation Plan** – After the plan has been tested and the preferred alternative has been selected, the plan is signed-off on. It is then ready to be executed on the entire preservation set. The plan can be executed every time there is a need (when there is a population of files at risk that match the preservation set search criteria). Once the plan is signed-off on, it cannot be changed.

See the following sections for more information on the advanced preservation workflow:

- **Preservation Libraries** on page 19
- **Risk Analysis** on page 91
- **Plan Configuration** on page 109
- **Testing and Execution** on page 139
- **Storage Migration** on page 191

## Basic Preservation Workflow

The following diagram shows the various aspects of the Basic Preservation Workflow:

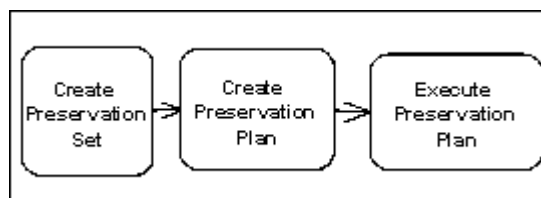


Figure 2: Basic Preservation Workflow

- Create a Preservation Set – The workflow starts by creating a preservation set of files.
- Create a Preservation Plan – Once a preservation set is created, the analyst can create a plan that is built around the preservation set.
- Execute the Preservation Plan – After the plan is created it can be signed-off on and executed. There is no testing or alternatives involved.

For more information on the Basic Preservation Workflow, see [Basic Preservation Plan](#) on page 199.

## Staff Roles

Tasks in the Preservation module are performed by several different roles. Each role has its own set of rights and limitations. Specifically:

- Preservation Analysts can do everything except Sign Off and Reject Plan
- Preservation Managers can do everything including Sign Off and Reject Plan
- Editors (View, Typical, or Full) perform Test Evaluation
- Technical Analysts are needed for handling technical issues (this role is not automatically assigned to a Preservation Analyst or Preservation Manager)

## Consortial Versus Institutional Scope

The Preservation module distinguishes between what users of a consortial scope versus users of an institutional scope can view and manage. It also distinguishes between what information remains exclusive to one institution and what information may be shared across institutions belonging to the same consortium.

A consortium login has access to consortium-level tests, plans, executions, and risk reports including those of all member institutions.

An institution has access to its own tests, plans, executions, risk reports, and failures (of IEs to load).

Signed-off plans from one institution can be seen and used by other institutions from the same consortium.

## Format Library Updates

Prior to version 3.0 of Rosetta, the updating of Format Libraries occurred only during an upgrade or service pack release of the Rosetta software. In order to add flexibility and expediency to updates, the Format Library can now be updated whenever there is a need to. Because the frequency will vary from Format Library version to another, Rosetta contains within its Preservation module the means for managing the Format Library updates.

As with previous versions, a global or master copy is maintained by a group of Rosetta users who consult on general format changes and specific requests from other Rosetta users for recognition of format changes. Once changes are implemented, a newer version of the master copy is packaged and distributed.

Individual libraries may customize their Format Libraries and retain their changes during upgrades.



# Part II

---

## Preservation Libraries

This part contains the following:

- **Chapter 2: Format Library** on page 21
- **Chapter 3: Application Library** on page 53
- **Chapter 4: Significant Properties** on page 71
- **Chapter 5: Classification Group Library** on page 77
- **Chapter 6: Metadata Extractor Library** on page 87



# 2

---

## Format Library

This section includes:

- [The Format Library](#) on page 21
- [Updating a Format Library Version](#) on page 22
- [Format Library Audit Trail](#) on page 24
- [Working with Formats](#) on page 26
- [Managing Local Risk identifiers](#) on page 39
- [Editing the Global Format Library](#) on page 43

### The Format Library

The Format Library serves as a knowledge base for all of the information regarding the different formats that are stored by Rosetta. This knowledge base allows users to manage their repositories and plan Preservation-related activities. It allows users to associate risks and metadata extraction tools with the different formats defined in PRONOM and other registries.

The Format Library uses a master copy that is maintained by one or more Rosetta Preservation Managers, who update the library collectively as needed and distribute it to all libraries through an export task. All other Rosetta libraries can import the latest Format Library version on an as-needed bases, and they can customize their version and maintain customizations during updates.

The Local Format Library is based on the Global Format Library. The local version includes all of the formats, risks, and so forth of the global version, but local users can make institution-based changes and adjustments to those components that only impact their local library.

## Updating a Format Library Version

Format Library versions are released by the Format Library Working Group (FLWG). These versions are independent of the Rosetta application version. Unless stated otherwise, all supported Rosetta versions can use any of the released Format Library versions.

Rosetta runs a scheduled job to determine when a new version is available. Depending on whether this job is set to download or auto-install, Rosetta will send an email notification to a designated address (see the *Rosetta System Administration Guide*, [Table 11](#)) either with a message that a version is available for (manual) installation, or that a new version has been installed (or, if an error occurred, that the installation has failed). For further information about configuring the Format Library Updates job, see the *Rosetta System Administration Guide*, [Table 22](#).

The list of available Format Library versions can be found under **Preservation > Global Format Library > Manage Format Library Version**.

The screenshot shows the 'Manage Format Library Version' page. It features a table of available versions, a deployment history section, and manual operations options.

Available Versions				
	Version	Release Date		
New!	5.5094	17/04/2019	Update	Release Notes

Deployment History

No available deployment history

Manual Operations

- Manual Import Format Library File
- Export Format Library

Back

Figure 3: Format Library Versions

The Format Library Versions page contains a list of versions of the Format Library. You can update to the latest version and roll back to an old version. Click **Release Notes** to download the release notes for a version.

You can update the Format Library version from the package downloaded by Rosetta, or you can provide your own package (a modified package for testing purposes, for example).

### To update using a downloaded version:

- 1 Click **Install** next to the version to which you want to update (12.8 in the example).

A confirmation box informs you that you are about to update to the latest version of the Format Library. You may cancel out at this point by clicking **Cancel**.

- 2 To proceed with the update, click **Confirm**.

A status box displays a progress bar, percent completed, and the tasks that are being performed for the library update. When the task is complete, the message Format Library Import Completed!(100%) displays.

The Action column contains a **Reinstall** link, which allows you to reinstall that version of the Format Library.

For the previous version, the Action column contains the **Rollback** link, which allows you to rollback to that previous version.

- 3 Click **Close** to close the status box.

Your Format Library is updated with the most current version.

### To update to the latest version manually:

- 1 Under the Manual Operations heading, click **Manual Import Format Library File**.

The Manual Import Format Library File form opens.

- 2 Click the **Browse** button.

A Windows File Upload dialog box opens.

- 3 Select the Format Library file from your hard drive or from a server where it resides.

---

#### NOTE:

The Format Library file must have the following name pattern:  
YYYY-MM-DD\_RELEASEVERSION.zip.

---

- 4 Click the **Import** button on the form.

A status box displays a progress bar, percent completed, and the tasks that are being performed for the library update. When the task is complete, the message Format Library Import Completed!(100%) displays.

- 5 Click **Close** to close the status box.

Your Format Library is updated to the version you imported.

## Format Library Audit Trail

The Format Library audit trail captures changes that were enacted from a previous version of the Format Library to the present version. Included in the audit trail is information relevant to a change event such as the internal version of the library (distinct from the version of the software), date of the change, before/after values for an element or field, reason for the change, name of the user who initiated or implemented the change. This trail is available from a link on the main Preservation menu as well as, for each format or element, a History tab on the format's or element's page.

Preservation Analysts can view the Format Library Audit Trail page by following the menu **Preservation > Advanced Preservation Activities > View Audit Trail**. Users can view the history of their local library and/or the audit trail of the global records as they are imported as part of each Format Library version.

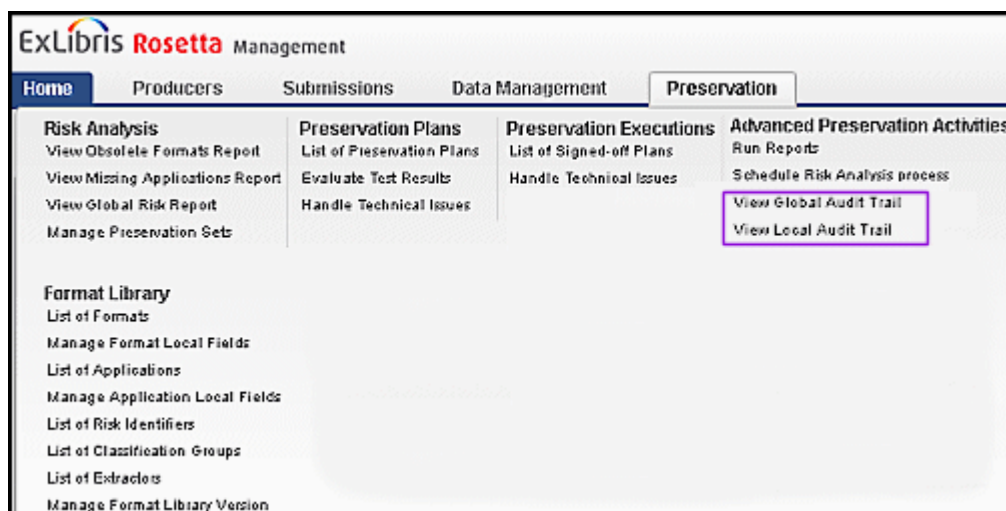


Figure 4: ViewAudit Trail on Preservation Menu

The Format Library Audit Trail opens to the Format Changes tab (see [Figure 5, Format Changes Tab of the Audit Trail Page](#)).

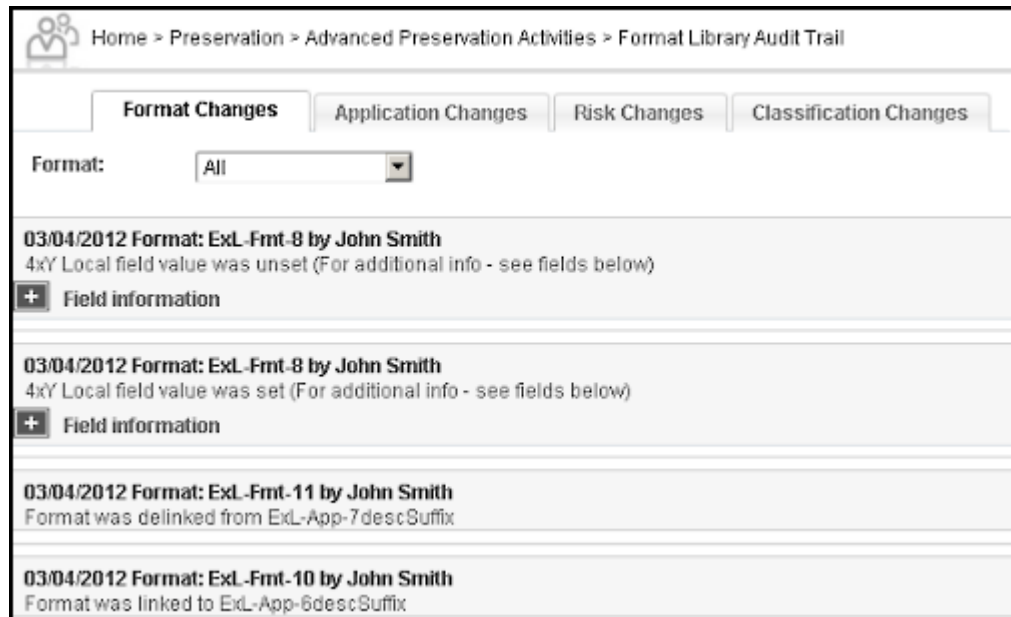


Figure 5: Format Changes Tab of the Audit Trail Page

Each format change appears in a row headed by date and format name. A summary of the changes follows. A plus (+) sign beside **Field information** indicates more information is available if you click the sign (see [Figure 6, Expanded Field Information](#)).



Figure 6: Expanded Field Information

To find a specific format from the list, use the **Format** drop-down menu:

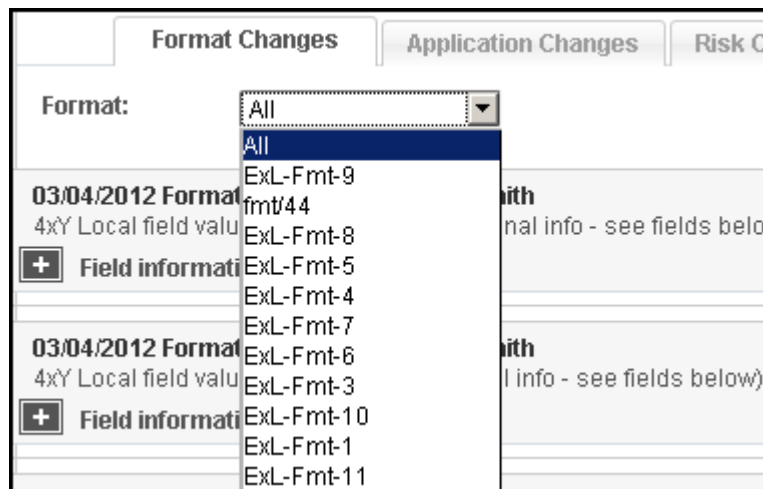


Figure 7: Format Drop-Down Menu Filter

Additional changes can be viewed by clicking the other tabs on the page:

- Application Changes
- Risk Changes
- Classification Changes

## Working with Formats

Users can make institution-based changes and adjustments to some components that impact their library.

To access information about the formats in the Format Library, follow the menu path **Preservation > Format Library > List of Formats**.

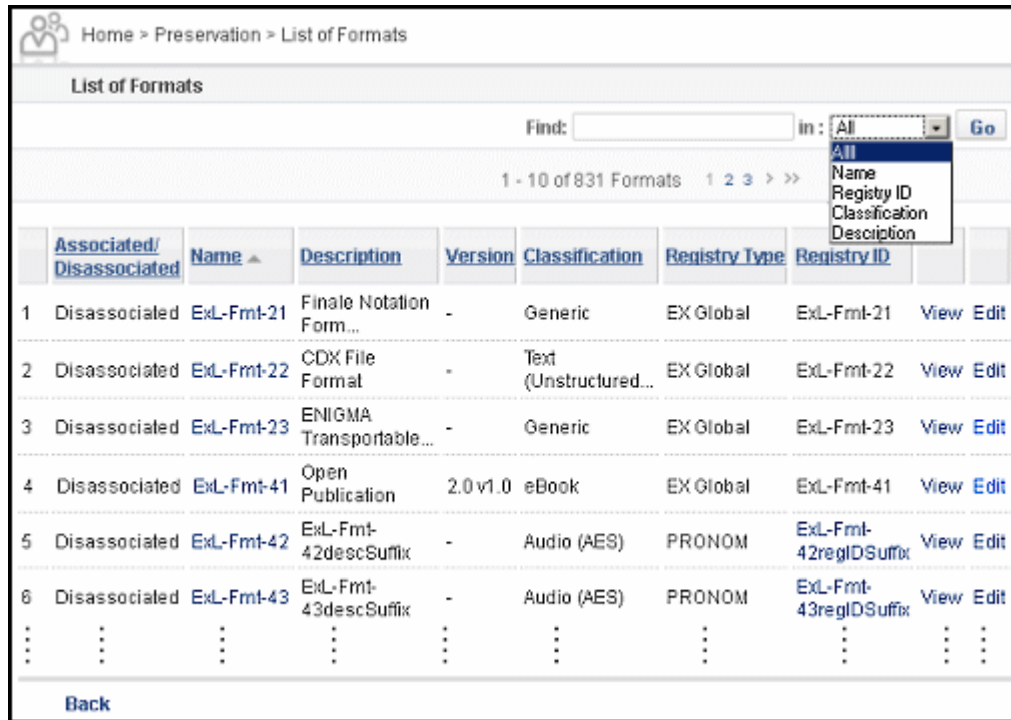


Figure 8: List of Formats (dots indicate entries not shown)

The List of Formats opens with the following columns containing information for each format:

Table 1. List of Formats

Column	Description
<b>Associated/Disassociated</b>	Indicates whether the format is associated with applications in the Format Library.
<b>Name</b>	The name of the format, either the PRONOM name or the name from the Preservation format library.
<b>Description</b>	The common name of the format
<b>Classification</b>	The Classification Group to which the format belongs
<b>Registry Type</b>	The registry used to name the format
<b>Registry ID</b>	The ID of the format in the registry

The number of items shown out of the total number of items shows above the columns, along with navigation page numbers and arrows.

To search for a format in the List of Formats, type a term or keyword in the **Find** box near the top of the page, select the field to search, and click **Go**.

---

**NOTE:**

Click the Registry ID of the format (if it is linked/clickable) to see the information on the Registry ID in the UK National Archives Web site.

---

## Viewing and Editing Formats

To view or edit a format, click **View** or **Edit** in the row of the format you want to examine. A page for that individual format opens with six tabs containing information for it. Some information can be edited or adjusted for the institutional library.

The following tabs are available for viewing and/or editing:

- **General Details** on page 28
- **Related Applications** on page 34
- **Risk Identifiers** on page 35
- **Sustainability Factors** on page 50
- **Notes** on page 50
- **History** on page 50

---

**IMPORTANT:**

The following discussion presents formats in edit mode for the institutional library. View mode contains the same information but is completely read-only. For information on edits to the master or global library, see **Adding and Editing Global Formats** on page 43.

---

### **General Details**

The General Details tab displays format information and allows users to select a metadata extractor.

Figure 9: Editing Formats/MD Extractor

The information presented on this tab includes the fields from the List of Formats (see [Table 1](#) on page 27) and fields described in the following table:

Table 2. General Details

Field	Description
<b>Version</b>	The version number of the format
<b>File Extensions</b>	The file extension associated with the format
<b>Mime type</b>	A file format identifier of the format
<b>MD Extractor</b>	The metadata extractor used with the format
<b>Obsolete</b>	Indicates if the format is obsolete

Additional fields and values may appear in the Technical Details section.

Users can change the metadata extractor for the format (if there are options available) by clicking the **MD Extractor** drop-down menu, selecting an option, and clicking **Apply** or **Save**. For more information on metadata extractors, see [Metadata Extractor Library](#) on page 87.

### Adding Fields to General Details

Although the metadata extractor is the only value that can be edited on the General Details tab, you can create additional custom fields to appear in a separate section on the page. Once added, a custom field appears on the General Details tab for every format. Institutions outside the consortium cannot see the customization of institution(s) within it.

#### To add a field to the General Details tab for formats:

- 1 From the Preservation roll-over menu, select **Manage Format Local Fields** under the Format Library heading.

The Manage Format Local Fields page opens.

The screenshot shows a web interface for adding new format local fields. At the top, there is a breadcrumb trail: Home > Preservation > Format Library > Manage Format Local Fields. Below this is a section titled 'New Format Local Fields details'. This section contains several input fields: 'Instructions' (a text box), 'Field Description' (a larger text area), and 'Value UI Type' (a dropdown menu currently showing 'TextField'). Below these is a 'Code Table Name' dropdown menu and a 'Create New Table' button. At the bottom of this section are 'Back' and 'Add' buttons. Below the 'New Format Local Fields details' section is another section titled 'List of Format Local Fields definitions'.

Figure 10: New Format Details Form

- 2 Use the following table to enter values in the required fields.

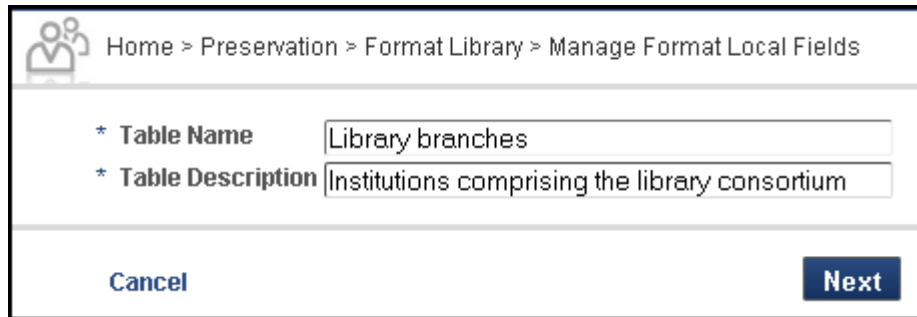
Table 3. Adding Local Fields

Field	Description	UI Placement
Instructions	Tells the user how to enter information in the field	First line of field entry, followed by text box, drop-down, etc.

Table 3. Adding Local Fields

Field	Description	UI Placement
Value UI Type	The type of data the user will enter: select text box, combo box, etc.	Next to the Instructions, the field type specified appears.
Field Description	Describes the field	Second line of field entry.

- 3 For data types requiring two or more pre-set values for a user to choose, select an existing code table from the **Code Table Name** field. If you don't see the pre-set values that you need in the existing list, create your own code table using the following procedure:
  - a Click the **Create New Table** button.  
A form for the table name and description opens.



The screenshot shows a web interface for managing local fields. At the top, there is a breadcrumb trail: Home > Preservation > Format Library > Manage Format Local Fields. Below this, there are two required fields: '\* Table Name' with the value 'Library branches' and '\* Table Description' with the value 'Institutions comprising the library consortium'. At the bottom of the form, there are two buttons: 'Cancel' and 'Next'.

Figure 11: Adding a code table

- b Enter a name and description of the code table and click the **Next** button.  
The code table form opens. The table name and description you entered populate those fields.

Home > Preservation > Format Library > Manage Format Local Fields > Code Tables

Languages: English

**Table Information**

Sub System: All Table Name: Library branches  
Updated by: Ex Libris Updated on: Fri Apr 06 19:00:35 IDT 2012  
Table Description: Institutions comprising the library consortium

**Code Table Rows**

Export Import

Enabled	Display Order	Code	Description	Default Value	Last Updated
---------	---------------	------	-------------	---------------	--------------

Create a New Code Table Row

Code	Description	Language	Default Value	<input type="checkbox"/>	Create
------	-------------	----------	---------------	--------------------------	--------

Cancel Save

Figure 12: Code Table Creation Page

- c To classify the code table within a sub-system, select an entry from the **Sub System** drop-down menu.
- d Enter a code and description in the new code table row. Enter an optional language and, if you want this value to be the default on the form, click the **Default Value** check box. Click **Create** and repeat this step until you have entered all the values for this field.

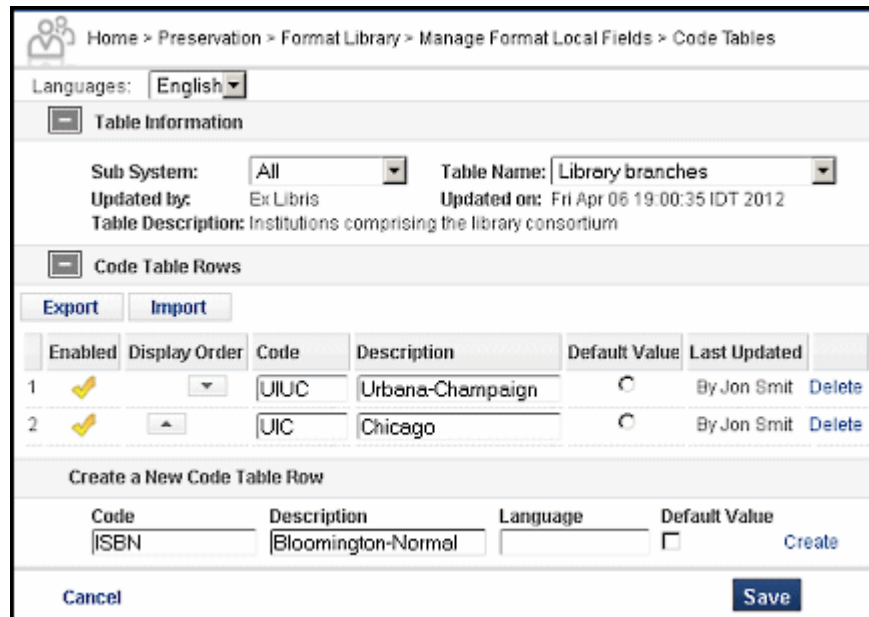


Figure 13: Code Table with Entries

- e In the Code Table Rows section, to change the order of the values as they will appear to the user, click the up and down arrows. To disable a value, click its yellow check mark.
  - f When your code table is complete, click the **Save** button.
- 4 Select the code table you want to use from the **Code Table Name** drop-down menu.

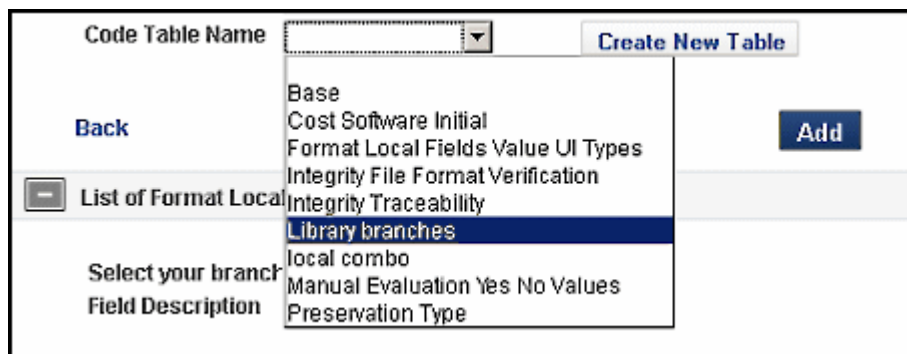


Figure 14: Code Table Name drop-down menu

- 5 When you have entered all required fields, click the **Add** button. The system adds your local field(s). They are now part of the format template in the local section (see [Figure 15, New Local Information Fields in General Details](#)).

The screenshot shows a web-based interface for managing format libraries. The 'General Details' tab is active, displaying a list of fields for the format 'ExL-Fmt-27'. The 'Local Information' section is highlighted with a purple box and contains the following fields:

- Select your branch:** Radio buttons for 'Urbana-Champaign' (selected), 'Chicago', and 'Bloomington-Normal'.
- Field Description:** Text field containing 'This institution is responsible for maintaining this format at the local level.'
- Select a code:** A dropdown menu.
- Field Description:** Text field containing 'Code A or Code B'.

At the bottom of the form, there are 'Cancel', 'Apply', and 'Save' buttons.

Figure 15: New Local Information Fields in General Details

### **Related Applications**

Applications can be associated with the formats with which they operate. To view or change the activation status of applications related to the format, click the **Related Applications** tab. All applications related to the rendering of the format appear in a table.

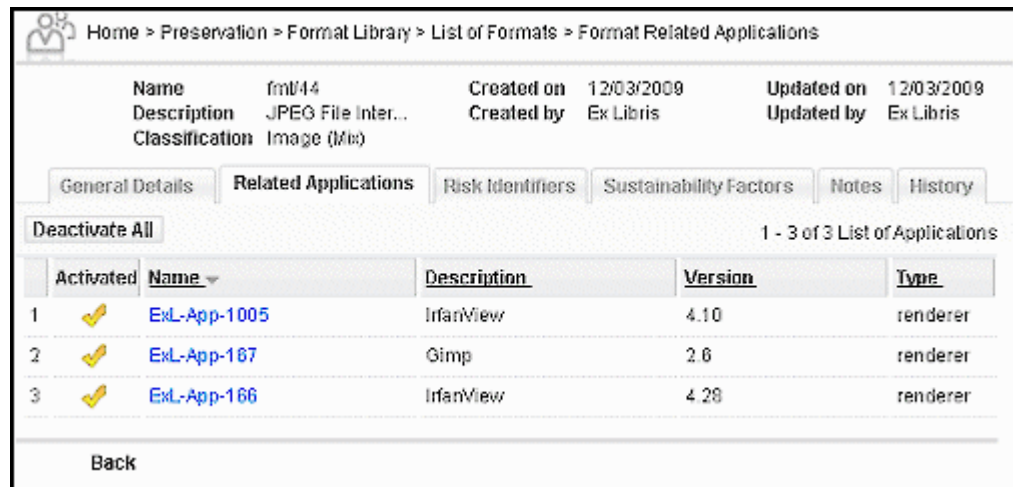


Figure 16: Editing Related Applications

To change the status of an application from Activated to Deactivated or vice versa, click the check mark in the **Activated** column. To deactivate all applications associated with the format, click the **Deactivate All** button.

### Adding Fields to Related Applications

Just as you can add fields related to your library's formats, you can add fields to your library's related applications. The custom fields appear in the Local section of the Related Applications tab. For more details about this feature, see the Applications Library chapter of this guide.

For information on how to add a field, follow the instructions for [Adding Fields to General Details](#) on page 30.

### Risk Identifiers

A Risk Identifier flags a perceived risk to the viability of a format. The risk may be a result of a format or format parameter becoming deprecated or obsolete (property- or tool-driven).

To view or change the activation status of risk identifiers, click the **Risk Identifiers** tab. (The following is an image of global risk identifiers. For information on local risk identifiers, see [Managing Local Risk identifiers](#) on page 39.)

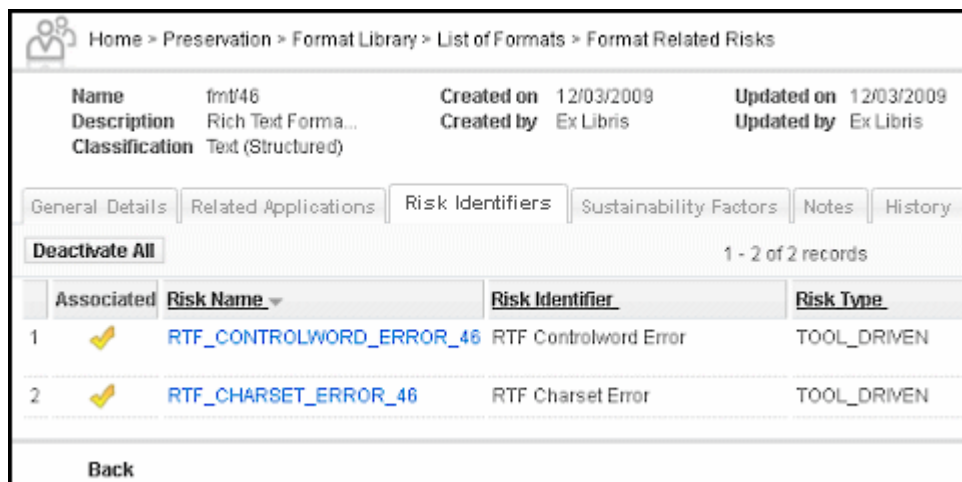


Figure 17: Editing Risk Identifiers (Global)

The following information is displayed:

Table 4. List of Risk Identifiers

Field	Description
<b>Risk Name</b>	The name of the risk identifier
<b>Risk Identifier</b>	A description of the risk identifier
<b>Risk Type</b>	Whether the risk is based on a property of the format or the tool used with the format

To change the status of an a risk from Activated to Deactivated or vice versa, click the check mark in the **Activated** column. To deactivate all risks associated with the format, click the **Deactivate All** button.

### Sustainability Factors

Sustainability factors describe a format’s fitness for use in the future preservation of digital objects, including factors of cost, stability, longevity, ease of implementation, self-documentation, and external dependencies. For more information, see <http://www.digitalpreservation.gov/formats/sustain/sustain.shtml>.

To access sustainability factors in the Preservation module, click the **Sustainability Factors** tab. The List of Sustainability Factors opens.

Home > Preservation > Format Library > List of Formats > Format Sustainability Factors

Name	fmt46	Created on	12/03/2009	Updated on	12/03/2009
Description	Rich Text Forma...	Created by	Ex Libris	Updated by	Ex Libris
Classification	Text (Structured)				

General Details | Related Applications | Risk Identifiers | **Sustainability Factors** | Notes | History

**Adoption**  
Field Description: [Major market share (BWF)]  
Field Description: A good chunk of market share (JPEG2000)  
Field Description: Major market share (BWF)  
Field Description: Very little market share, boutique format  
Note: [ ]

**Base format**  
Field Description: [A ubiquitous format rendered by most applications]  
Field Description: Is this the base format (a ubiquitous format which is likely to be rendered by most applications?)  
Note: [ ]

**Documentation Availability**  
Field Description: [Held elsewhere, but available]  
Field Description: The availability of any documentation.  
Note: This setting was previously institution has copy.

**Documentation Quality**  
Field Description: [Excellent clarity and coverage.]  
Field Description: The institution's comfort level with the documentation. Does it cover all the important information of the composition of the format?  
Note: [ ]

**Format stability**  
Field Description: [Relates to relationship of adoption, application updates, backwards compatibility and size of institutions comment on how stable they perceive the format to be. "Stable" for example would be limited backwards compatibility, "unknown" is for new formats.]  
Note: [ ]

**Standardisation**  
Field Description: [Widely used and accepted as a standard]  
Field Description: The type of standard of the format. De Jure, Defacto, none. Defacto is a relatively subjective term, but involves adoption.  
Note: [ ]

Cancel [Apply] [Save]

Figure 18: Sustainability Factors

For each factor, you can select a an option from the corresponding drop-down menu and/or enter text in the **Note** field. Clicking **Apply** saves your changes without taking you from the page. Clicking **Save** saves your changes and returns you to the List of Formats page..

## Notes

You can leave general notes about the format in the Notes tab.

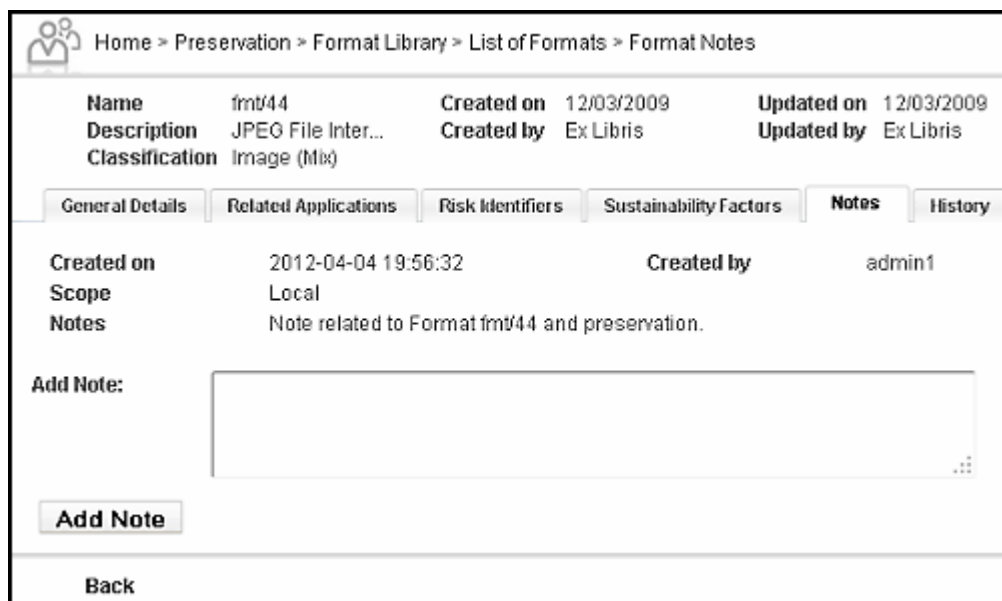


Figure 19: Notes

The following information is displayed:

Table 5. Notes

Field	Description
Created on	The date the note was created
Scope	Whether the note is global or local in scope
Notes	The text of the note
Created by	The user that created the note

To add a note, type the note in the **Add Note** text box and click the **Add Note** button.

**NOTE:**

Once created, notes cannot be edited or deleted.

**History**

The History tab shows information about any changes made to the format since your library's initial adoption from the master format library.



Figure 20: History Tab

Each change is listed by date and by the staff who supervised the changes. For additional details about the change to the field, click the plus sign (+) next to **Field information**. Specific information will open below.

## Managing Local Risk identifiers

You can add and edit local risk identifiers.

To view or edit risk identifiers for the format, click the **Risk Identifiers** tab in the local format library. Risk identifiers are displayed in a table below the tabs.

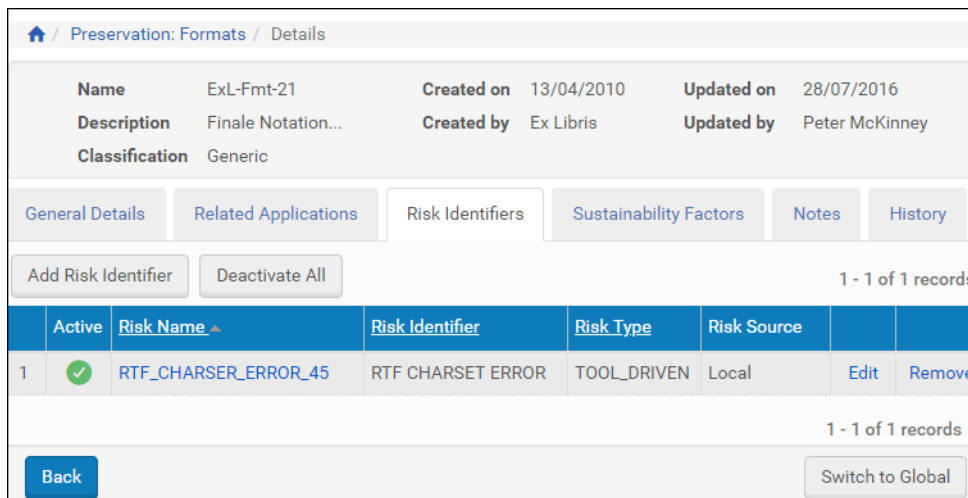


Figure 21: Editing Risk Identifiers

The following information is displayed:

Table 6. List of Risk Identifiers

Field	Description
<b>Active</b>	Click to activate / deactivate the risk identifier
<b>Risk Name</b>	The name of the risk identifier
<b>Risk Identifier</b>	A description of the risk identifier
<b>Risk Type</b>	Whether the risk is based on a property of the format or the tool used with the format
<b>Risk Source</b>	Indicates if the source of the risk is global or local

**To add a new risk identifier:**

- 1 Click **Add Risk Identifier**. The Risk General Details page opens.

The screenshot shows a web interface for adding a risk identifier. The breadcrumb path is 'Preservation: Formats / Details'. There are two tabs: 'General Details' and 'Risk Parameters', with 'Risk Parameters' being the active tab. The form contains the following fields and controls:

- \* Name**: A text input field.
- Risk Identifier**: A text input field.
- Risk Type**: Two radio buttons, 'Property Driven' (selected) and 'Tool Driven'.
- Format**: A text input field containing 'ExL-Fmt-21'.
- Plug-In**: A dropdown menu.
- Review Date**: A date input field with the placeholder 'dd/MM/yyyy' and a calendar icon.

At the bottom right, there are 'Cancel' and 'Save' buttons.

Figure 22: Adding Risk Identifiers

- 2 Fill in the fields according to the following table

Table 7. Add Risk Identifier

Field	Description
Name	The name of the risk identifier
Risk Identifier	A description of the risk identifier
Risk Type	Whether the risk is based on a property of the format or the tool used with the format
Format	The format with which the risk is identified
Plug-in	The plug-in used to extract the metadata of the Object. Can be selected only if Risk Type=Tool Driven.
Review Date	The date of the risk review

- 3 Click **Save**.
- 4 Click the **Risk Parameter** tab. The following window is displayed:

The screenshot shows a web interface for adding risk parameters. The breadcrumb path is 'Preservation: Formats / Details'. There are two tabs: 'General Details' and 'Risk Parameters'. The 'Risk Parameters' tab is selected. Below the tabs, there are three columns: 'Characteristic', 'Operator', and 'Parameter'. Under 'Characteristic', there is a dropdown menu with 'File Software Version' selected. Under 'Operator', there is a dropdown menu with '=' selected. Under 'Parameter', there is an empty text box. To the right of these fields is an 'Add Criterion' button. At the bottom right of the window are 'Cancel' and 'Save' buttons.

Figure 23: Adding Risk Parameters

- 5 Select a **Characteristic** from the drop-down list. (Characteristics are defined in the Related Properties tab of the Classification Groups Library. See [Editing Related Properties](#) on page 84 for more information.)
- 6 Select an **Operator** from the drop-down list.
- 7 Type a Parameter in the **Parameter** text box.
- 8 Click **Add Criterion**.
- 9 Click **Save**.  
The risk identifier has been defined for the format.

#### To edit a risk identifier:

- 1 In the List of Risk Identifiers, click **Edit** in the row of the risk identifier you want to edit. Rosetta displays risk identifier information for that row.
- 2 Edit the information. Use the information in [Table 8](#) if you have questions about the fields.
- 3 Click the Save button to save changes, Cancel to leave the page without committing changes.
- 4 If you want to change the information click **Remove** and add new information.
- 5 Click **Add Criterion**.
- 6 Click **Save**.

## Editing the Global Format Library

Only a small number of Rosetta users maintain the global library database. This section discusses the master copy of the Format Library and how to maintain it.

**NOTE:**

Local changes to the Global Format Library are overwritten by the Global Format Library update and should be submitted to the Format Library Working Group (FLWG) in order to be properly integrated in the Global Format Library. To enable access to the Global Format Library, see the **General Parameters** table of the *Rosetta System Administration Guide*.

### Adding and Editing Global Formats

Formats can be added to the Global library, but they cannot be removed.

To add a new format to the Format Library, or to edit information for an existing one, access the List of Formats from Manage Global Format Library heading on the Preservation roll-over menu.



Figure 24: List of Formats for the Global Library

The List of Formats page opens (see [Figure 25, Searching for a Specific Format](#)).

Click the **Add Format** button to create an entirely new format. To edit a format, first find the format you want to change by browsing the pages or conducting a search using the **Find** field. Then click **Edit** in the row of the format you want to change.

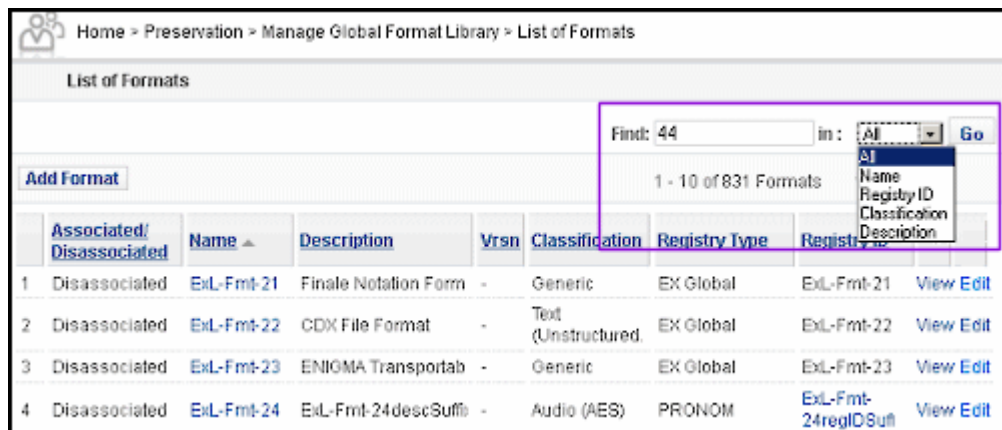


Figure 25: Searching for a Specific Format

### General Details

The General Details tab displays the format information in editable fields.

Home > Preservation > Format Library > Manage Format Local Fields > Format General Details

<b>Name</b>	fmt/44	<b>Created on</b>	12/03/2009	<b>Updated on</b>	12/03/2009
<b>Description</b>	JPEG File Inter...	<b>Created by</b>	Ex Libris	<b>Updated by</b>	Ex Libris
<b>Classification</b>	Image (Mix)				

**General Details** | Related Applications | Risk Identifiers | Sustainability Factors | Notes | History

\* **Name** fmt/44  
\* **Description** JPEG File Interchange Format  
**Version** 1.02  
**Other Names** JPEG, JFIF(1.02)  
**File Extensions** jpg,jpe,jpeg  
**Mime Type** image/jpeg  
**Registry Type** PRONOM  
\* **Registry ID** fmt/44  
**Classification** Image (Mix)  
**MD Extractor** JPEG-hul (JPEGHULMDEExtractorPlugin)  
**Obsolete**  Yes  No  
**End Support Date** DD MM YYYY  
**Developer** C-Cube Microsystems  
**Supported By**

**Technical Details**

**Orientation** Binary  
**Character Encoding**  
**Byte Order** Big-endian(Motorola)  
**Byte Sequence**  
**Release Date** 09 01 1992  
**Dependencies**  
**Documentation**

Cancel Switch to Local Apply Save

Figure 26: General Details Form, Global Library View

Enter information for a new format or change existing values. Use [Table 1, List of Formats](#) and [Table 2, General Details](#) for specific information about the fields.

**NOTE:**

All fields can be edited except for format name. For a new format, the system generates the format name.

When you have completed adding or editing information in the fields, click **Save**.

## Related Applications

This section explains how to associate an application with a format. For detailed information on the applications themselves, see [Application Library](#) on page 53

To see applications related to the format you selected, click the **Related Applications** tab for the format.

Name	Description	Created on	Updated on
fmt/44	JPEG File Inter...	12/03/2009	12/03/2009
		Created by	Updated by
	Image (Mix)	Ex Libris	Ex Libris

General Details | **Related Applications** | Risk Identifiers | Sustainability Factors | Notes | History

**Add Application** Application Type:  1 - 3 of 3 List of Applications

	Name	Description	Version	Type	
1	ExL-App-166	IrfanView	4.28	renderer	Remove
2	ExL-App-167	Gimp	2.6	renderer	Remove
3	ExL-App-1005	IrfanView	4.10	renderer	Remove

[Back](#) [Switch to Local](#)

Figure 27: Applications Associated with Format 44

Applications that are associated with the format appear in a table.

To disassociate an application that should no longer be associated with the format, click the **Remove** text in the application's row.

### To add an application that should be associated with the format:

- 1 Select your **Application Type** from the drop-down list at the top of the table. (In the above figure, the options are **Renderer** and **Converter**.)
- 2 Click the **Add Application** button.

The List of Applications page opens. To find a specific application, use the **Find** search box or browse using the numbers and arrows above the table.

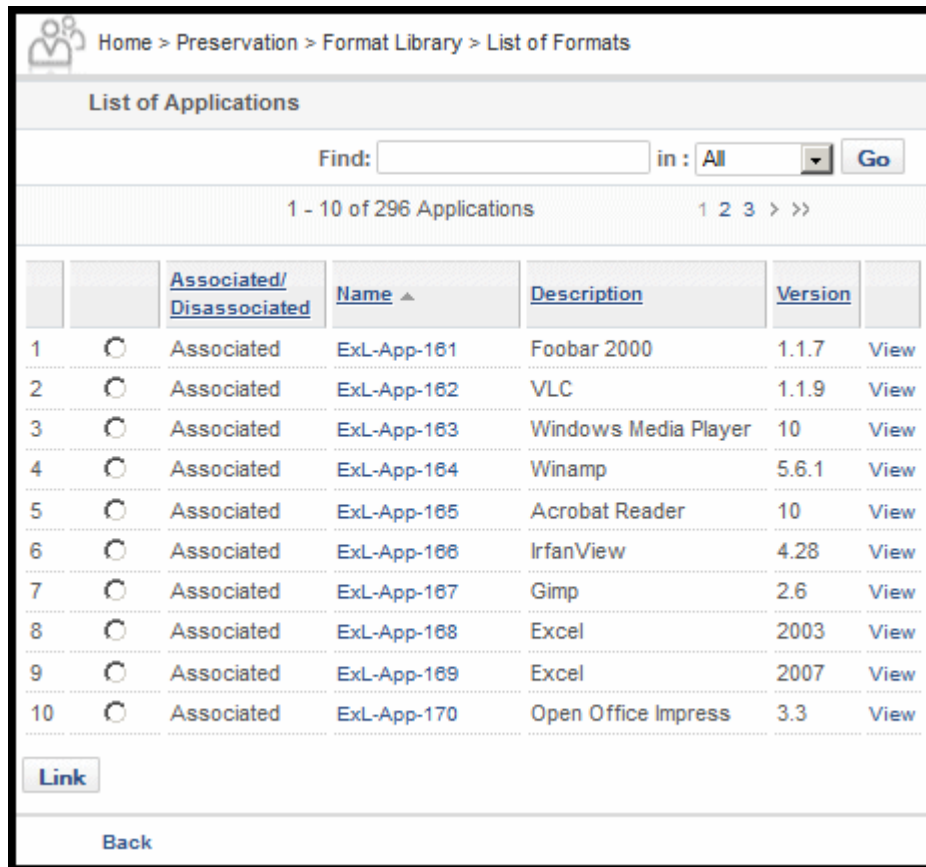


Figure 28: Associating Applications

- 3 Select the radio button next to the application you want to associate with the format.
- 4 Click the **Link** button below the table.  
The new association appears in the List of Applications.
- 5 Click **Save** to save the new association.

### **Risk Identifiers**

To view or edit risk identifiers for the format, click the **Risk Identifiers** tab. Risk identifiers are displayed in a table below the tabs.

Name	fm/45	Created on	12/03/2009	Updated on	12/03/2009
Description	Rich Text Forma...	Created by	Ex Libris	Updated by	Ex Libris
Classification	Text (Structured)				
General Details   Related Applications   <b>Risk Identifiers</b>   Sustainability Factors   Notes   History					
<a href="#">Add Risk Identifier</a> <span style="float: right;">1 - 2 of 2 records</span>					
Risk Name	Risk Identifier	Risk Type			
1 RTF_CHARSET_ERROR_45	RTF Charsset Error	TOOL_DRIVEN	Edit	Remove	
2 RTF_CONTROLWORD_ERROR_45	RTF Controlword Error	TOOL_DRIVEN	Edit	Remove	

Figure 29: Editing Risk Identifiers

**To add a new risk identifier:**

- 1 Click **Add Risk Identifier**. The Risk General Details page opens.

Home / Preservation: Formats / Details

General Details | **Risk Parameters**

\* Name

Risk Identifier

Risk Type  Property Driven  Tool Driven

Format ExL-Fmt-21

Plug-In

Review Date

Cancel Save

Figure 30: Adding Risk Identifiers

2 Fill in the fields according to the following table

Table 8. Add Risk Identifier

Field	Description
Name	The name of the risk identifier
Risk Identifier	A description of the risk identifier
Risk Type	Whether the risk is based on a property of the format or the tool used with the format
Format	The format with which the risk is identified
Plug-in	The plug-in used to extract the metadata of the Object. Can be selected only if Risk Type=Tool Driven.
Review Date	The date of the risk review

3 Click **Save**.

4 Click the **Risk Parameter** tab. The following window is displayed:

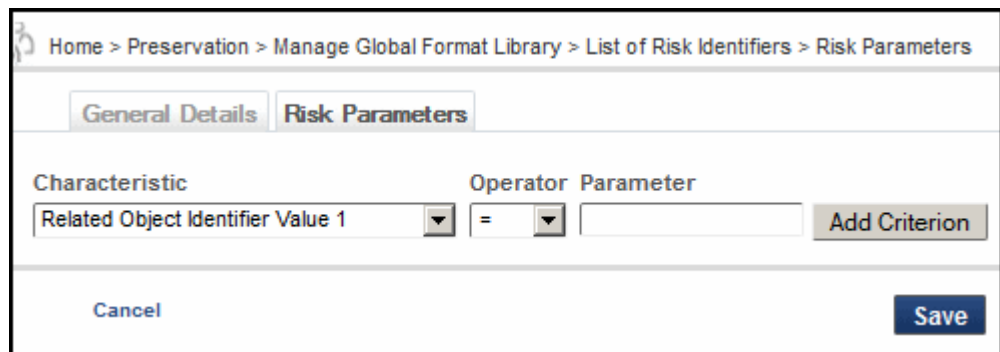


Figure 31: Adding Risk Parameters

5 Select a **Characteristic** from the drop-down list. (Characteristics are defined in the Related Properties tab of the Classification Groups Library. See [Editing Related Properties](#) on page 84 for more information.)

6 Select an **Operator** from the drop-down list.

7 Type a Parameter in the **Parameter** text box.

8 Click **Add Criterion**.

9 Click **Save**.

The risk identifier has been defined for the format.

#### **To edit a risk identifier:**

- 1 In the List of Risk Identifiers, click **Edit** in the row of the risk identifier you want to edit. Rosetta displays risk identifier information for that row.
- 2 Edit the information. Use the information in **Table 8** if you have questions about the fields.
- 3 Click the Save button to save changes, Cancel to leave the page without committing changes.
- 4 If you want to change the information click **Remove** and add new information.
- 5 Click **Add Criterion**.
- 6 Click **Save**.

#### **Sustainability Factors**

Sustainability Factors function in the same way in the global library as they do in the regular (or local) library. For information, see **Editing Sustainability Factors** on page 68.

#### **Notes**

The Notes tab contains any notes about the format. It functions in the same way in the global library as it does in the regular (or local) library. For information, see **Notes** on page 50.

---

#### **NOTE:**

Once created, notes cannot be edited or deleted.

---

#### **History**

The History tab displays the history of changes to the selected format. Global history shows the changes made to the application on the global level; local history shows changes made to the current local library.

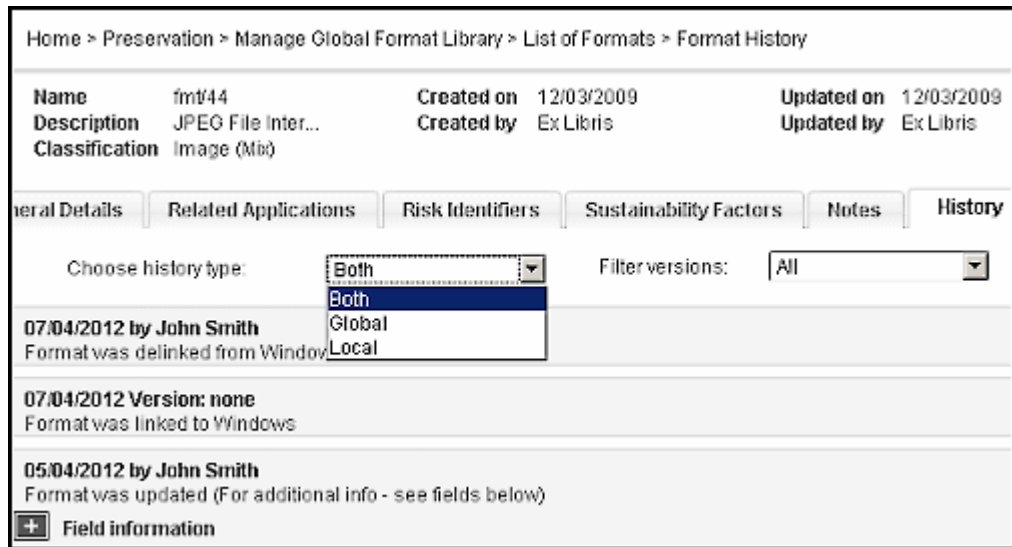


Figure 32: Global History Tab

Global library stewards can view all global and local library histories. They can also view the history by library version.



# 3

---

## Application Library

This section includes:

- **Application Library** on page 53
- **Global Application Library** on page 63

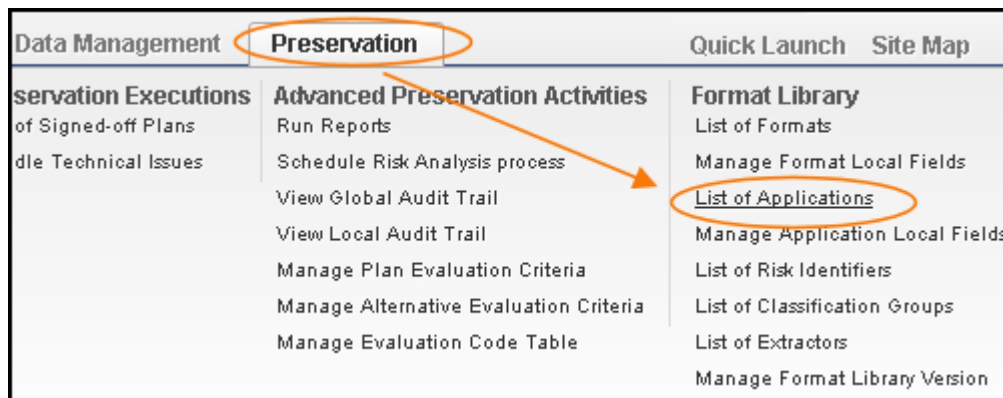
### Application Library

The Application Library serves as a knowledge base of information regarding the different applications that are used by an institution. This knowledge base allows users to manage the repository and plan preservation-related processes.

The Application Library has a local branch for each institution. The local branch is an extension of the global Application Library, containing the master list of applications along with customizations for the particular institution.

### Accessing the List of Applications

To access the Application Library, from the Rosetta Management Home page, click the Preservation heading, then **Format Library > List of Applications**.



The List of Applications page opens (Figure 33).

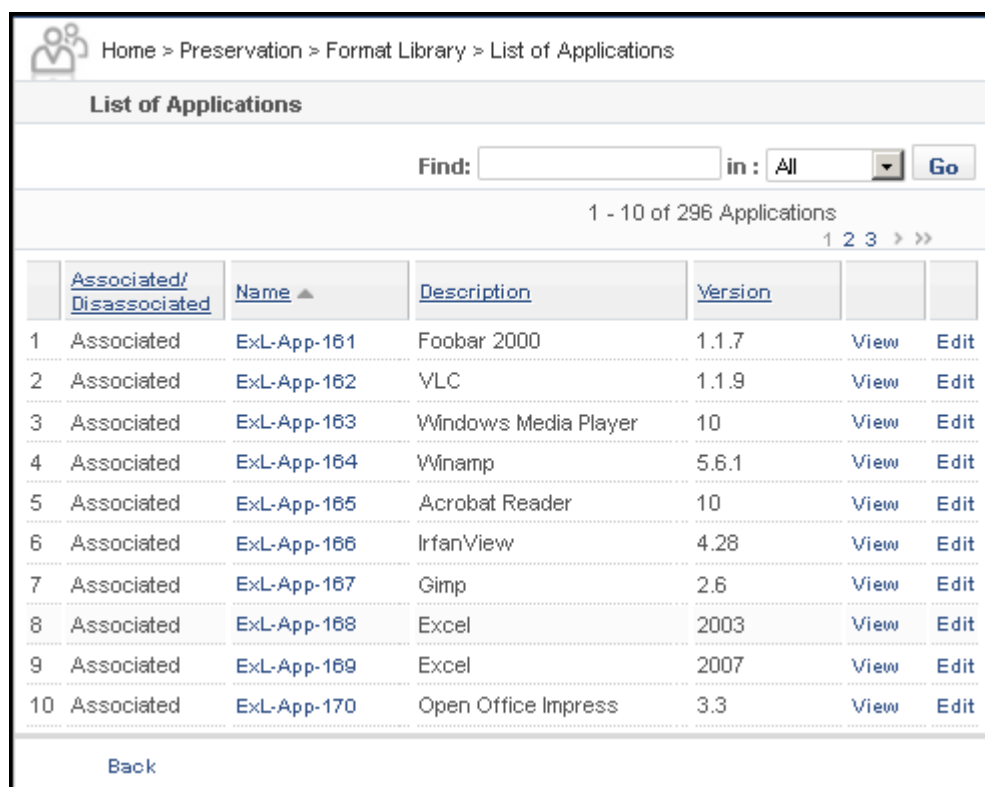


Figure 33: List of Applications

The List of Applications provides information described in [Table 9](#).

Table 9. List of Applications

Column	Description
Associated/Disassociated	Indicates if the application is associated with a format in the system
Name	The PRONOM name of the application
Description	The common name of the application
Version	The version of the application

To search for an application in the List of Applications, enter text in the search box, select the field to search, and click **Go**.

## Viewing or Editing Application Details

View the details of an application by clicking the application name or by clicking the **View** text in the row of the application name (see [Figure 33](#)).

Figure 34: Local Applications

If fields have been added to the this tab for your institution’s library, you can add or edit information in the fields by clicking the **Edit** text in the row of the application (see [Figure 33](#)).

The General Details tab opens for the application.

### General Details

Rosetta opens to the General Details tab when you first view or edit an application from the list. In addition to the information displayed in the List of Applications (see [Table 9](#) on page 55), the following information appears:

Table 10. General Details

Field	Description
License Type	Indicates whether the application is licensed or open source
Registry Type	Indicates the registry used to name the format
Registry ID	The ID of the format in the registry
Support End Date	The date support of the application ends
Role List	The list of roles that the application can play, either Rendering, Migration, or both.
Deployment	Whether the application is deployed locally on each PC or at a central location.

Information unique to your institution can be added if local fields have been added in the database. If your Preservation staff has added one or more field(s), a plus sign appears beside the **Local** heading bar (see [Figure 34](#)). To view any such fields, click the plus sign.

The Local heading bar opens to display any additional fields (see [Figure 36](#)). To add or edit an existing value, enter a value in the field and click the **Save** button.

---

**NOTE:**

To add a local field to the list of default fields, see [Adding Fields to General Details](#) on page 56.

---

### Adding Fields to General Details

As with local format fields, you can create local application fields for the General Details tab. These appear in a separate section below the default fields. Once added, a custom field appears on the General Details tab for every application. Institutions outside the consortium cannot see the customization of institution(s) within it.

**To add a field to the General Details tab for applications:**

- 1 From the Preservation roll-over menu, select **Manage Application Local Fields** under the Format Library heading.

The Manage Application Local Fields page opens.

Figure 35: New Application Details Form

- 2 Use the following table to enter values in the required fields.

Table 11. Adding Local Fields

Field	Description	UI Placement
Instructions	Tells the user how to enter information in the field	First line of field entry, followed by text box, drop-down, etc.
Value UI Type	The type of data the user will enter: select text box, combo box, etc.	Next to the Instructions, the field type specified appears.
Field Description	Describes the field	Second line of field entry.

- 3 For data types requiring two or more pre-set values for a user to choose, select an existing code table from the **Code Table Name** field. If you don't see the pre-set values that you need in the existing list, create your own code table using the procedure described in Step 3 on page 30 of the **Format Library** chapter.
- 4 Select the code table you want to use from the **Code Table Name** drop-down menu.

- 5 When you have entered all required fields, click the **Add** button.

The system adds your local field(s). They are now part of the format template in the local section (see [Figure 36, Local Fields Expanded on General Information Tab](#)).

Application - General Information

<b>Name</b>	ExL-App-163	<b>Created on</b>	16/06/2011	<b>Updated on</b>	01/07/2011
<b>Description</b>	Windows Media P...	<b>Created by</b>	Ex Libris	<b>Updated by</b>	Peter McKinney

**General Details** | Related Formats | Sustainability Factors | Notes | History

**Name** ExL-App-163  
**Description** Windows Media Player  
**Version** 10  
**License Type** Licensed  
**Registry Type** EX Global  
**Registry ID** ExL-App-163  
**Support end Date** -  
**Role List** render  
**Deployment** -  
**Alias** -  
**Family** Windows Media Player, Audio player  
**Default File Format** -

**Local Fields**

**Preservation type** Preservation Master  
**Field Description** The type of preservation

Cancel Apply Save

Figure 36: Local Fields Expanded on General Information Tab

### **Related Formats**

The Related Formats tab displays formats associated with the application (see [Figure 37](#)). None of the fields on this tab can be edited. However, you can activate or deactivate a format's association with an application.

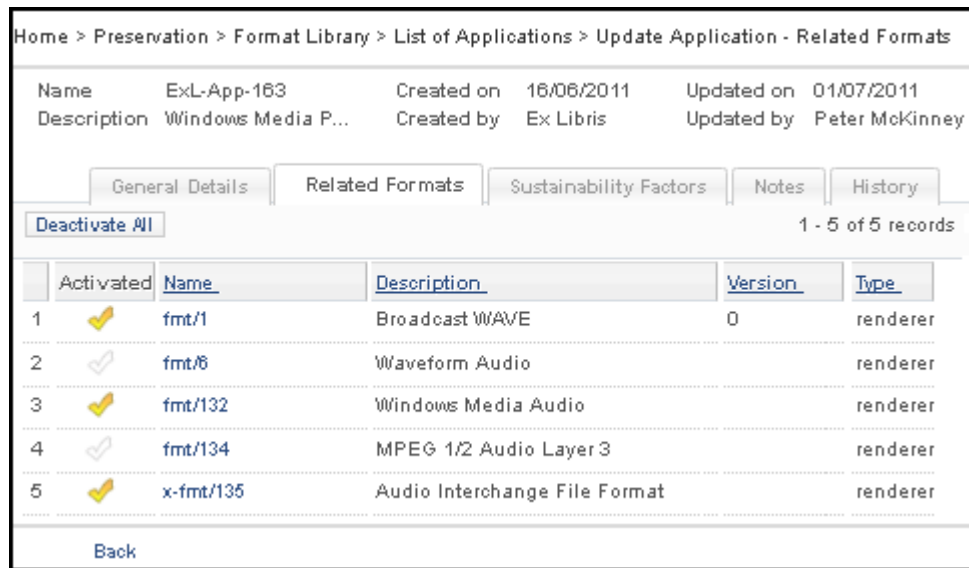


Figure 37: Related Formats

The following information is provided on the Related Formats tab:

Table 12. Related Formats

Field	Description
<b>Activated</b>	Indicates if the association between format and application is active
<b>Name</b>	The name of the application
<b>Description</b>	A description of the application
<b>Version</b>	The version number of the application
<b>Type</b>	The type of application

Activated formats show a yellow check mark in the **Activated** column, deactivated formats show a clear check mark.

To activate, click a clear check mark in the **Activated** column of the format's row. The system opens a Notes page. You must enter a note in the field before proceeding. Click **Next**, and the page refreshes with the format activated (the clear check mark turned yellow).

To deactivate, starting with a yellow check mark, click the check mark, enter a note in the required **Note** field, then click **Next**.

**NOTE:**

You can deactivate the association of all the formats listed on this tab by clicking the **Deactivate All** button.

### ***Sustainability Factors***

The Sustainability Factors tab poses questions and suggests metrics for users to consider regarding the sustainability of the application. Sustainability factors are evaluated by individuals, not the system, by using drop-down menu selections and notes. Notes can be added for any field. Save entries or changes by clicking the **Apply** or **Save** button.

Home > Preservation > Format Library > List of Applications > Update Application - Sustainability Factor

Name	ExL-App-163	Created on	16/06/2011	Updated on	01/07/2011
Description	Windows Media P...	Created by	Ex Libris	Updated by	Peter McKinney

**Adoption** 
  
 Field Description: The perceived view on how widely used this format is.
   
 Note:

**Model** 
  
 Field Description: How open has the development process been to others?
   
 Note:

**Documentation Avail** 
  
 Field Description: The availability of any documentation.
   
 Note:

**Quality** 
  
 Field Description: The institution's comfort level with the documentation.Does it cover all the imp the composition of the application and its functionality?
   
 Note:

**Flexibility** 
  
 Field Description: Can the application run on mulitple operating systems and/or hardware architec
   
 Note:

**Stability** 
  
 Field Description: Institutions comment on how stable they perceive the format to be.
   
 Note:

Figure 38: Sustainability Factors

## Notes

The **Notes** tab allows staff to enter information about the application. Notes entered on this tab are logged and cannot be edited or deleted. However, new notes can be added to the tab.

Name	ExL-App-163	Created on	16/06/2011	Updated on	01/07/2011
Description	Windows Media P...	Created by	Ex Libris	Updated by	Peter McKinney

General Details | Related Formats | Sustainability Factors | **Notes** | History

Created on: 2012-07-15 15:38:17      Created by: admin1  
Scope: Global  
Notes: Additional notes that don't fall into any other category/tab with a Notes field.

Add Note:

**Add Note**

[Back](#)

Figure 39: Notes Tab

Enter notes in the **Add Note** field and click the **Add Note** button. The system saves the new note, its date, creator, and scope, as a permanent entry on this tab.

## History

The History tab displays every action performed on the application from its introduction into the system to the present. Entries are in log format and are system-generated.

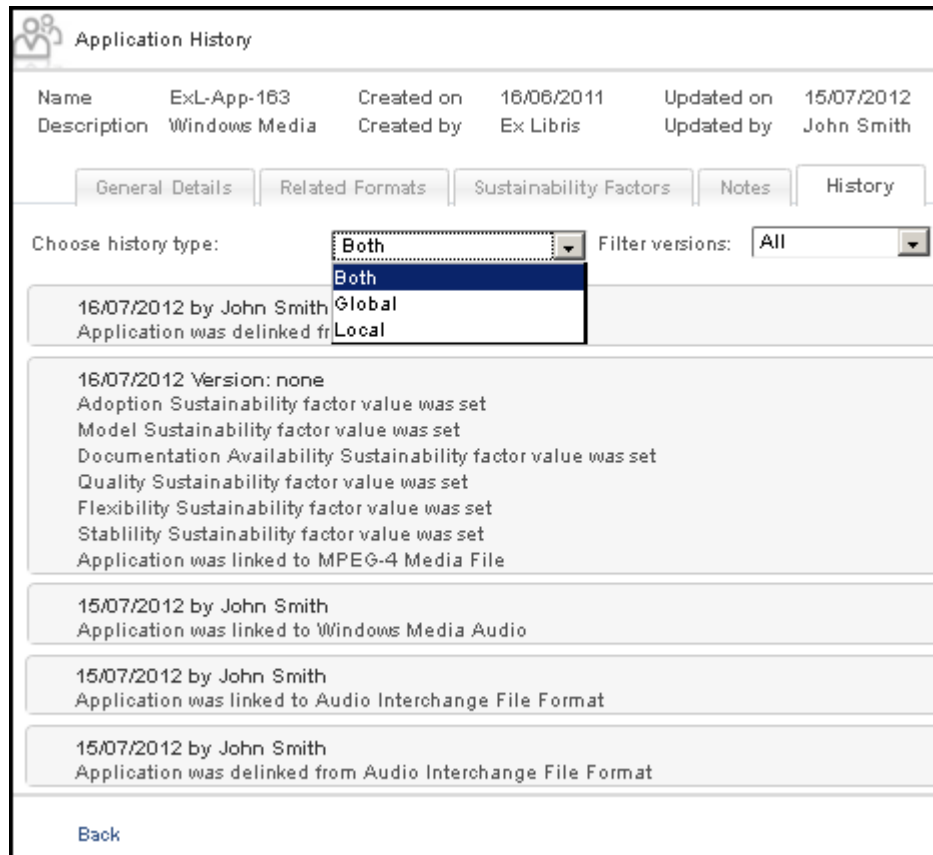


Figure 40: Application History

Users can choose to view log items that are only global, only local (specific to their institution), or both global and local together. Users can also filter the view by Format Library version.

## Global Application Library

The Global Application Library is the master version shared by all institutions that use Rosetta.

Only a small number of Rosetta users maintain the master library. This section discusses the master copy of the Application Library and how to maintain it if you are one of these users.

## Applications in the Global Library

To access the Global Application Library, go to the Rosetta Home page and click **Preservation > Manage Global Format Library > List of Applications**. The List of Applications page opens.

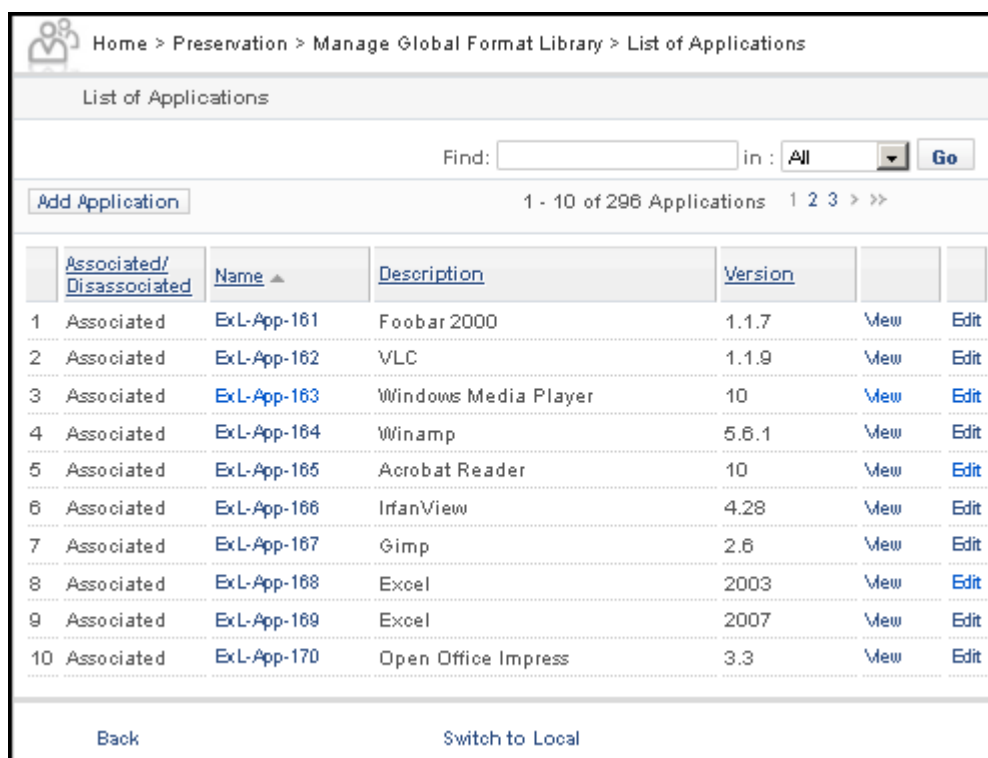


Figure 41: List of Applications

The List of Applications displays the following information:

Table 13. List of Applications

Column	Description
<b>Associated/Disassociated</b>	Indicates if the application is associated with a format. This information is key to identifying risks in the database.
<b>Name</b>	The PRONOM name of the application
<b>Description</b>	The common name of the application
<b>Version</b>	The version of the application

You can search for an application in the List of Applications by entering text in the search box and selecting a search field.

## Actions from the Global Applications Page

Global applications can be viewed, edited, or added from the Global List of Applications page.

### NOTE:

Currently, applications can be added to the Global Library, but they cannot be removed.

To view information, click the **View** text in the row of the application you want to view, then click the tabs to display information as needed.

To add or edit an application, click the **Add Application** button or the **Edit** text on the row of the application you want to edit.

Click the following tabs to see the relevant information and enter values, as necessary.

### General Details

The general details of the application are displayed when you first select a specific application from the list.

The General Details tab opens when you first select a specific application from the list. In edit mode, most of the fields contain editable values (see [Figure 42](#)).

Preservation > Manage Global Format Library > List of Applications > Application - General Information

Name	ExL-App-163	Created on	16/06/2011	Updated on	15/07/2012
Description	Windows Media P...	Created by	Ex Libris	Updated by	John Smith

General Details | Related Formats | Sustainability Factors | Notes | History

\* Name: ExL-App-163  
\* Description: Windows Media Player  
Version: 10  
License Type: Licensed  
Registry Type: EX Global  
Registry ID: ExL-App-163  
Support end Date: DD MM YYYY  
Role List: render  
Deployment:  
Alias:  
Family: Windows Media Player, Audio player  
Default File Format:

Cancel Switch to Local Apply Save

Figure 42: General Details - Global Library

In addition to the information displayed in the List of Applications (**Table 13** on page 64), these fields may contain information:

Table 14. General Details

Field	Description
License Type	Indicates whether the application is licensed or open source
Registry Type	Indicates the registry used to name the format
Registry ID	The ID of the format in the registry
Support End Date	The date support of the application ends
Role List	The list of roles that the application can play, either Rendering, Migration, or both.
Deployment	Whether the application is deployed locally on each PC or at a central location

**NOTE:**

The **Name** field is system-generated and cannot be changed.

**Related Formats**

Click the **Related Formats** tab to display the following page for viewing, adding, or editing formats in the Global Library.

The screenshot displays the 'Update Application - Related Formats' page. At the top, there is a metadata table for the application 'ExL-App-163'. Below this, there are tabs for 'General Details', 'Related Formats', 'Sustainability Factors', 'Notes', and 'History'. The 'Related Formats' tab is active, showing an 'Add Format' button and a dropdown menu for 'Application Type' set to 'Renderer'. Below this is a table listing 5 related formats, each with a 'Remove' link.

Name	Description	Version	Type	
1 fmt/1	Broadcast WAVE	0	renderer	Remove
2 fmt/6	Waveform Audio		renderer	Remove
3 fmt/132	Windows Media Audio		renderer	Remove
4 fmt/134	MPEG 1/2 Audio Layer 3		renderer	Remove
5 x-fmt/135	Audio Interchange File Format		renderer	Remove

At the bottom of the interface, there are 'Back' and 'Switch to Local' buttons.

Figure 43: Related Formats, Global Library

The following information is displayed:

Table 15. Related Formats

Field	Description
Name	The name of the format
Description	A description of the format
Version	The version number of the format
Type	The type of application with which the format is associated, renderer or converter.

Click **Remove** to remove a format associated with the application.

**To add a format to be associated with the application:**

- 1 Select the type of application (converter or renderer) to be associated with the format from the **Application Type** drop-down list.
- 2 Click the **Add Format** button.

A List of Formats page opens (see **Figure 44**)

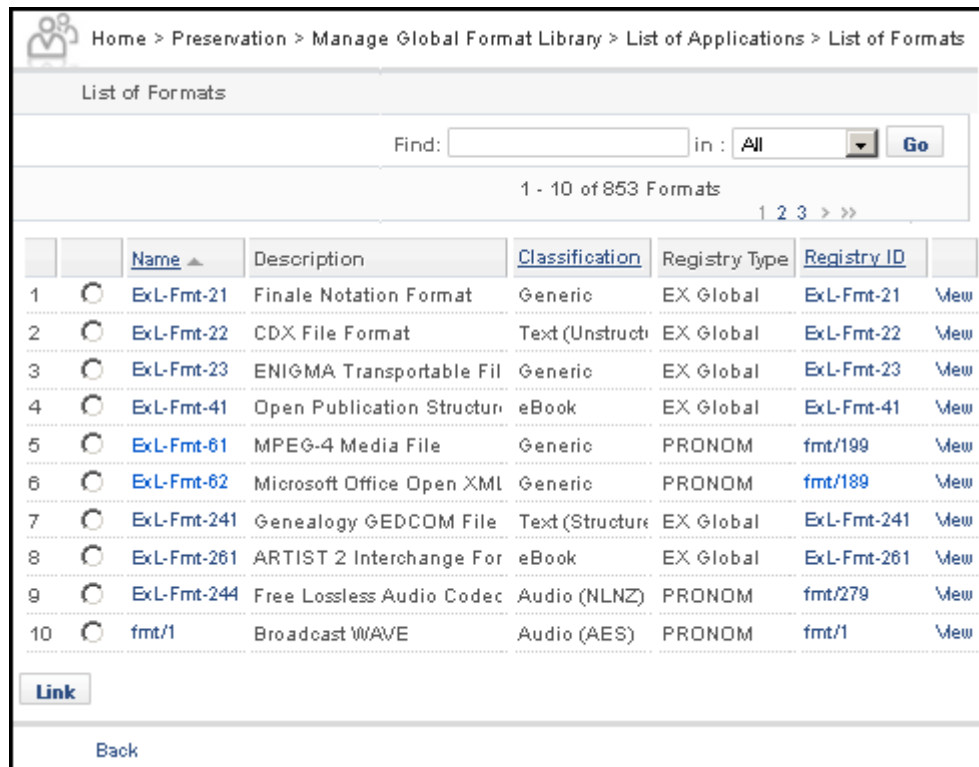


Figure 44: Add Format

- 3 Select the format that you want to add and click **Link**.

The format is added to the list associated with the application and is listed on the Related Formats tab.

### **Editing Sustainability Factors**

Click the **Sustainability Factors** tab to open a form containing questions and measurements relating to application sustainability across time and formats.

Name	ExL-App-163	Created on	16/06/2011	Updated on	01/07/2011
Description	Windows Media	Created by	Ex Libris	Updated by	Peter McKinney

General Details | Related Formats | **Sustainability Factors** | Notes | History

The availability of any documentation.  
Note: Institution has copy

The institution's comfort level with the documentation  
Note: Excellent clarity and coverage.

How open has the development process been to others?  
Note: Completely open source

The perceived view on how widely used this format is.  
Note: A good chunk of market share (Firefox)

Institutions comment on how stable they perceive the format to be  
Note: Changes often, applications change often.

Can the application run on multiple operating systems and/or hardware architectures (e.g. JAVA)?  
Note: High

Buttons: Cancel, Switch to Local, Apply, Save

Figure 45: Editing Sustainability Factors

Select an answer to each question from the drop-down list. The questions are set in the database and cannot be changed. Type a note in the **Note** field for each question and click **Save**.

### **Editing Notes**

Click the **Notes** tab to open information on notes produced by users and to edit notes.

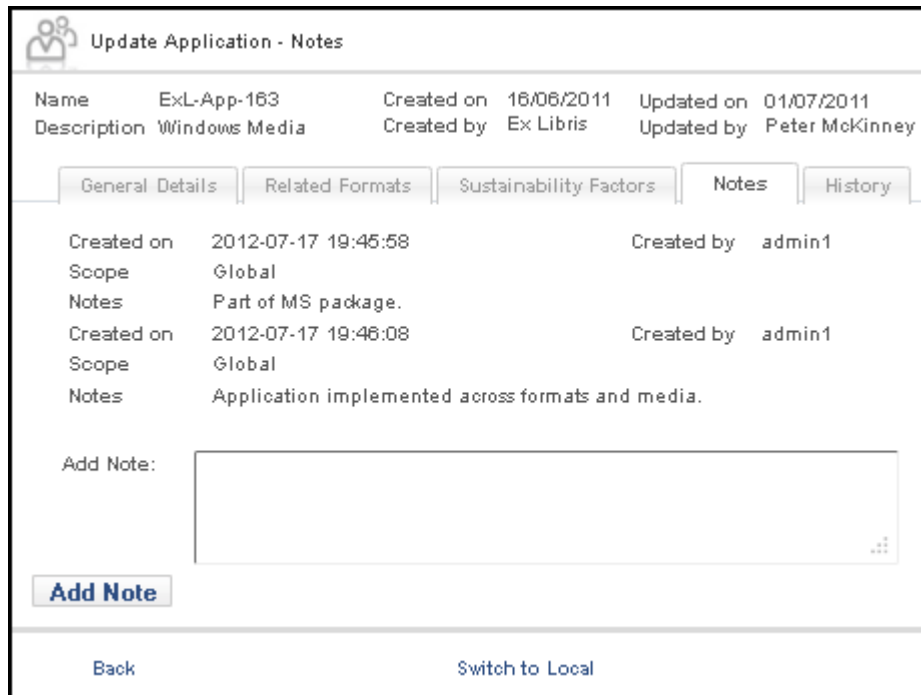


Figure 46: Application Notes - Global View

To add a note, type the note in the **Add Note** text box and click **Save**.

**NOTE:**

Once created, notes cannot be edited or deleted.

The following information is displayed:

Table 16. Notes

Field	Description
Created on	The date the note was created
Scope	Whether the note is global or local in scope
Notes	The text of the note
Created by	The user that created the note

**History**

The History tab displays every action performed on the application from its introduction into the system to the present. Entries are in log format and are system-generated.

**Application History**

Name	ExL-App-163	Created on	16/06/2011	Updated on	15/07/2012
Description	Windows Media	Created by	Ex Libris	Updated by	John Smith

General Details | Related Formats | Sustainability Factors | Notes | History

Choose history type: **Both** Filter versions: **All**

16/07/2012 by John Smith Application was delinked from **Global**  
Local

16/07/2012 Version: none  
Adoption Sustainability factor value was set  
Model Sustainability factor value was set  
Documentation Availability Sustainability factor value was set  
Quality Sustainability factor value was set  
Flexibility Sustainability factor value was set  
Stability Sustainability factor value was set  
Application was linked to MPEG-4 Media File

15/07/2012 by John Smith Application was linked to Windows Media Audio

15/07/2012 by John Smith Application was linked to Audio Interchange File Format

15/07/2012 by John Smith Application was delinked from Audio Interchange File Format

[Back](#) [Switch to Local](#)

Figure 47: Application History

Users can choose to view log entries that are only global, only local (specific to their institution), or both global and local together. Users can also filter the view by Format Library version.

# 4

---

## Significant Properties

This section includes:

- **Significant Properties in the Local Library** on page 71
- **Significant Properties at the Global Library Level** on page 73

Significant properties accessed from a local library are view-only and cannot be edited by individual institutions. Like classification groups and applications, they are based on a master global library that a small number of Rosetta users maintain.

For information on significant properties at the global level, see **Significant Properties at the Global Library Level** on page 73.

### Significant Properties in the Local Library

To access significant properties, follow the menu path **Preservation > Format Library > List of Significant Properties**. The List of Significant Properties page opens (see **Figure 48**).

	<u>Name</u> ▲	<u>Description</u>	<u>Type</u>	<u>Creator</u>	<u>Modification date</u>	
1	AES.analogDigitalFlag	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>
2	AES.bitDepth	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>
3	AES.bitRateReductionDataRate	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>
4	AES.bitRateReductionDataRateMode	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>
5	AES.byteOrder	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>
6	AES.channelAssignment	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>
7	AES.channels	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>
8	AES.codecCreatorApplication	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>
9	AES.codecCreatorApplicationVersion	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>
10	AES.codecName	-	TEXT	Ex Libris	17/02/2013	<a href="#">View</a>

Figure 48: List of Significant Properties page

The List of Significant Properties page shows a name and description for each property as well as the type of data for indexing, the creator of the property, and the date modified.

To search for a particular property, enter a search term in the **Find** search box, select a field to search, and click **Go**.

## Viewing Significant Properties

Significant property details can be viewed by clicking the name of the property or the **View** text in the row of the property you want to view (see [Figure 48](#)). The details open on the Significant Properties Details page (see [Figure 49](#)).

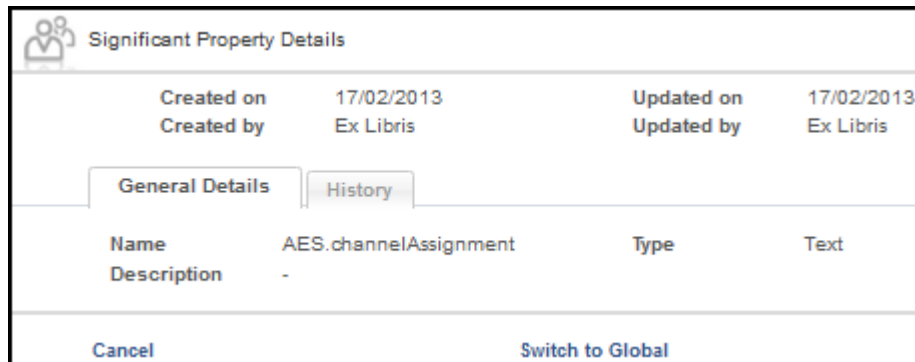


Figure 49: Significant Properties Details Page

To view the history of the property, including any changes made at the global level, click the **History** tab.

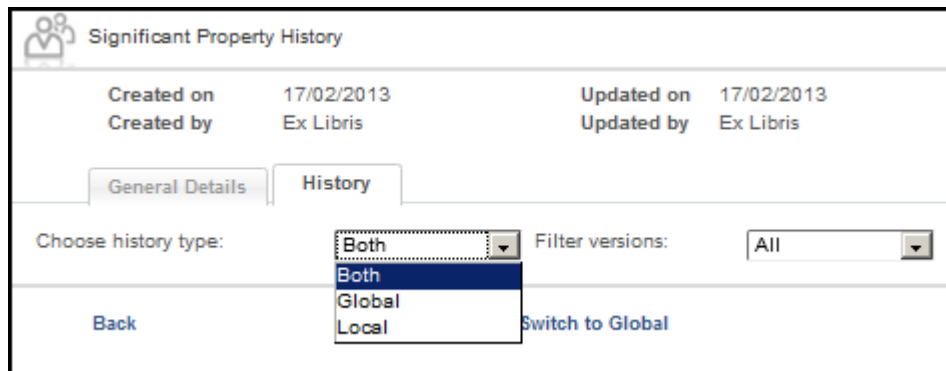


Figure 50: Significant Properties History Page

You can view the history by type (local, global, or both) and by version.

## Significant Properties at the Global Library Level

Significant properties can be managed using a spreadsheet, as they have been in previous Rosetta versions. In order for them to be available for use with the classification group and extractors, however, any additions or changes to the properties must occur in the Preservation user interface.

---

### NOTE:

Significant properties can be added or edited, but their names cannot be changed once they are entered into the system (in case files stored in the permanent repository are using them). They cannot be deleted from the system.

---

To access the List of Significant Properties, from the main Rosetta menu, click **Preservation > Manage Global Format Library > Significant Properties**. The List of Significant Properties page opens.

	Name ▲	Description	Type	Creator	Modification date		
1	AES.analogDigitalFlag	-	TEXT	Ex Libris	17/02/2013	View	Edit
2	AES.bitDepth	-	TEXT	Ex Libris	17/02/2013	View	Edit
3	AES.bitRateReductionDataRate	-	TEXT	Ex Libris	17/02/2013	View	Edit
4	AES.bitRateReductionDataRateMode	-	TEXT	Ex Libris	17/02/2013	View	Edit
5	AES.byteOrder	-	TEXT	Ex Libris	17/02/2013	View	Edit
6	AES.channelAssignment	-	TEXT	Ex Libris	17/02/2013	View	Edit
7	AES.channels	-	TEXT	Ex Libris	17/02/2013	View	Edit
8	AES.codecCreatorApplication	-	TEXT	Ex Libris	17/02/2013	View	Edit
9	AES.codecCreatorApplicationVersion	-	TEXT	Ex Libris	17/02/2013	View	Edit
10	AES.codecName	-	TEXT	Ex Libris	17/02/2013	View	Edit

Figure 51: List of Significant Properties - Global

The List of Significant Properties displays the same information for the global management view as it does for the local view. It also allows Global Administrators the following additional actions:

- Editing an existing property (in addition to viewing, which exists also at the local level)
- Adding a new property

If you are a Global Administrator, following the instructions in **Adding and Editing Significant Properties** on page 74 to perform either of these actions.

## Adding and Editing Significant Properties

### To add or edit a significant property:

- 1 To add a new significant property, click the **Add Significant Property** button at the top of the property list.

To edit an existing significant property, you can search for the property by

typing text in the **Find** search box, selecting a field to search, and clicking **Go**. From the results list, find the property you want to edit and click the **Edit** link in its row.

The screenshot shows a web interface titled "Significant Property Details". At the top, it displays metadata: "Created on 17/02/2013", "Updated on 17/02/2013", "Created by Ex Libris", and "Updated by Ex Libris". Below this are two tabs: "General Details" (selected) and "History". The main form area contains a "Name" field with the value "AES.channelAssignment" and a "Type" dropdown menu currently set to "Text". A "Description" text area is empty. At the bottom of the form are four buttons: "Cancel", "Switch to Local", "Apply", and "Save".

Figure 52: General Details for Editing

- 2 If you are editing a property, the **Name** value cannot be changed. If you are adding a property, you must enter a name for the new property.
- 3 Select or change the property type (for indexing).
- 4 Enter or edit an optional description for the significant property.
- 5 Click **Apply** to save changes and remain on the page, **Save** to save changes and return to the List of Significant Properties.

The system saves the property so that it can be used by other Preservation components.



# 5

---

## Classification Group Library

This section includes:

- [Classification Groups](#) on page 77
- [Global Classification Group Library](#) on page 82

The Classification Group Library serves as a knowledge base for formats that share the same properties. Classification groups can contain a large number of formats, such as all the text formats, or a small number, such as a set of TIFF image formats.

Formats can be assigned to a classification group when they are created. If they are not assigned to a specific group, they are assigned by default to a general classification group. For information on adding new formats, see [General Details](#) on page 28.

### Classification Groups

The local Classification Group Library is view-only and cannot be edited by individual institutions. Like the other libraries, it is based on a master global library that a small number of Rosetta users maintain.

For information on the global Classification Group Library, see [Global Classification Group Library](#) on page 82.

To access the Classification Group Library, follow the menu path **Preservation > Format Library > List of Classification Groups**. The List of Classification Groups page opens.

	Name ▲	Description	
1	Audio (AES)	For all uncompressed audio formats that the extractors normalise outputs to AES metadata.	<a href="#">View</a>
2	Audio (NLNZ)	For FLAC formats and MP3. Called "NLNZ as these formats have NLNZ extractors.	<a href="#">View</a>
3	Database	Database	<a href="#">View</a>
4	eBook	Mixed content - images, structured text, links, wrapped for a book reader type application.	<a href="#">View</a>
5	Email	Email	<a href="#">View</a>
6	Generic	Formats that do not fit into any other class	<a href="#">View</a>

[Back](#)

Figure 53: List of Classification Groups

The List of Classification Groups page shows a name and description for each group. To search for a particular classification group, enter a search term in the **Find** search box, select a field to search, and click **Go**.

Classification group details can be viewed by clicking the **View** text in the row of the group you want to view.

## Classification Groups

View a Classification Group by clicking the Classification Group name or by clicking **View** in the row corresponding to the group you want to view. The details for the group open (see [Figure 54](#)).

Name	Description	Created on	Updated on
Image (Raster)	Image (Raster)	03/12/2009	03/12/2009
		Created by	Updated by
		Ex Libris	Ex Libris

[Back](#)

Figure 54: Classification Groups, General Details Default Tab

Related aspects of the classification group are sorted into tabs, with General Details being the default.

### General Details

The General Details tab contains the name and description of the classification group.

### Related MD Extractors

The **Related MD Extractors** lists applications that extract metadata information about this classification group (see [Figure 55](#)).

Name	Image (Raster)	Created on	Updated on	Updated by
Description	Image (Raster)	Ex Lkrls	03/12/2009	Ex Lkrls

General Details | **Related MD Extractors** | Related Properties | Related Formats | Histor

MD Extraction Tool	Description
1 nz.govt.natlib.adapter.bmp.BitmapAdapter	BitmapExtractorPlugin
2 nz.govt.natlib.adapter.tiff.TIFFAdapter	TIFFExtractorPlugin

[Back](#)

Figure 55: Related MD Extractors

### Related Properties

Click the **Related Properties** tab to view the common properties of the formats in the Classification Group (see figure below). These properties are obtained by the metadata extractors.

Name	Image (Raster)	Created on	03/12/2009	Updated on	03/12/2009
Description	Image (Raster)	Created by	Ex Libris	Updated by	Ex Libris
General Details   Related MD Extractors   <b>Related Properties</b>   Related Formats   His					
<b>DNX Property</b>					
1	bitmap.colorBlue				
2	bitmap.colorGreen				
3	bitmap.colorIndex				
4	bitmap.colorRed				
5	bitmap.colorReserved				
6	bitmap.colours				
7	bitmap.importantColours				
8	image.bitDepth				
9	image.compression				
<a href="#">Back</a>					

Figure 56: Related Properties

### **Related Formats**

Click the **Related Formats** tab to view the formats associated with the Classification Group (see figure below).

Name	Description	Version
1 <a href="#">fmt/12</a>	Portable Network Graphics	1.1
2 <a href="#">fmt/13</a>	Portable Network Graphics	1.2
3 <a href="#">fmt/114</a>	Windows Bitmap	1
4 <a href="#">fmt/115</a>	Windows Bitmap	2
5 <a href="#">fmt/116</a>	Windows Bitmap	3
6 <a href="#">fmt/117</a>	Windows Bitmap	3.0 NT
7 <a href="#">fmt/118</a>	Windows Bitmap	4
8 <a href="#">fmt/119</a>	Windows Bitmap	5
9 <a href="#">fmt/150</a>	JPEG-LS	

Figure 57: Related Formats

### **History Tab**

The History tab contains a log of all the changes and updates to the classification group. Entries note the date, the user who made the change, and details about the change.

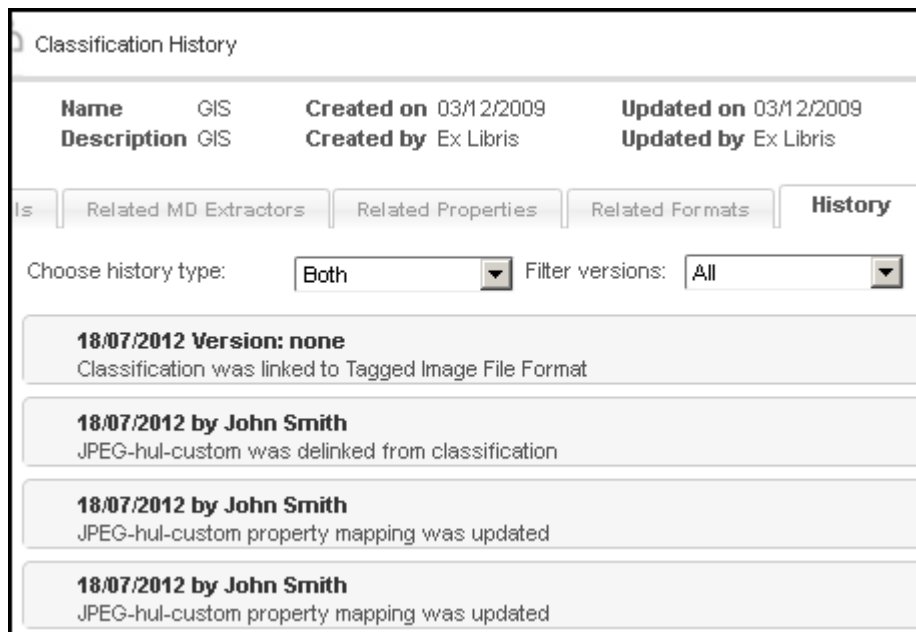


Figure 58: History Tab for Classification Group

## Global Classification Group Library

The Classification Group Library is shared by all users of Rosetta. Currently, formats can be added to the Classification Group Library, but they cannot be removed.

To access the Classification Group Library, go to the Rosetta Home page and click **Preservation > Manage Global Format Library > List of Classification Groups**. The List of Classification Groups page opens.

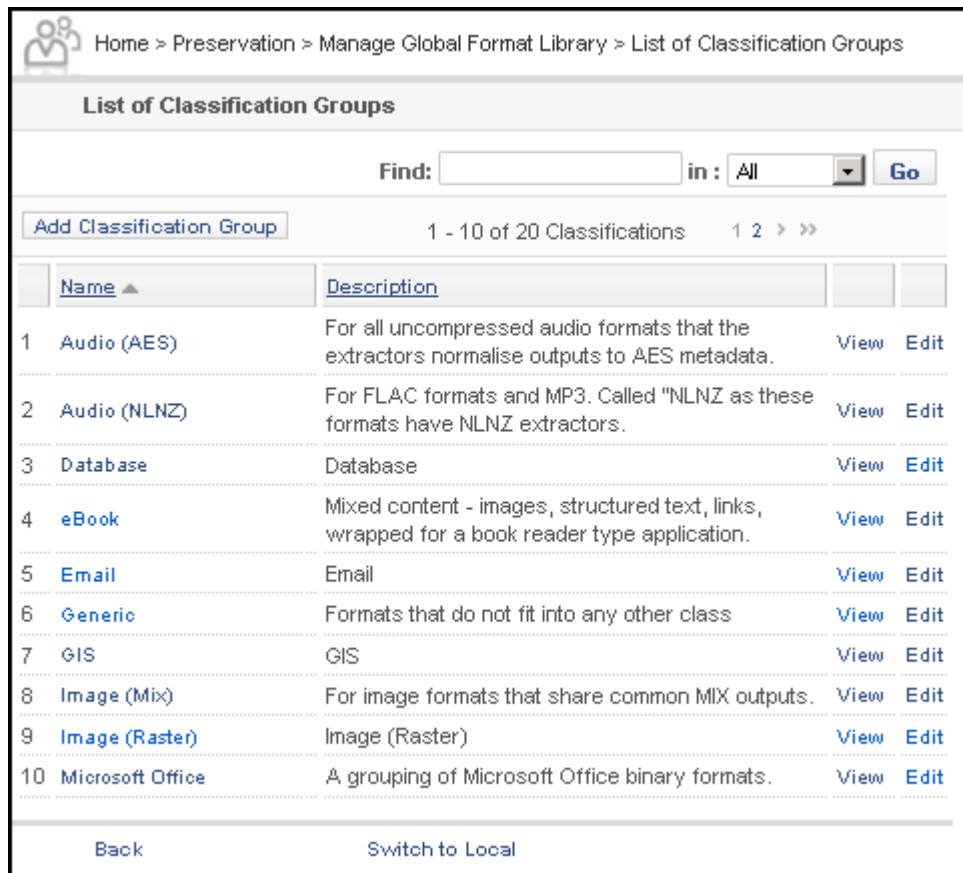


Figure 59: List of Global Classification Groups

The List of Classification Groups displays the following information for each group:

Table 17. Classification Groups

Column	Description
Name	The name of the Classification Group
Description	A description of the Classification Group

To search for a particular Classification Group, type text in the **Find** search box, select a field to search, and click **Go**.

Some aspects of individual Classification Groups can be edited by a global Administrator.

## Editing Global Classification Groups

Select **Edit** in the row of the group you want to edit. To create a new classification group, click the **Add Classification Group** button. The tabs below contain editable information about the format.

### Editing General Details

The General Details tab shows Classification Group information with an editable Description field.

<b>Name</b>	Image (Raster)	<b>Created on</b>	03/12/2009	<b>Updated on</b>	03/12/2009
<b>Description</b>	Image (Raster)	<b>Created by</b>	Ex Libris	<b>Updated by</b>	Ex Libris

**General Details** | Related MD Extractors | Related Properties | Related Formats | History

\* **Name** Image (Raster)  
\* **Description** Image (Raster)

Cancel      Switch to Local      **Apply**      **Save**

Figure 60: Editing Classification Groups

Global Administrators can edit the Description field of an existing classification group. For a new classification group, both a name and a description field can be added (and both are required).

Enter the information and click **Apply** or **Save**.

### Related MD Extractors

Click the **Related MD Extractor** tab to display the metadata extractor tools that are associated with the Classification Group. The page is read-only.

---

**NOTE:**

MD Extractors are associated with a Classification Group in the MD Extractor Library.

---

### Editing Related Properties

Click the **Related Properties** tab to display the common properties of the Classification Group.

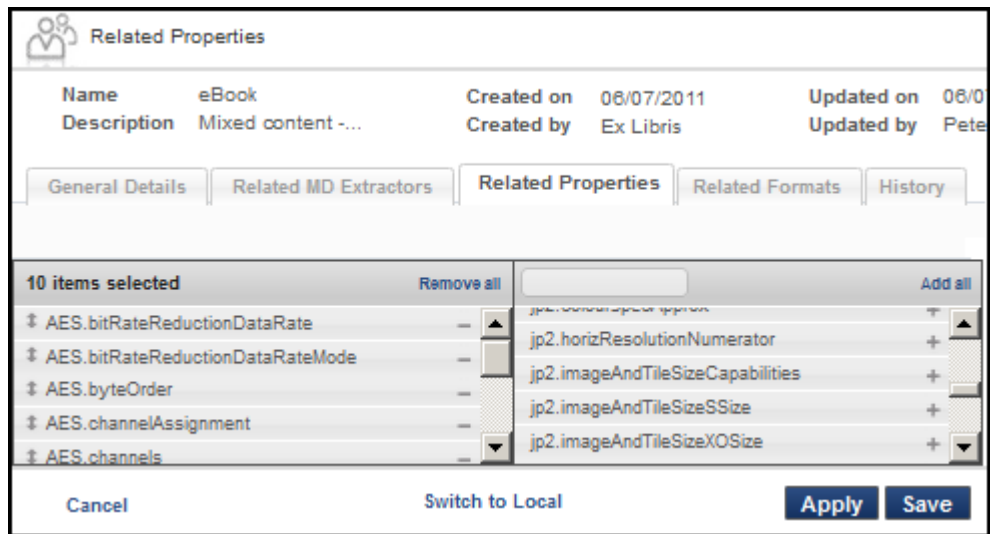


Figure 61: Related Properties

To remove a related property, click the minus sign beside it (from the left column) and then **Apply** or **Save**.

To add a property to the Classification Group, from the table on the right, click the plus sign beside the property you want to add.

The property moves to the left-side table.

Click **Apply** or **Save**.

#### NOTES:

- These properties are listed in the Characteristic drop-down list of the Risk Parameters tab when adding Risk Identifiers. For more information on adding Risk Identifiers, see **Risk Identifiers** on page 35.
- The order of the field codes determines the order that they are displayed in the Format-Based Search Results window when managing Preservation Sets.

#### **Editing Related Formats**

Click the **Related Formats** tab to display the formats assigned to the Classification Group. Items are view-only from this page.

<b>Name</b>	Microsoft Office	<b>Created on</b>	14/01/2010	<b>Updated on</b>	14/01/2010
<b>Description</b>	A grouping of M...	<b>Created by</b>	Ex Libris	<b>Updated by</b>	Ex Libris
General Details   Related MD Extractors   Related Properties   <b>Related Formats</b>   History					
1 - 10 of 15 List of Formats 1 2 > >>					
<u>Name</u>	<u>Description</u>	<u>Version</u>			
1 <a href="#">fmt/39</a>	Microsoft Word for Windows Document	6.0/95			
2 <a href="#">fmt/40</a>	Microsoft Word for Windows Document	97-2003			
3 <a href="#">fmt/59</a>	Binary Interchange File Format (BIFF) Workbook	5			
4 <a href="#">fmt/60</a>	Binary Interchange File Format (BIFF) Workbook	7			
5 <a href="#">fmt/61</a>	Binary Interchange File Format (BIFF) Workbook	8			
6 <a href="#">fmt/62</a>	Binary Interchange File Format (BIFF) Workbook	8X			
7 <a href="#">fmt/111</a>	OLE2 Compound Document Format				
8 <a href="#">fmt/125</a>	Microsoft Powerpoint Presentation	95			
9 <a href="#">fmt/126</a>	Microsoft Powerpoint Presentation	97-2002			
10 <a href="#">x-fmt/88</a>	Microsoft Powerpoint Presentation	4			
<a href="#">Back</a> <span style="margin-left: 200px;"><a href="#">Switch to Local</a></span>					

Figure 62: Related Formats

Formats are assigned to a Classification Group when they are created in the Format Library. For information on adding new formats, see [General Details](#) on page 28.

### History Tab

The History tab for global users is the same as that for local users. It contains a log of all the changes and updates to the classification group. Entries note the date, the user who made the change, and details about the change.

# 6

---

## Metadata Extractor Library

This section includes:

- [Introducing the Metadata Extractors Library](#) on page 87
- [List of Metadata Extractors](#) on page 87
- [Managing Custom Metadata Extractors](#) on page 89

### Introducing the Metadata Extractors Library

The purpose of the metadata extractor library is to manage the metadata extractor tools and map their output to DNX fields.

The metadata extractor library contains all of the metadata extractors provided by Rosetta at the global library level. Rosetta also provides the means for institutions to use their own custom metadata extractor to handle the intake of files. Such custom extractors are treated as plug-ins and are then refined by the local library.

From the global library perspective, only individual bundled items can be edited. Those items are then exported to local libraries.

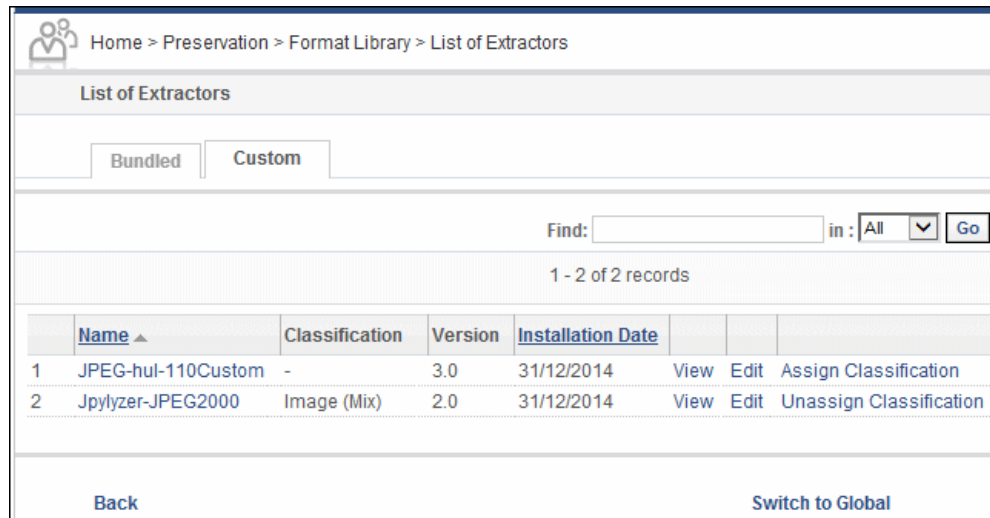
### List of Metadata Extractors

To access the metadata extractor library, follow the path from the main roll-over menu: **Preservation > Format Library > List of Extractors**. The List of Extractors page opens with the Bundled tab selected. All extractors listed are view-only.

	Name ▲	Classification	Version	Installation Date	
1	AIFF-hul	Audio (AES)	2.2	06/10/2013	<a href="#">View</a>
2	AIFF-hul-1.10	Audio (AES)	3.0	26/10/2014	<a href="#">View</a>
3	ASCII-hul	Text (Unstructured)	2.2	06/10/2013	<a href="#">View</a>
4	ASCII-hul-1.10	Text (Unstructured)	3.0	26/10/2014	<a href="#">View</a>
5	BYTESTREAM-hul	-	2.2	06/10/2013	<a href="#">View</a>
6	BYTESTREAM-hul-1.10	-	3.0	26/10/2014	<a href="#">View</a>
7	GIF-hul	Image (Mix)	2.2	06/10/2013	<a href="#">View</a>
8	GIF-hul-1.10	Image (Mix)	3.0	26/10/2014	<a href="#">View</a>
9	HTML-hul	Text (Mark-up)	2.2	06/10/2013	<a href="#">View</a>
10	HTML-hul-1.10	Text (Mark-up)	3.0	26/10/2014	<a href="#">View</a>

Figure 63: List of Extractors, View-Only

The extractors are listed by name of extractor and list the type of file (classification) that the extractor works with. To use an extractor other than the ones present in the Bundled list, click the **Custom** tab.



Home > Preservation > Format Library > List of Extractors

List of Extractors

Bundled Custom

Find:  in: All

1 - 2 of 2 records

	Name ▲	Classification	Version	Installation Date			
1	JPEG-hul-110Custom	-	3.0	31/12/2014	View	Edit	Assign Classification
2	Jpylyzer-JPEG2000	Image (Mix)	2.0	31/12/2014	View	Edit	Unassign Classification

Back Switch to Global

Figure 64: List of Extractors - Custom Tab

Any custom extractors that your library has added (through a plug-in) appear in the list. Each extractor provides the following actions:

- View – view the mapping of the MD extractor to DNX significant properties
- Edit - manage the mapping of the MD extractor to DNX significant properties
- Assign/Un-Assign Classification - link or un-link the extractor to a data type.

## Managing Custom Metadata Extractors

After extractors have been added through the plug-in manager, they appear on the **Custom** tab for Preservation users to view, edit, and assign.

Library users can edit their custom extractors by clicking the **Edit** text link in the row of the extractor they want to work with. The Mapping Fields page opens.

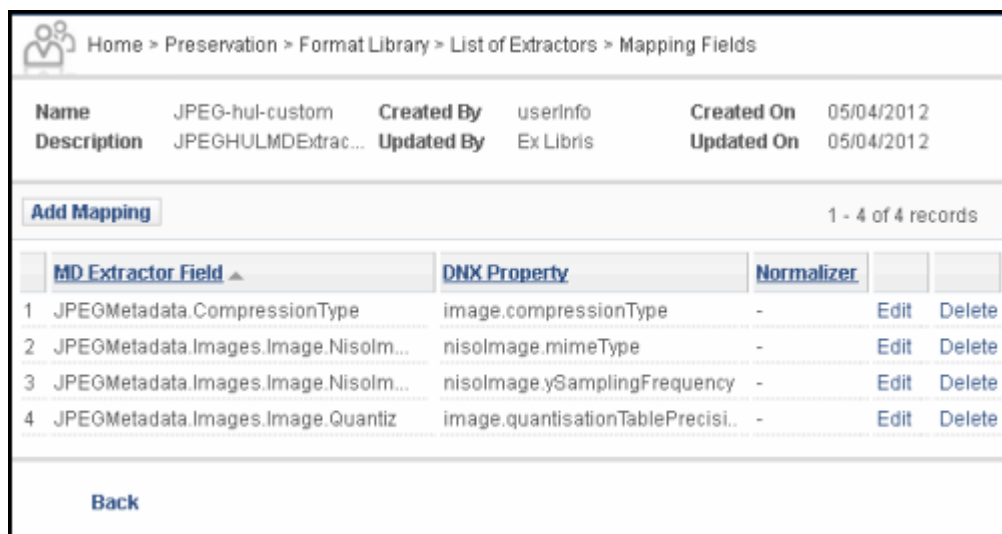


Figure 65: Editing a Custom Extractor

The page provides a table with the following information for each extractor field:

:

Table 18. Viewing MD Extractors

Field	Description
<b>MD Extractor Field</b>	The metadata field being extracted. These fields are loaded into the system as part of the plug-in information. There is no way to edit these fields from the Preservation interface.
<b>DNX Property</b>	The location in the DNX file in which the metadata is stored
<b>Normalizer</b>	The tool used to normalize the metadata for the extractor. For example, with the fields <code>YSamplingFrequency</code> and <code>XSamplingFrequency</code> , some extractors might have two separate fields, and some might have one field that is written in the format of <code>(X, Y)</code> . The normalizer will convert the one field <code>(X, Y)</code> to two fields <code>(X)</code> , <code>(Y)</code> .

To add a mapping to the extractor, click the **Add Mapping** button and enter values in the MD Extractor Field, DNX Property, and Normalizer field. To edit a mapping, click **Edit** in the row of the field you want to change and, when the Edit page opens, make changes to the selections. Use [Table 18, Viewing MD Extractors](#), for specific information about the fields.

# Part III

---

## Risk Analysis

This part contains the following:

- **Chapter 7: Risk Analysis Overview** on page 93
- **Chapter 8: Risk Analysis and Reports** on page 97
- **Chapter 9: Creating Preservation Sets** on page 105



# 7

---

## Risk Analysis Overview

This section contains:

- **Risk Analysis and Preservation** on page 93
- **Types of Risks** on page 93
- **Identifying Risks** on page 94
- **Generating Risk Reports** on page 95
- **Preservation Sets** on page 95

### Risk Analysis and Preservation

The risk analysis portion of the Preservation module allows libraries to assess current and future risks related to formats of the objects in their repository, whether the risks relate to format obsolescence, application incompatibility, or an attribute that puts one or more formats at risk. Analyzing the current repository holdings from this perspective provides protection against large-scale loss.

During SIP processing, each file that is loaded into the permanent repository is measured for risk when the Risk Identification task is run as part of the validation stack

### Types of Risks

Risks are defined as files that cannot be rendered or processed by their institution's software or hardware. Risks are always defined in terms of at-risk formats. There are four types of format-related risks:

- **Obsolete formats:** Formats that have been deemed obsolete by the global community. All files based or dependent on these formats are at risk.

- **Missing applications:** Formats that do not have the necessary applications (within the institution that houses them) to render them as originally intended. All files related to these formats are at risk.
- **Property-driven risks:** Formats with properties (technical metadata) containing certain values that prevent files from being rendered.  

For example, files that belong to the TIFF format may have color encoding with the value CIE\_LAB. Only the TIFF files with this value are at risk. The risk is implemented as a query that searches for these values in all the files that belong to this format.
- **Tool-driven risks:** Formats with properties that are considered to be risky but are not extracted by the existing metadata extractor (JHOVE or NLNZ adapters). These risks are identified by specific risk-extracting plug-in tools and associated with a problematic format through the format's risk record. The extracted properties are stored in the repository database.

## Identifying Risks

Rosetta uses following processes to measure the risk status of an institution's repository.

- **Ongoing Risk Identification**
- **Risk Identification Scheduled Process**
- **Ongoing Risk Analysis**

### Ongoing Risk Identification

As part of the validation stack phase in SIP processing, Rosetta processes each file and extracts its technical metadata. The information is stored in the HDeStreamRef table.

If there is a risk extractor associated with a file's format, the system also runs the extractor tool and saves the output in the HDeStreamRef table. The extracted technical metadata is stored in a way that allows the risk analysis job to gather the information and summarize it in risk reports.

### Risk Identification Scheduled Process

Because a repository contains existing files that have not gone through the ongoing risk identification, the validation stack that runs the risk extractor can be used on this set of files as part of the process automation. To do this, the user must create a set and run this process to identify the risk in these files.

## Ongoing Risk Analysis

To generate risk reports, this scheduled process runs on all the risks of each format and checks the database to see how many files match the risk criteria.

For example, the risk analysis process will count how many files exist with obsolete formats. The numbers are stored in a table that is the basis for the format risks reports.

## Generating Risk Reports

Rosetta generates reports that allow institutions to determine the degree of risk present in their permanent repositories. Customary, **Risk Reports** are generated automatically in one step.

### Risk Reports

The results of the risk analysis processes are shown in the Global Risk Report. This report summarizes the number of objects for each format and the related risk(s). The reports allow users to understand the degree of risk posed by problematic formats and files in the repository.

In addition, the risk reports allow users to create a preservation set for each format and its related risks. A preservation plan can then be created to handle a preservation set and mitigate a specific risk.

## Preservation Sets

A Preservation set is a set of objects specifically designed for Preservation activities. There are two kinds of Preservation sets:

- **Format/Risk Set:** A set that is based on format and risk and is created from the risk report. Since a Preservation plan must be based on both format and risk, only Format/Risk Sets (or duplications of such sets) can be the basis for Preservation plans.
- **Format Set:** For research purposes, users can create sets that are based only on format—without a risk code as a parameter. The user can create a set that shows all the risk properties. Format Sets cannot, however, be the basis for Preservation plans because they do not use risk codes.

The difference between both Preservation sets and regular, non-Preservation sets is that regular sets can contain multiple formats and thus cannot show the risk properties in their results. Regular sets show only the common attributes of all formats (mime type, file extension, file size and format id).



# 8

---

## Risk Analysis and Reports

This section contains:

- **Risk Identification** on page 97
- **Scheduling Risk Analysis** on page 98
- **Global Risks** on page 101

### Risk Identification

The definition of risks begins with digital formats in the Format Library. These formats are largely defined by the Rosetta users' community and are registered in the Rosetta Global Format Library, which all Rosetta users can access. Individual libraries can also define formats for the Global Format Library. (Rosetta libraries each also have their own local libraries. See [Section 1: Preservation Libraries](#))

Formats are identified as risky based on one of the following three weaknesses: obsolete formats, limited internal software resources, and a format characteristic or parameter that may contain questionable values (such as certain color spectrum values that do not comply with accessibility). Libraries then add the identified risks to their Risk Identifier Library using the risk analysis interface pages of Preservation.

---

**NOTE:**

A risk is identified very specifically in Rosetta. It is not a general risk such as "lack of browser support in the future." It is a comprehensive definition of a format such as `.gif89a` with a specific problem such as "will lose browser compatibility beginning with IE 7 and Firefox 3." The risk, obsolescence, can be added to the library only as part of a format, never as a separate entity, because it does not exist outside of the format in which it occurs.

---

## Scheduling Risk Analysis

A risk analysis report runs on the entire contents of your institution's repository and not only on the objects that were added since the last report generation.

The Schedule Risk Analysis Process page (**Preservation > Advanced Preservation Activities > Schedule Risk Analysis Process**) allows Preservation Managers and Analysts to schedule the job that runs the Risk Analysis Report.

	Previous Fire Time	Next Fire Time	Frequency	State	History	Update	Run Now
1	04/07/2018 10:52:00	05/07/2018 10:52:00	Every day at 10:52:00	Normal	History	Update	Run Now

Figure 66: Schedule Risk Analysis Process

The Schedule Risk Analysis Process page enables Preservation Analysts and Managers to monitor the status of the Risk Analysis Report job and perform the following tasks:

- View the job's details – Click the **History** link to display the job's details.
- Modify the job – For more information, see [Scheduling the Risk Analysis Report Job](#) on page 98.
- Execute the job – Click the **Run Now** link to run the job manually.

In addition, Preservation Analysts and Managers can cancel the job. For more information, see [Cancelling the Risk Analysis Report Job](#) on page 100.

### Scheduling the Risk Analysis Report Job

This task allows Preservation Managers and Analysts to modify the details for the Risk Analysis Report job.

#### To schedule the Risk Analysis Report job:

- 1 On the Schedule Risk Analysis Process page, click the **Update** link next to the job.

The Job Details page displays the status of the job.

Home / Preservation: Schedule Risk Analysis Process / Details

\* Name: Risk Report

**Scheduling**

[Hourly](#)  
[Daily](#)  
[Weekly](#)  
[Monthly](#)  
[Advanced](#)

**Start At**

**Time**: 10:52

**Date**: 27/07/2015

**Repeat**:  Indefinitely  Until

05/07/2018

Buttons: Back, Refresh, Apply, Run Now, Unschedule

Figure 67: Job Details Page (Risk Analysis Report Job)

- 2 Select the interval at which to execute the job: **Hourly**, **Daily**, **Weekly**, **Monthly**, and **Advanced**.

- 3 To configure hourly, daily, weekly, and monthly intervals:
  - a Use the following table to configure the common interval fields:

Table 19. Common Interval Fields

Section	Field	Description
Start At	Time	Select the hour and minutes from the drop-down fields to specify the time at which to run the job.
	Date	Use the calendar tool or select the month, day, and year from the drop-down fields to select the date at which to start running the job.
Repeat	Indefinitely	Select this option to run the job indefinitely.
	Until	Select the month, day, and year from the drop-down fields to specify the date at which to stop running the job.  <b>NOTE:</b> After this date, the state of the job will change from <b>Normal</b> to <b>Not Running</b> .

- b Use the following table to configure the interval-specific fields:

Table 20. Interval-Specific Fields

Type of Interval	Perform this task:	Description
Hourly	Every	Select the hourly interval from the <b>Hours</b> drop-down field.
Weekly	Week days	Select which days of the week to run this job.
Monthly	Monthly At	Select the day of the month to run this job.

For information on how to configure advanced intervals, see **Configuring Advanced Job Schedules** on page 246 of the *Rosetta Staff User's Guide*.

- 4 Click the **Apply** button to schedule the job.

## Cancelling the Risk Analysis Report Job

Cancelling a job allows the Preservation Manager or Analyst to postpone the execution of the job indefinitely without deleting it from the system.

**NOTE:**

The **Unschedule** option is not available when the state of the job is **Not Running**.

### To cancel the Risk Analysis Report job:

- 1 On the Schedule Risk Analysis Process page, click the **Update** link next to the Risk Report job.  
The Schedule Risk Analysis Process page opens.
- 2 Click the **Unschedule** button.  
The state of the job should change to **Not Running**.

## Global Risks

This report includes all risks, including the obsolete formats, the missing applications, and the file attributes risks, which evaluates risks due to specific file attributes and their at-risk values as they exist in the files' technical metadata.

Access the report from the **Preservation** menu (**Risk Analysis > View Global Risks Report**). The list of risks opens (see **Figure 68**).

	Risk Name	Risk Query	No. of Formats		
1	RTF_CHARSET_ERROR_49	Risk Library Identifiers = RTF_CHARSET_ERROR_49	1	View	Research Set
2	RTF_CONTROLWORD_ERROR_49	Risk Library Identifiers = RTF_CONTROLWORD_ERROR_49	1	View	Research Set
3	Zero Applications	-	42	View	Research Set

Figure 68: Global Risk Report

The report provides the information described in the following table.

Table 21. Information on the Global Risk Report

Heading	Description
Risk Name	The name of the risk.
Risk Query	A query used to search the repository for the risk.
No. of Formats	The number of formats associated with the risk.

The report also provides two links to additional actions for each format, View and Exploratory Set.

## View

Clicking View in any row of the Global Risk Report opens a Formats per Risk page (see figure below) that displays additional information specific to that risk.

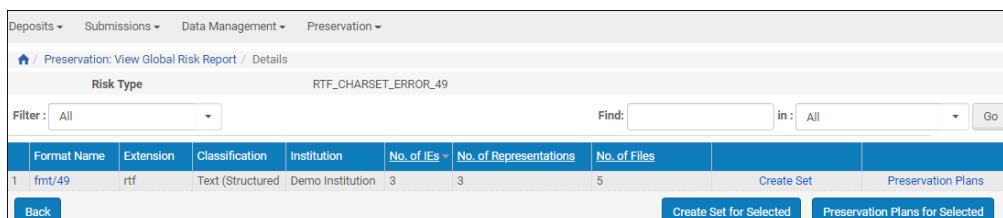


Figure 69: Formats Per Risk

The information and actions include the following.

Table 22. Information on the Global Risks Per Format

Heading	Description
Format Name	The name of the format.
Extension	The extension of the format.
Classification	
Institution	The institution in which the format is located.
No. of IEs	The number of Intellectual Entities found with this risk.
No. of Representations	The number of representations found to have this risk.
No. of Files	The number of files found with this risk.
Create Set for Selected	Opens the set management UI for creating a Preservation set (see <a href="#">Creating Preservation Sets</a> on page 105)
Preservation Plans for Selected	Opens a list of plans associated with the format/risk combination.

## Research Set

Clicking **Research Set** for a particular format row from the Global Risks Report ([Figure 69](#)) opens a list of items sorted by the file PID that fall into this format.

### NOTE:

Research sets can be created either from the risk report or directly from the Preservation menu.

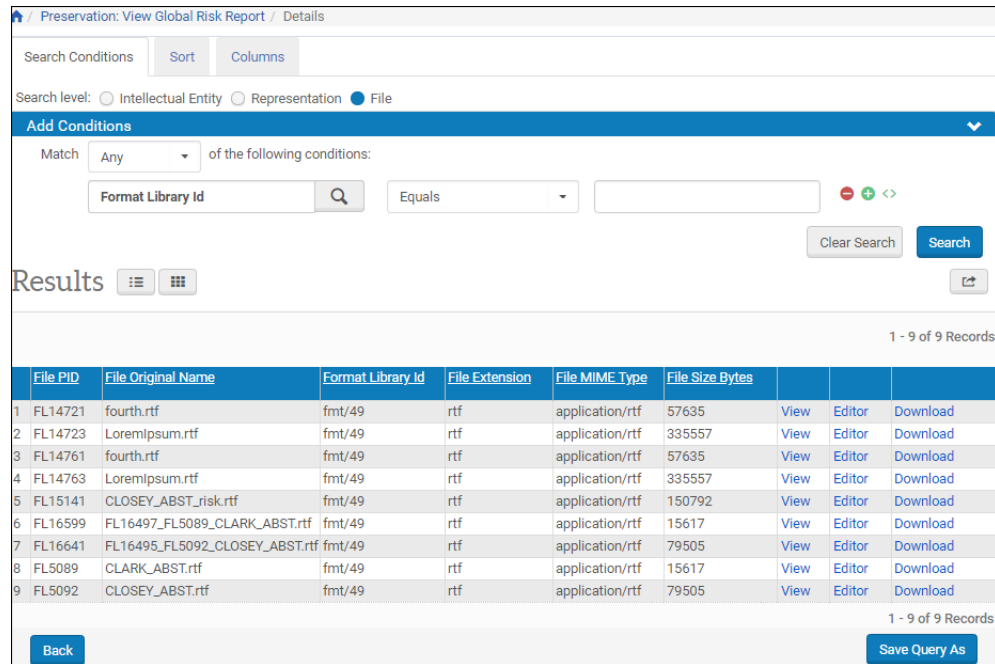


Figure 70: Research Set

The Results (Per file format) pane contains fields specific to the research set (or selected format).

From this page, users can click one of the following links to perform an action:

Table 23. Actions from the Research Set Page

Clicking	Does the Following:
View	Opens the file in a secondary window.
Editor	Opens the object in the Web Editor for editing of metadata.
Download	Launches a download wizard for downloading the object. You can open the object from here or copy it to a location on your local drive.



# 9

## Creating Preservation Sets

Preservation sets help institutions assess and manage risks. The sets are created for formats and risks. Users can add conditions to the sets to narrow search criteria. You can create a Preservation set based on any type of risk.

### To create a Preservation set:

- 1 Access the risk report on which you want to base your set (for example, **Preservation > Risk Analysis > View Global Risk Report**).

	<u>Risk Name</u> ▲	<u>Risk Query</u>	<u>No. of Formats</u>		
1	Obsolete	-	1	View	Research Set
2	Zero Applications	-	9	View	Research Set

Figure 71: Create Set for View Global Risk Report

- 2 Click **View** for the risk for which you want to create a set. A list of formats of the risk appears:

Home / Preservation: View Global Risk Report / Details

Risk Type Zero Applications

Filter: All Find: in: All Go

	Format Name	Extension	Institution	No. of IEs	No. of Representations	No. of Files		
1	fmt/353	tif,tiff,ptif	Demo Institution	68	72	95	Create Set	Preservation Plans
2	x-fmt/16	txt	Demo Institution	5	5	5	Create Set	Preservation Plans
3	x-fmt/392	jp2	Demo Institution	2	2	2	Create Set	Preservation Plans
4	fmt/101	xml,dtd	Demo Institution	1	1	1	Create Set	Preservation Plans
5	x-fmt/110	txt	Demo Institution	1	1	1	Create Set	Preservation Plans
6	x-fmt/263	zip	Demo Institution	1	1	1	Create Set	Preservation Plans
7	x-fmt/266	gz,z	Demo Institution	1	1	1	Create Set	Preservation Plans
8	x-fmt/408	ps	Demo Institution	1	1	1	Create Set	Preservation Plans
9	x-fmt/62	log	Demo Institution	1	1	1	Create Set	Preservation Plans

Back Create Set for Selected Preservation Plans for Selected

Figure 72: Risk Formats

- 3 Select a format and click **Create Set** for the row.
- 4 If you filter the formats, you can select multiple formats:

Deposits Submissions Data Management Preservation

Home / Preservation: View Global Risk Report / Details

Risk Type Zero Applications

Filter: Image (Mix) Find: in: All Go

	<input type="checkbox"/>	Format Name	Extension	Institution	No. of IEs	No. of Representations	No. of Files		
1	<input type="checkbox"/>	fmt/353	tif,tiff,ptif	Demo Institution	68	72	95	Create Set	Preservation Plans
2	<input type="checkbox"/>	x-fmt/392	jp2	Demo Institution	2	2	2	Create Set	Preservation Plans

Back Preservation Plans for Selected Create Set for Selected

Figure 73: Risk Formats – Filtered

- 5 Select a format and click **Create Set** for the row or select multiple formats and click **Create Set for Selected**.

**NOTE:**

Multiple formats can be selected only within the context of a single classification.

- 6 The Search Conditions page appears.

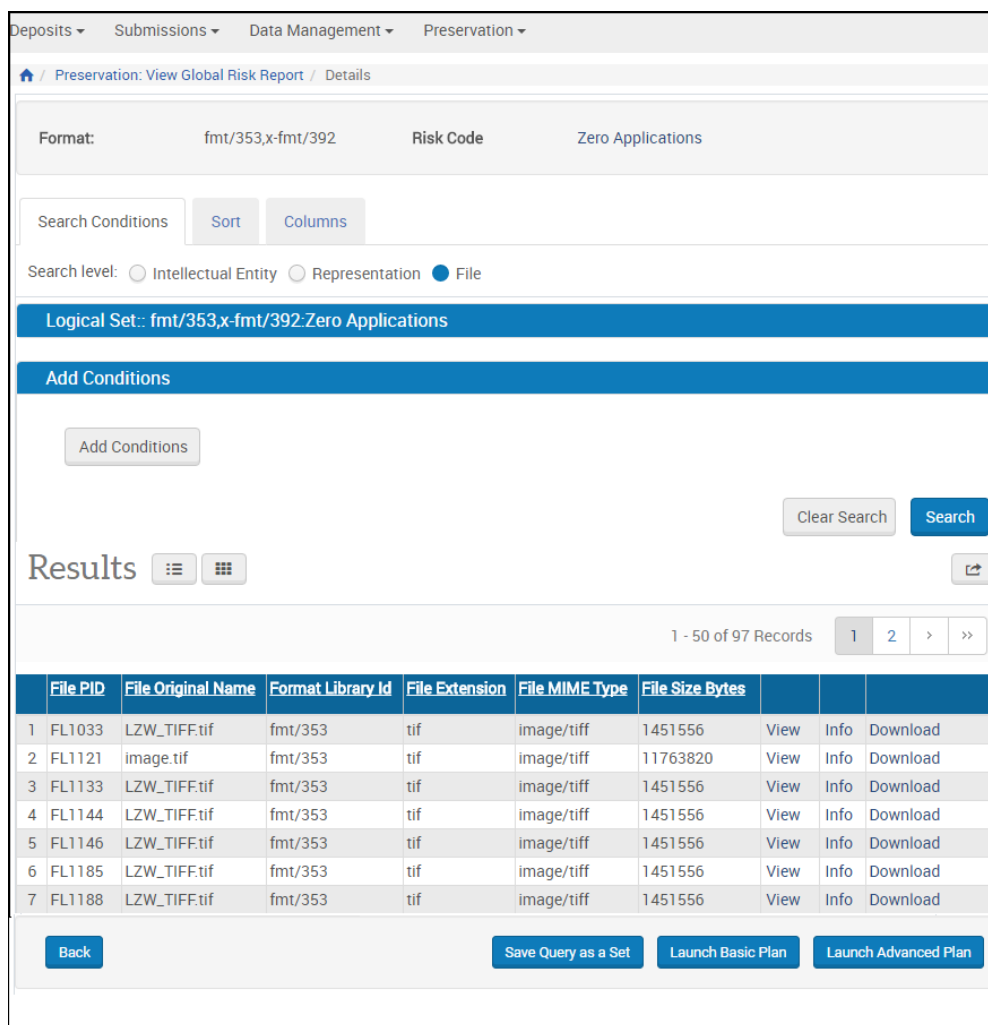


Figure 74: Create Set - Search Conditions

The Search Conditions page displays general information about the format and allows you to add conditions to a search for objects that make up a set in the Add Conditions section.

- 7 To create the Preservation set, click the **Save Query as a Set** button. The set is created:

Deposits ▾ Submissions ▾ Data Management ▾ Preservation ▾

Home / Preservation: View Global Risk Report / Details

Find:  in: All ▾ Go

1 - 3 of 3 Records

	Name	Format	Risk Code	Plan Name	Created By	Creation Date		
1	fmt/353,x-fmt/392:Zero Applications - 176511	fmt/353,x-fmt/392	Zero Applications		admin1	8/17/16	Edit Results	Delete
2	fmt/353,x-fmt/392:Zero Applications - 176296	fmt/353,x-fmt/392	Zero Applications		admin1	8/17/16	Edit Results	Delete
3	fmt/353,x-fmt/392:Zero Applications - 176397	fmt/353,x-fmt/392	Zero Applications		admin1	8/17/16	Edit Results	Delete

1 - 3 of 3 Records

Back

Figure 75: Set List

- 8 To launch the Basic Preservation Plan workflow, click **Launch Basic Plan**. For more information, see **Basic Preservation Plan** on page 199.
- 9 To launch the Advanced Preservation Plan workflow, click **Launch Advanced Plan**. For more information, see **Plan Configuration** on page 109.

# Part IV

---

## Plan Configuration

This part contains the following:

- **Chapter 10: Plan Configuration Overview** on page 111
- **Chapter 11: Configuration Procedures** on page 115



# 10

---

## Plan Configuration Overview

This section contains:

- [Plan Configuration in Preservation](#) on page 111
- [Configuration Stages](#) on page 111
- [Preservation Plan Components](#) on page 112

### Plan Configuration in Preservation

Plan configuration takes the information learned in the risk analysis segment of the Preservation module and builds a plan for creating a test set of objects, defining evaluation criteria, and configuring alternative methods for sustaining objects of particular formats that put the collections at risk. (For more information on risk types and risk reports, see the Risk Analysis section of this guide.)

Configuration precedes the testing and execution of Preservation plans by Preservation Analysts who are working to maintain the longevity of objects in their institution's collections. The goal is to determine the best alternative to maintaining the sets or collections and implementing that alternative. The alternative can use an internal resource such as an internal conversion tool or an external tool wherein the set of files is exported, converted, and then imported back into Rosetta.

### Configuration Stages

The following stages comprise the Preservation plan lifecycle:

Table 24. Configuration Plan Stages

Stage	Next Stage	Actions Allowed	Restrictions
Draft	In Testing	View, Duplicate, Edit, Delete	
In Testing	Ready for Sign-off	View, Duplicate, Edit, Delete	<ul style="list-style-type: none"> <li>■ Can be deleted only when there are no running tests.</li> <li>■ Duplication includes copy of documents, copy of logical sets, and copy of alternatives. It does not include test itemized sets and the tests results.</li> </ul>
Test in Progress	In Testing	View, Duplicate	
Ready for Sign-off	<ul style="list-style-type: none"> <li>■ Signed Off</li> <li>■ In Testing</li> <li>■ Rejected</li> </ul>	View, Duplicate, Revert to In Testing, Sign Off	Revert to In-Testing can be done only by the Preservation Manager (PM).
Signed Off (and Active)	-	View, Duplicate	Can only be done by a PM.
Rejected	-	View, Duplicate	
Inactive	Active	View, Duplicate	Plan cannot be executed. This state is reversible— plan can become Active again.

## Preservation Plan Components

The Preservation plan contains the following elements:

- **Administrative information:** Basic information consisting of the plan’s unique name, a description, and any documents that need to be uploaded in support of the plan.
- **Preservation set:** A logical search whose results become itemized when the plan is being executed. The set’s search criteria are based on a risk and a format and can be refined according to other attributes (for example, file size or file extension).
- **Test set:** A subset of the full itemized Preservation set used to test the different plan alternatives. A Preservation Analyst (PA) identifies this subset of IEs by adding conditions to the original query and selecting the specific members from the results of the narrowed query.

- **Evaluation:** The evaluation criteria used by the PAs to determine the best plan alternative for preserving objects in the repository. The evaluation criteria are stored in the database with different possible values for each criterion. For example, the criterion Market Share may have the values of 0 - 10%, 10% - 25%, 25% - 50%, or 50% - 75%. The criterion Open Source Support can have the values Yes or No.
- **Plan evaluation:** The comparison of alternatives according to criteria that are relevant to the format. Examples of such criteria are: International standards exist (yes/no), Hardware costs (below 100K\$, 100K\$ – 500K\$, over 500K\$), and Manual resources required (local staff, temporary employees, outsourcing required).
- **Alternative evaluation:** The evaluation of each migration alternative based on a comparison of the properties of the original file and the properties of the migrated file. In order to automate the process as much as possible, the PA can choose the properties that will be checked by the system from the list of properties that are defined in the classification group to which the formats belong. For example, bit depth in image formats should be the same before and after the migration. For more details regarding classification groups, see the Format Library sections of this guide.

In addition, the PA can choose criteria for manual evaluation—that is, information that needs to be entered based on the PA’s impressions after reviewing the results through the viewer (for example, macros in text documents).

- **Tests:** The test of each of the alternatives on the subset. The evaluation results of the tests are saved so that they can be compared by the PA. A certain alternative can be tested more than once but only the last evaluation results will be saved. The migrated representations are deleted once the evaluation is completed by the PA.
- **Plan sign-off/rejection:** Sign-off on a plan by the Preservation Manager (PM). The PM selects one alternative and adds a note that records the decision. Once the plan is signed off on, it cannot be changed. It can only be executed or deleted.

At the point of sign-off, the PM may reject the plan. It will then be stored in the system, but it cannot be modified or executed.



# 11

---

## Configuration Procedures

This section contains:

- [Preparations for Creating a Plan](#) on page 115
- [Building a Preservation Plan](#) on page 115
- [Adding Plan Alternatives](#) on page 125
- [Editing Alternatives](#) on page 134
- [Descriptor File](#) on page 135

### Preparations for Creating a Plan

A Preservation plan is based on preparatory work performed in the format library and risk analysis segments of Rosetta. The foundations of this work center on establishing a comprehensive format library and identifying the risks that accompany each format in the library, then creating queries and sets of objects that belong to those formats and risks.

For detailed information on how to develop these building blocks, see the sections on format libraries and risk analysis in this guide.

### Building a Preservation Plan

You can build a Preservation plan based on a Preservation set or a duplicate of an existing Preservation plan. Additional key components include alternatives (distinct paths or treatments of at-risk objects) and evaluation criteria for those alternatives.

## A Plan from a Preservation Set

You can perform searches of objects in your repository based on at-risk formats. The results will help you determine the degree of risk that exists among objects in your collections.

To build a plan from your risk format results, perform the following steps.

- 1 With your risk results open on the Search Object page (see [Figure 76](#)), click the **Launch Advanced Preservation Plan** button.

The screenshot shows a search results page with the following elements:

- Format: fmt/396, Risk Code: Zero Applications
- Search Conditions: Sort, Columns
- Search level:  Intellectual Entity,  Representation,  File
- Logical Set: fmt/396:Zero Applications
- Add Conditions: Add Conditions, Clear Search, Search
- Results: View 100 Records, 1 - 1 of 1 Records
- Table with columns: File PID, File Original Name, Format Library Id, File Extension, File MIME Type, File Size Bytes, View, Editor, Download
- Table Row 1: 1, FL54820, courthion\_le\_jeune\_suisse..., fmt/396, mobi, 281749, View, Editor, Download
- Buttons: Back, Save Query as a Set, Launch Basic Plan, Launch Advanced Plan

Figure 76: Post-query Search Object page

Rosetta opens the Plan Details - Administrator Information page (see [Figure 77](#)).

Preservation > Risk Analysis > View Missing Applications Report > Plan Details - Administrator Info

Plan Name	-	Creation Date	31/07/2012	Created By	admin1
Source Format	x-fmt/392	Source Classification	Image (Mix)	Risk Code	ZERO_APPLICATIONS
Preservation Set	9585240	Test Set	-		

**General Information**

\* Plan Name

\* Plan Reason

**Attached Documents**

Document path

No records were found

Figure 77: Preservation Plan Creation - Step1

- 2 In the General Information section of the page, enter a name for this plan and a reason for adding it to the Preservation plan database.
- 3 To attach a supporting document to the test plan, click the **Browse** button in the Attached Documents section, locate the document you want to attach, and select it.  
The path and filename display in the Document path field.
- 4 To upload the file, click the **Add** button. Information about the file displays in the Attached Documents section.
- 5 To create a test set, click the **Test Set Members** button at the bottom of the page.

**NOTE:**

Creating a test set is required for moving on to the next step.

The Search Object page opens.

Preservation > Risk Analysis > View Missing Applications Report > Create Preservation Plan Test Set

Format x-fmt/392 Risk Code ZERO\_APPLICATIONS Preservation Set x-fmt/392:ZERO\_APPS

Search Conditions Sort Columns

Search level:  Intellectual Entity  Representation  File

Match  Or of the following conditions:

IE Modification Date > Before > 2012-01-01

1 - 9 Records

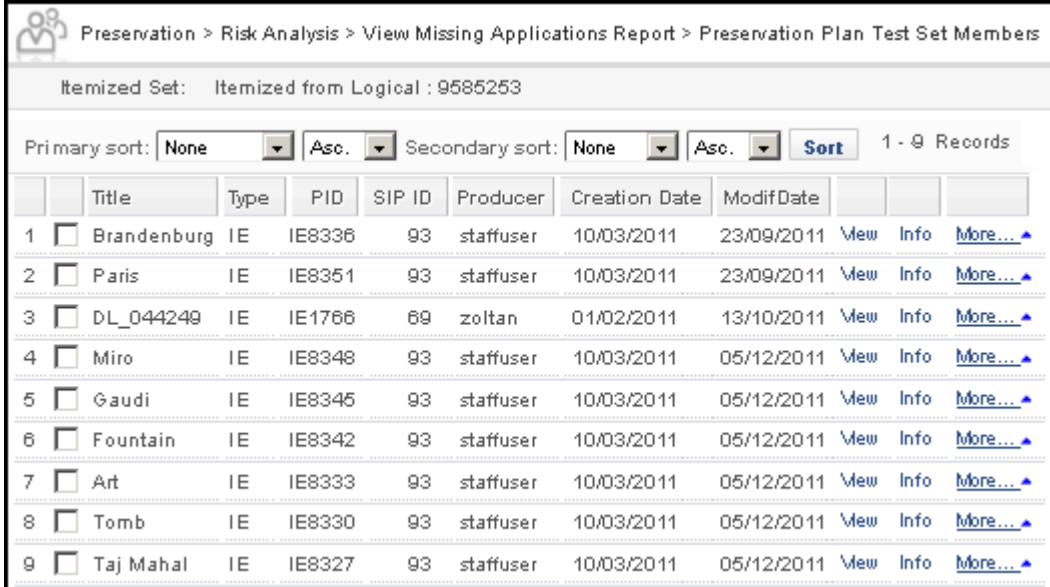
#	<input type="checkbox"/>	Title (DC)	Type (DC)	IE PID	SIP ID	Authoritative Name	IE Creation Date			
1	<input checked="" type="checkbox"/>	Raider	Unpublished	IE8321	93	Ex Libris Demo Producer	10/03/2011	View	Info	Export
2	<input checked="" type="checkbox"/>	Fountain	Unpublished	IE13272	99	Ex Libris Demo Producer	15/03/2011	View	Info	Export
3	<input checked="" type="checkbox"/>	Taj Mahal	Unpublished	IE8327	93	Ex Libris Demo Producer	10/03/2011	View	Info	Export
4	<input checked="" type="checkbox"/>	Siena	Unpublished	IE8324	93	Ex Libris Demo Producer	10/03/2011	View	Info	Export
5	<input checked="" type="checkbox"/>	Miro	Unpublished	IE13278	99	Ex Libris Demo Producer	15/03/2011	View	Info	Export
6	<input checked="" type="checkbox"/>	Gaudi	Unpublished	IE13275	99	Ex Libris Demo Producer	15/03/2011	View	Info	Export
7	<input type="checkbox"/>	Arc de Tri	Unpublished	IE13349	101	Ex Libris Demo Producer	15/03/2011	View	Info	Export
8	<input checked="" type="checkbox"/>	Pisa	Unpublished	IE13203	97	Demo Internal Producer	15/03/2011	View	Info	Export
9	<input type="checkbox"/>	Tomb	Unpublished	IE8330	93	Ex Libris Demo Producer	10/03/2011	View	Info	Export

Figure 78: Search Object page from Preservation Plan

- 6 Select test set members from the **Results** pane by clicking the check boxes. If you have more than one page of test items to choose from, click the Add Selected button before moving on to the next page. (That will refresh the page.)

- 7 When you have added all items for your test sample, click the **Review Set** button to review all items in the set.

The Set Members page shows the items you selected.



The screenshot shows a web interface for 'Preservation Plan Test Set Members'. At the top, there is a breadcrumb trail: 'Preservation > Risk Analysis > View Missing Applications Report > Preservation Plan Test Set Members'. Below this, it says 'Itemized Set: Itemized from Logical : 9585253'. There are sorting options: 'Primary sort: None Asc.' and 'Secondary sort: None Asc.' with a 'Sort' button. It indicates '1 - 9 Records'. The main content is a table with 9 rows and 10 columns. The columns are: an empty checkbox, Title, Type, PID, SIP ID, Producer, Creation Date, ModifDate, View, Info, and More... (with a right-pointing arrow). The rows contain the following data:

	Title	Type	PID	SIP ID	Producer	Creation Date	ModifDate	View	Info	More...
1	Brandenburg	IE	IE8336	93	staffuser	10/03/2011	23/09/2011	View	Info	More...
2	Paris	IE	IE8351	93	staffuser	10/03/2011	23/09/2011	View	Info	More...
3	DL_044249	IE	IE1766	69	zoltan	01/02/2011	13/10/2011	View	Info	More...
4	Miro	IE	IE8348	93	staffuser	10/03/2011	05/12/2011	View	Info	More...
5	Gaudi	IE	IE8345	93	staffuser	10/03/2011	05/12/2011	View	Info	More...
6	Fountain	IE	IE8342	93	staffuser	10/03/2011	05/12/2011	View	Info	More...
7	Art	IE	IE8333	93	staffuser	10/03/2011	05/12/2011	View	Info	More...
8	Tomb	IE	IE8330	93	staffuser	10/03/2011	05/12/2011	View	Info	More...
9	Taj Mahal	IE	IE8327	93	staffuser	10/03/2011	05/12/2011	View	Info	More...

Figure 79: Set Members for Testing

- 8 After you review the set and delete any items you want to exclude, return to the wizard by clicking the **Back** text, make any adjustments you need, then click **Next**.

The Plan Details - Alternatives Evaluation Form opens. This form determines the criteria your institution will use to evaluate the alternative. Criteria can relate any aspect of maintaining your institution and your collections.

Preservation > Risk Analysis > View Missing Apps Report > Plan Details - Alternatives Eval Form

Plan Name: Plan C    Creation Date: 01/08/2012    Created By: admin1  
 Source Format: x-fmt/392    Source: Image (Mix)    Risk Code: O\_APPLICATIONS  
 Preservation Set: 9585306    Classification:    Test Set: 9585307

Additional Evaluation Criteria

Selected Evaluation Criteria	Evaluation Notes	
1 Importance	How important is this item	Delete
2 Integrity > Traceability of change	Choose the appropriate value	Delete
3 Integrity > File Format Verification	Choose the appropriate value	Delete
4 Cost-Software > Initial	Choose the appropriate value	Delete
5 Cost per Day	Choose the appropriate value	Delete
6 opinion	Describe in your own words	Delete

Select Evaluation Criterion: Cost per Day

Figure 80: Evaluation Criteria

This page shows one set of evaluation criteria for comparing the different alternatives. The entire table of criteria is loaded from a separate table and the user can delete any items that don't apply to this plan.

- For instructions on how to add new criteria that is not in the table, see [Evaluation Criteria](#) on page 121. When you are satisfied with the evaluation criteria for this alternative, click the **Next** button.

The Plan Details - Evaluation Assignment page opens.

Preservation > Risk Analysis > View Missing Applications Report > Plan Details - Evaluation Assignment

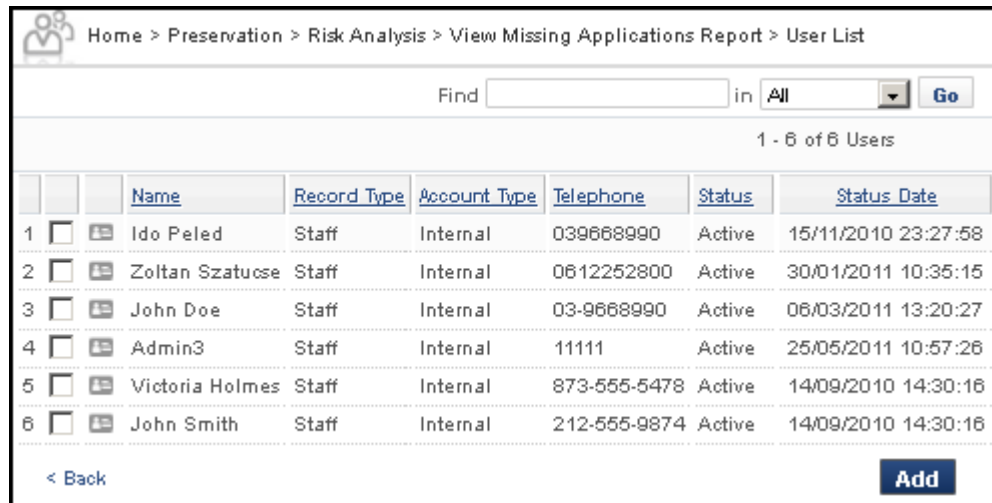
Plan Name: Plan C    Creation Date: 01/08/2012    Created By: admin1  
 Source Format: x-fmt/392    Source: Image (Mix)    Risk Code: ZERO\_APPLICATIONS  
 Preservation Set: 9585306    Classification:    Test Set: 9585307

No records were found

Figure 81: Evaluation Assignment

- 10 Click the **Add User** button to assign the evaluation of test results to an Editor in the system.

The User List page opens to a table of Editors..



		Name	Record Type	Account Type	Telephone	Status	Status Date
1	<input type="checkbox"/>	Ido Peled	Staff	Internal	039668990	Active	15/11/2010 23:27:58
2	<input type="checkbox"/>	Zoltan Szatucse	Staff	Internal	0612252800	Active	30/01/2011 10:35:15
3	<input type="checkbox"/>	John Doe	Staff	Internal	03-9668990	Active	06/03/2011 13:20:27
4	<input type="checkbox"/>	Admin3	Staff	Internal	11111	Active	25/05/2011 10:57:28
5	<input type="checkbox"/>	Victoria Holmes	Staff	Internal	873-555-5478	Active	14/09/2010 14:30:16
6	<input type="checkbox"/>	John Smith	Staff	Internal	212-555-9874	Active	14/09/2010 14:30:16

Figure 82: Editors Available for Evaluation Assignment

- 11 Click the check box(es) beside the user(s) to which you want to assign the evaluation. Then click the **Add** button.  
The Plan Details - Evaluation Assignment page refreshes with the user(s) you selected.
- 12 Click the **Save** button to save the plan and return to the List of Preservation Plans page. To save the plan and go directly to the Alternative List, click the **Alternative List** button.

## Evaluation Criteria

The evaluation criteria of preservation plans and plan alternatives can be customized to suit your institution's needs and priorities. Fields for evaluating criteria can be added to the system. They can be classified by type (text field or drop-down box). Code tables for drop-down values can be created by staff and stored in a dedicated table. This table and all related code tables are accessible to Preservation Analysts and Managers through the Management > Preservation user interface. Analysts creating evaluation forms for plans and alternatives can draw from this pool of criteria, as needed.

## Accessing the Pages in the RoseTTa User Interface

Preservation Analysts and Managers can access the pages related to managing evaluation criteria by following the path below and clicking the link to their starting page:

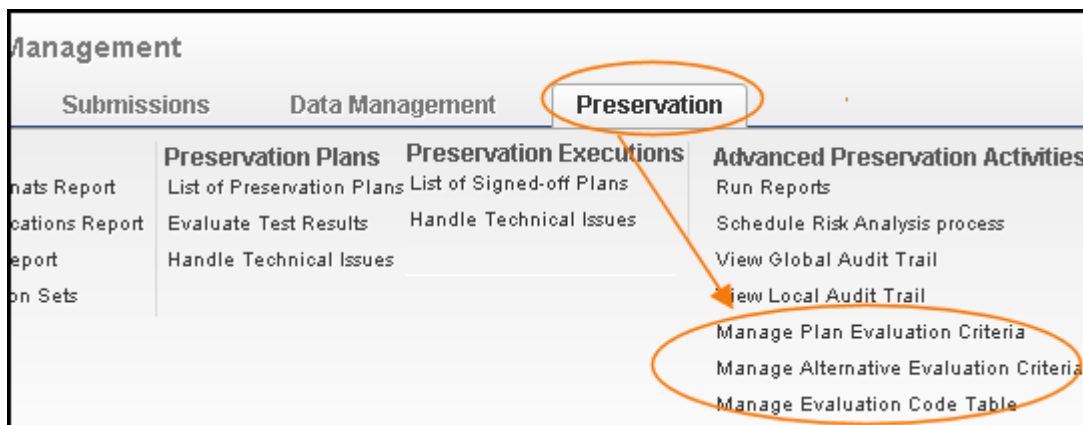


Figure 83: Navigating to Evaluation Criteria Pages

### ***Managing Plan and Alternative Evaluation Forms***

Evaluation criteria is set up for plans and plan alternatives in the same way.

---

**NOTE:**

You must first connect to the consortium before making code table updates for preservation.

---

#### **To set up evaluation criteria:**

- 1 Follow the path from the **Preservation** tab to Advanced Preservation Activities to **Manage Plan Evaluation Criteria** or **Manage Alternative Evaluation Criteria**, depending on whether you are developing criteria by which to evaluate a plan or to evaluate an alternate to a plan.

The Manage Evaluation Criteria page you selected opens.

	Field Name	Description	Field Type	Code Table Name		
1	Integrity > Traceability of change	Choose the appropriate value	Combo Box	IntegrityFileFormatVerification	Edit	Delete
2	Integrity > File Format Verification	Choose the appropriate value	Combo Box	IntegrityTraceability	Edit	Delete
3	Cost-Software > Initial	Choose the appropriate value	Combo Box	CostSoftwareInitial	Edit	Delete
4	Cost per Day	Choose the appropriate value	Text	-	Edit	Delete
5	opinion	Describe in your own words	Text	-	Edit	Delete

Figure 84: Evaluation Criteria Page

Existing fields and information for each field display in a table.

Table 25.

Header	Information
Field Name	The label of the field as it appears on the user interface of the person creating the survey.
Description	The tooltip, typically directions for how to enter a value for the field.
Field Type	The type of value, indicating the way to enter the value (select drop-down or enter text). Drop-downs (or “Combo Boxes” must be accompanied by code tables listing available selections.
Code Table Name	The code table that lists values for a Combo Box field. This table can be added to the system, or an existing code table can be used, with or without edits. See

Fields can be added (button top left), edited, or deleted (per row).

- 2 To view a field in detail and perform edits, click the **Edit** link of the field’s row.

Home > Preservation > Advanced Preservation Activities > Manage Plan Evaluation Criteria > Evaluation Field

\* Field Name  Field Type

Description (Tooltip)

Code Table Name

Figure 85: View or Edit Entries for an Evaluation Field

- 3 Add entries for a new field or edit existing entries.
- 4 If you are creating a “Combo Box” (or, a box displaying values that the customer much choose from), click either the **Edit Table** button or the **Create Table** button to edit or create values for the selection box. See [Adding/Editing a Code Table](#) on page 124 for information on how to manage code values for an evaluation field.
- 5 If you are creating or editing a text field, select the **Field Type** of **Text**.
- 6 When you are finished entering fields and values for the evaluation field, click **Save** to save your edits/entries and return to the list of fields for your plan or alternate.

### **Adding/Editing a Code Table**

---

#### **NOTE:**

You must first connect to the consortium before making code table updates for preservation.

---

#### **To add or edit values for a drop-down list within a field:**

- 1 Click the **Create Table** button or, to edit an existing table’s values, select the **Code Table Name** from the drop-down menu and then click the **Edit Table** button.

The Code Tables page opens.

If you are creating a new table, enter a name and description in the respective fields and click the Create button. The empty row for a code table opens below the general table information.

If you are editing an existing table, the full Code Tables page opens with values entered for the field you selected.

Home > Preservation > Advanced Preservation Activities > Manage Plan Evaluation Criteria > Code Tables

Languages: English

Table Information

Sub System: PRESERVATION\_EVALUATION Table Name: Cost Software Initial  
Updated by: Ex Libris Updated on: Thu Jun 21 21:25:49 IDT 2012  
Table Description: Plan List Search By Codes

Code Table Rows

Export Import

	Enabled	Display Order	Code	Description	Default Value	Last Updated	
1	<input checked="" type="checkbox"/>	▼	50000	50000\$ a year	<input checked="" type="radio"/>	By Ex Libris	Delete
2	<input checked="" type="checkbox"/>	▲ ▼	5000	5000\$ a year	<input type="radio"/>	By Ex Libris	Delete
3	<input checked="" type="checkbox"/>	▲ ▼	10000	10000\$ a year	<input type="radio"/>	By Ex Libris	Delete

Create a New Code Table Row

Code Description Language Default Value Create

Cancel Save

Figure 86: Code Table For Preservation Evaluation Criteria

To switch to another table, click the **Table Name** drop-down list and select a different table name.

- 2 Edit any existing row or add a new row from the Create a New Code Table Row section. You can also change the display order of the values as they appear in the drop-down list by clicking the up or down arrow buttons in the Display Order column.
- 3 When you have created the new table, click the **Save** button.

The new or edited code table is saved to the system and can be used as part of an evaluation criterion, is added to the Preservation Plan, and shows in all future Preservation Plans and Plan Alternatives.

## Adding Plan Alternatives

A plan alternative defines, for a format risk, a possible path, its actions, and its outcome for mitigating the risks of that format. More than one alternative can be assigned to a single format risk, and a Preservation Analyst can determine which option is the most beneficial to the institution based on tests of the alternatives (and other considerations).

Alternatives involve converting existing objects so that they become viable for the future, using either an internal plug-in tool or an external service. Every Preservation plan requires at least one alternative plan. This allows the institution at least two options when evaluating the plan: to keep the data as it is (in its source format) or to perform an alternative action to improve the quality and/or longevity of the data (in a target format).

**To create an alternative for a plan:**

- 1 Access the Alternatives Details - General Information page through one of the following paths:
  - After creating a plan, click the **Alternative List** button at the bottom of the Plan Details - Evaluation Assignment page.
  - From the Preservation main page, click **Preservation Plans List**, then click the **Alternatives List** text link corresponding to the row containing the plan you want to work with.

The first time the Alternatives List Page is opened for this plan, no alternatives are listed and the message **No records were found** displays below the **Add Alternative** button. Once you have added alternatives, Rosetta lists them in a table below the **Add Alternative** button.

Home > Preservation > Preservation Plans > List of Preservation Plans > Alternatives list

Plan Name RTF Chars Creation Date 20/05/2012 Created By admin1  
 Source Format fmt/49 Source Class Text (Structured) Risk Code RTF\_CHARS  
 Preservation Set 9365844 Test Set 9365845 Sustainability Facts Comparison Report

Add Alternative 1 - 2 of 2 Plans

	Name	Type	Test Stage	Updated Date				
1	Move RTF to fmt/50	External	Ready for Import	20/05/2012	View	Import	More Actions	
2	Move RTF to fmt/51	Internal	Aborted	20/05/2012	View	Edit	Run Test	More Actions

Duplicate | Delete | View Notes

Back Refresh Compare Alt.

Figure 87: Alternatives List, Two Existing Entries

When alternatives have been added, they appear in a table with general information and available actions (detailed below).

Table 26. Fields and Actions on the List of Alternatives

Field	Description
Add Alternative	Adds a new alternative for the plan. Note that the only supported alternative type at this point is migration.
Evaluate Test	Opens the evaluation interface for evaluating the test results.
View	Opens the alternative in view mode.
Handle Technical Issues	Opens the TA folders where failed test sets are stored.
Test Summary	If the alternative has been tested, opens the test results summary.
Edit	Enables the user to edit the alternative details (selected plug-in, evaluation criteria, alternative evaluation).
Duplicate	Creates a duplicate of the alternative.
Delete	Deletes the alternative.
Run Test	Runs a new test of the plug-in on the test subset. The system creates a new test record and directs the user to the test list.  In the case of an external migration alternative, this action launches the process of creating the descriptor file and separates the representations that need to be sent for migration outside of Rosetta.
Import	For external migration alternatives, this action launches the automatic validation that checks the descriptor file and matches it with the number of files in the import directory. If the validation passes, the loading starts automatically. If the validation fails, an error message specifies the lines in the descriptor file that didn't pass the validation.

- 2 To create an alternative, click the **Add Alternative** button below the general information pane.

The Alternatives Details wizard opens (see [Figure 88](#)). The top pane contains general information like the plan name, the source classification and format, and the creator of the plan.

Figure 88: Add Alternative Wizard, Step 1

- 3 Enter information in the fields according to the table below.

Table 27. Alternative Wizard Step 1 Fields

Field	Description
Alternative Name	The name of the plan alternative.
Description	(Optional.) A description of the actions involved in this alternative.
Select Target Format	The format to which the source files' common significant properties should be automatically compared. The drop-down opens a list of available formats in the Format Library.  <b>NOTE:</b> The actual migration target format depends on the selected migration tool.

Table 27. Alternative Wizard Step 1 Fields

Field	Description
Alternative Type	Either internal or external, depending on whether the migrations in the file use an internal plug-in tool and are carried out through the Rosetta process automation framework or whether the files are sent to an external vendor who converts the files off-site and returns them to Rosetta as new representations of the IEs.
Select Plug-in	A field that displays after a user selects Internal for the Alternative Type. The field contains a drop-down list of all plug-ins that work with the selected format.
Export/Import Directory	When the user has set the Alternative Type to external, read-only directory paths for outgoing files ( <b>Export Directory</b> ) and returning files ( <b>Import Directory</b> ) display below the Alternative Type field.  <b>NOTE:</b> The exact mechanism for uploading the new files coming from an external preservation action is described in the of the <i>Rosetta Staff Guide</i> .

The screenshot shows a web-based configuration form for an alternative plan. At the top, there is a breadcrumb trail: Home > Preservation > Preservation Plans > Preservation Plans. Below this is a sub-header: List > Alternatives Details - General Information. A progress indicator shows four steps, with the first step (1) highlighted. The form contains the following fields and values:

Alternative Name	p3	Target Format	fmt/44	Alt. Created By	admin1
Plan Name	p1	Plan Creation Date	26/10/2009	Plan Created By	admin1
Source Classification	Image (Raster)	Source Format	fmt/7	Risk Code	COMPRESSION_LZW_7

Below the summary table, there are several input fields:

- \*Alternative Name: Text input field containing "p3".
- Description: Text area containing "Image conversion from fmt/7 to fmt/44".
- \*Select Target Format: Dropdown menu showing "fmt/44".
- \*Alternative Type: Radio buttons for "Internal" (selected) and "External".
- \*Select Plug-in: Dropdown menu showing "RtfMigrationTool".

At the bottom of the form, there are "Cancel" and "Next" buttons.

Figure 89: Alternative Wizard Step 1, Filled

- 4 Click the **Next** button.

The second step of the wizard opens.

Alternative Name	p3	Target Format	fmt/44	Alt. Created By	admin1
Plan Name	p1	Plan Creation Date	26/10/2009	Plan Created By	admin1
Source Classification	Image (Raster)	Source Format	fmt/7	Risk Code	COMPRESSION_LZW_7

Plugin Parameters

No Parameters

< Back Cancel **Next**

Figure 90: Alternative Wizard Step 2

If the plug-in requires any parameters, a place for those parameter values will display below the Plugin Parameters bar. If not, the text No Parameters displays.

- 5 Enter values in the Plugin Parameters section if relevant.
- 6 Click the **Next** button.

Step 3, evaluation criteria for the alternative, opens.

Deposits ▾ Submissions ▾ Data Management ▾ Preservation ▾

Home / Preservation: Preservation Plans / Details

1 2 3 4

Alternative Name	Primary Alternative	Target Format ID	EXL-Fmt-62	Alternative Created By	admin1
Plan Name	plan_created_from_report_2016-07-03T11:35:48	Plan Creation Date	03/07/2016	Plan Created By	admin1
Source Classification	Image (Mix)	Source Format	fmt/353	Risk Code	lzw

**Automatic Evaluation - Source vs. Target** ▾

No records were found

Characteristic	Operator	Parameter	
<input type="text"/>	Not Smaller By ▾	<input type="text"/>	<input type="button" value="Add Source vs. Target Criteria"/>

**Automatic Evaluation - Target Characteristics only** ▾

No records were found

Characteristic	Operator	Parameter	
<input type="text"/>	Equals ▾	<input type="text"/>	<input type="button" value="Add Target Only Criteria"/>

Validate Format ID

**Automatic Evaluation - File Comparison Plugin** ▾

No records were found

Plugin	Operator	Parameter	
<input type="text"/>	Equals ▾	<input type="text"/>	<input type="button" value="Add File Comparison Criteria"/>

**Manual Evaluation** ▾

Selected Evaluation criteria		
1	Font types unchanged	Delete
2	Font sizes unchanged	Delete
3	Footnotes	Delete
4	Size	Delete
5	Summary	Delete

Test Alternative Evaluation criteria

<input type="text" value="Font types unchanged"/> ▾	<input type="button" value="Add Manual Criteria"/>
---	--

Figure 91: Alternative Wizard, Step 3

Four types of evaluation, based on the format source and target for the

alternative, display on this page.

Table 28. Alternative Wizard, Step 3

Type	Description
Automatic Evaluation - Source vs. Target	The user selects the properties of the classification group that should be measured by the system when it compares the original format file to the migrated file (for example, <b>File extension must equal file extension</b> ).
Automatic Evaluation - Target Characteristics only	<p>The user selects the target file properties that are not compared to those of the original file, but are measured according to the selected operators and parameters (for example, <b>File size smaller or equal 3MB</b>).</p> <p>Select <b>Validate Format ID</b> to validate the target's file format (as selected in the first step of the alternative wizard) and inform the user when viewing the plan results if conversion succeeded or not.</p>
Automatic Evaluation – File Comparison Plugin	The user selects a plugin, an operator, and a parameter to define the criteria for comparing the files.
Manual Evaluation	<p>The user selects the evaluation criteria that are stored in a separate table with their possible values. For example, the criterion <b>Character -&gt; Font size unchanged</b> could be <b>Yes</b> or <b>No</b>.</p> <p>The evaluation criteria is stored in the Evaluation Criteria Mapping table, which holds the name, description, and controlled list of values if the criterion is a drop-down. For more information about configuring this table, see the <i>Rosetta Configuration Guide</i>, <b>Working with Mapping Tables</b> on page 240.</p>

- 7 Use the drop-down menus and text fields to indicate parameters for automatically evaluating the alternative source compared to the target or the target on its own.

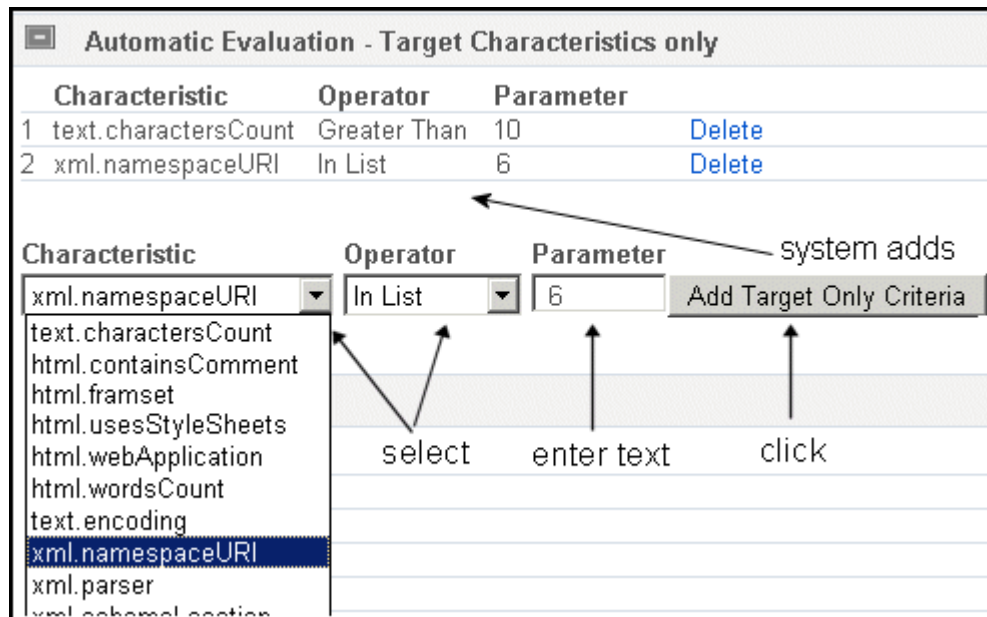


Figure 92: Adding an Automatic Evaluation Criterion

- 8 Add or remove any manual criteria using the Add buttons and Delete text in the bottom section (Manual Evaluation) of the page.
- 9 Click the **Next** button.

The Alternatives Details - Evaluation Criteria page opens. This is the fourth and final step of the alternatives wizard.

The screenshot shows a web interface for configuring an alternative. At the top, there is a breadcrumb trail: Home > Preservation > Preservation Plans > Preservation Plans. Below this is a sub-header: List > Alternatives Details - Evaluation Criteria. A table displays the following information:

Alternative	p3	Target Format	fmt/44	Alt. Created	admin1
Plan Name	p1	Plan Creation	26/10/2009	Plan Created	admin1
Source	Image (Raster)	Source	fmt/7	Risk Code	COMPRESSION
Classification		Format			_LZW_7

Below the table is a section titled "Evaluation Details" with a minus sign icon. It contains several criteria, each with a dropdown menu or text box:

- Integrity > Traceability of change**: Dropdown menu with "Yes" selected. Below it is the text "Choose the appropriate value".
- Integrity > Traceability of change**: Dropdown menu with "Yes" selected. Below it is the text "Choose the appropriate value".
- Cost-Software > Initial**: Dropdown menu with "10000\$ a year" selected. Below it is the text "Choose the appropriate value".
- Cost per Day**: Text box. Below it is the text "Choose the appropriate value".
- opinion**: Text box. Below it is the text "Describe in your own words".

At the bottom left, there are links for "< Back" and "Cancel". At the bottom right, there is a blue "Save" button.

Figure 93: Alternative Wizard, Step 4

All the criteria selected previously by the plan editor displays for the evaluator. Each criterion has a list of possible values for selection (for example, Yes/No, Good/Fair/Bad) or an open text box for writing an evaluation.

- 10 Enter the details and click the **Save** button

The alternative is complete and Rosetta returns you to the Alternatives List page, where the new alternative appears as an entry in the table.

## Editing Alternatives

Users can edit existing plan alternatives at certain test stages (when the alternative isn't being actively tested).

To edit an alternative for a Preservation plan, open the Alternative Details page by following **Preservation > List of Preservation Plans** and clicking the **Alternatives List** text link corresponding to the plan's row, then the **Edit** link corresponding to the individual alternative plan.

The Alternatives Details page opens to the General Details tab.

Alternative Name		Target Format ID		Alternative Created By	
jpg alt		fmt/44		admin1	
Plan Name		Plan Creation Date		Plan Created By	
PreservationType test time - 17:29		06/12/2017		admin1	
Source Classification		Source Format		Risk Code	
Image (Mix)		fmt/353		lzw	

Alternative Name		
jpg alt		
Description		-
Select Target Format		fmt/44
Alternative Type		Internal
* Select Plug-in		tiff_2_jp2_lzw_compression
Parameters		
Export Directory		/exlibris_shared/operational_shared/operational_export_directory/196476/196482/export
Import Directory		/exlibris_shared/operational_shared/operational_export_directory/196476/196482/import

Figure 94: Alternative Details Edit Page

Each tab corresponds to a different kind of information. (This information was entered initially through the Add Alternative wizard.)

For more information on the fields, see [Adding Plan Alternatives](#) on page 125.

For information relating to the testing and execution of plans, see [Adding Alternatives](#) on page 156.

## Descriptor File

The descriptor file is relevant for an external migration only. It holds information on the files, representations, and IEs used to create new representation(s). This section describes descriptor file

- [Generation](#) on page 135
- [Contents](#) on page 136
- [Validation](#) on page 138

## Generation

The descriptor file is used both for export and import. It is generated differently according to the source of the add representation action.

When the user clicks **Execute** on a signed-off Preservation plan, the system creates the descriptor file. All the fields in the Add Representation Fields mapping table are mapped in the descriptor file. While processing each IE in the set, the information on the original IE, the representation, and the files are

added to the descriptor. For each file, the indication of whether conversion is needed or not will be added to the descriptor.

The descriptor file is updated outside of the system, either by the vendor performing the conversion or the library staff. When the files are imported, an updated version of the descriptor is also imported.

## Contents

The descriptor is a comma-separated values (CSV) file. The first line in the descriptor will contain the column names.

The following fields in the descriptor file are required:

Table 29. Required Fields in the Descriptor File

Field Name	Description
IE PID	The PID of the IE to which the new representation must be linked.
Representation PID	The PID of the original representation. The value is recorded in the descriptor during export. This value will be used later in the import process (for Provenance Information).
Preservation Type	The Preservation Type of the original representation, Preservation Master or Modified Master. For Preservation actions, the type is created during export and the same value will be used for import. The new representation will be assigned the same Preservation Type as the original representation. For representations added from the Web Editor, the Preservation Type will be taken from the value the Editor enters in the form. This column will be mapped to the field <code>DNX.generalRepCharacteristics.preservationType</code> .
Original PID	The PID of the original file. It is created during export. This value will be used later in the import process (for Provenance Information).
File Name	The name of the original file will be inserted during export. When importing, the name has to be replaced by the name of the new file.
File Location	The path to the file relative to the directory where the descriptor file is placed.

Table 29. Required Fields in the Descriptor File

Field Name	Description
Usage Type	The Usage Type of the original representation. For Preservation actions, it is created during export. This value will be used later in the import process. The new representation will be assigned the same Usage Type as the original representation. For representations added from the Web Editor, the Usage Type will be taken from the value the Editor enters in the form. This column will be mapped to the field <code>DNX.generalRepCharacteristics.usageType</code> .
Conversion Required	When adding a representation, the user must provide all the files for the representation. When exporting, all the files will be exported. It is possible that only part of the files need conversion. For this purpose, for the files that need to be converted, the value of this field will be "Yes," for files that don't need conversion, the value of this field will be "No."
Submission Reason	This field will appear only for Master representations. The field will be filled in only when Add Representation is called from the Web Editor (that is, no Preservation plan is attached). The text entered will be saved as a Provenance event.

It is possible to define a dynamic list of DNX fields to load when adding a representation.

In order to support the dynamic definition of metadata fields, the mapping table Add Representation Fields is provided. The mapping table defines which DNX field each of the entered values is mapped to. All the fields listed in the Add Representation Fields mapping table can be added to the descriptor (for example, Label, Representation Code, Mime type, File Label, Checksum, Capture System, Source Type).

**NOTES:**

- When a new representation is created, a generic structure map is created and the original physical map is abandoned. The system does not support adding a new logical structure map through the `descriptor.csv` file. The physical structure map will be generated according to the order of the files in the descriptor file.
- There are two separate descriptor files, one for export and one for import. The format of the files is the same. The two files are placed in the same directory.

## Validation

Before importing the files, the system performs a series of validation tasks, ensuring that:

- The descriptor file format is correct: it is a.csv file. If an error is found, a message will be displayed and the Add Representation process aborted.
- The number of files in the Import Directory matches the number of files in the descriptor. If an error is found, a message will be displayed and the Add Representation process aborted.
- The names of the files in the Import Directory match the names of the files in the descriptor. There are no extra or missing files.
  - When adding a representation from the Web Editor, if an error is found, a message will be displayed and the Add Representation process aborted.
  - When adding a representation as part of a Preservation Test or Execution, if files are missing for an IE, the IE will be marked as a candidate to skip and Add Representation will continue with the next IE. See Error Handling for more details.
- The descriptor file is well-formed. If an error is found, a message will be displayed and the Add Representation process aborted.
- The descriptor file contains all the mandatory fields. If an error is found, a message will be displayed and the Add Representation process aborted.
- All the labels in the descriptor file match labels in the Add Representation Fields mapping table. If an error is found, a message will be displayed and the Add Representation process aborted.
- The values of fields with object type representation (for example, Preservation Type, Representation Code, Usage Type, Capture System and Source Type) are the same for all the files in the same representation. If an error is found, a message will be displayed and the Add Representation process aborted.

# Part V

---

## Testing and Execution

This part contains the following:

- **Chapter 12: Preservation Testing** on page 141
- **Chapter 13: Preservation Plan Execution** on page 173
- **Chapter 14: Resolving Technical Issues** on page 185



# 12

---

## Preservation Testing

This section contains:

- [Preparing Preservation Plans](#) on page 141
- [Testing a Preservation Plan](#) on page 148

### Preparing Preservation Plans

Once the user has identified objects at risk in the repository (see [Risk Analysis and Reports](#) on page 97), he or she needs to create a Preservation plan. The plan is created through the Preservation Planning sub-module of the Preservation module.

The Preservation Planning sub-module enables its users (Preservation Analysts in the institution) to do the following:

- Prepare Preservation plans
- Test Preservation plans and evaluate their results
- Compare Preservation options and select the best approach

The following sections explain how to prepare Preservation plans:

- [Planning and Testing Process Flow](#) on page 141
- [Viewing Risk Reports](#) on page 142
- [Creating a Preservation Set](#) on page 144
- [Creating a Preservation Plan](#) on page 147

### Planning and Testing Process Flow

The workflow for preparing and testing a plan will, with few exceptions, follow the diagram below:

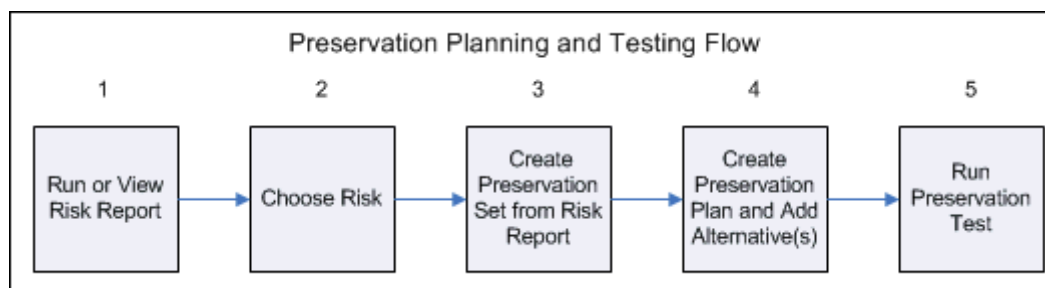


Figure 95: Preservation Planning and Testing Steps

## Viewing Risk Reports

The objects for Preservation actions are selected on the basis of risk reports generated by the Risk Analysis module.

### To view Risk Reports:

- 1 Open the report you want to view by clicking the **Preservation** tab and selecting **View Global Risk Report** from the Risk Analysis section.

The report opens, displaying a list of formats that have risks associated with them.

The list is searchable and sortable. Each entry in the list has the following two options:

- **Create Set** - Clicking this link opens the Search Object page, from which you can start creating a set of objects for a Preservation plan. To proceed, see [Creating a Preservation Set](#) on page 144.
- **Preservation Plans** - Clicking this link opens the List of Preservation Plans page, which displays a list of existing Preservation plans related to the given format.

	<a href="#">Format Name</a> ▲	<a href="#">Registry Id</a>	<a href="#">Classification</a>	<a href="#">No. of Risks</a>		
1	<a href="#">Extensible Markup Language</a>	fmt/101	Text (Mark-up)	3	<a href="#">View</a>	<a href="#">Research Set</a>
2	<a href="#">GZIP Format</a>	x-fmt/266	Generic	3	<a href="#">View</a>	<a href="#">Research Set</a>
3	<a href="#">Hypertext Markup</a>	fmt/97	Text (Mark-up)	3	<a href="#">View</a>	<a href="#">Research Set</a>
4	<a href="#">Hypertext Markup</a>	fmt/98	Text (Mark-up)	3	<a href="#">View</a>	<a href="#">Research Set</a>
5	<a href="#">Log File</a>	x-fmt/62	Generic	3	<a href="#">View</a>	<a href="#">Research Set</a>
6	<a href="#">PostScript</a>	x-fmt/406	Generic	3	<a href="#">View</a>	<a href="#">Research Set</a>
7	<a href="#">PostScript</a>	x-fmt/408	Generic	3	<a href="#">View</a>	<a href="#">Research Set</a>
8	<a href="#">Tagged Image File</a>	fmt/353	Image (Mix)	2	<a href="#">View</a>	<a href="#">Research Set</a>

[Back](#)

Figure 96: View File Properties Related Risks Report Page

Each entry in the list has the following two options:

- **View** - Clicking this link opens the Risks per Format page.

Home > Preservation > Format Library > List of Risk Identifiers > Risks per Format

Format Id	fmt/101	Format Name	Extensible Markup Language	Classification	Text (Mark-up)			
Risk Code	Risk Query	Institution	No. of IEs	No. of Reps	No. of Files			
1	sizeRisk	File Size Bytes > 1	Demo Institution	2	2	6	Create Set	Preservation Plans
2	lzw	Niso Image - Compre Scheme (Significant Properties) = LZVV	Demo Institution	2	2	6	Create Set	Preservation Plans
3	Zero Applications	-	Demo Institution	2	2	6	Create Set	Preservation Plans

Back

Figure 97: Risks Per Format Page

The Risks per Format page lists all risks associated with the given format and shows the number of IEs, representations, and files affected by each risk. The list is searchable and sortable. Each entry has the same two options: **Create Set** and **Preservation Plans**. See [Creating a Preservation Set](#) on page 144 to proceed.

- **Research Set** - Clicking this link opens the Search Object page, from which you can start creating a set of objects for a Preservation plan. To proceed, see [Creating a Preservation Set](#) on page 144.

## Creating a Preservation Set

After viewing risk reports, the next step in a Preservation action is creating a set of objects intended for Preservation.

### To create a Preservation set:

- 1 From the View Global Risk Report page, click **View** for the format you want to work with, then **Create Set** for the row that contains the specific risk you want to target

The Search Object page opens.

The screenshot displays a web interface for searching objects. At the top, the breadcrumb navigation reads: Home > Preservation > Risk Analysis > View Global Risk Report > Create Preservation Set. Below this, there are filters for 'Format: fmt/353' and 'Risk Code: sizeRisk'. A 'Search Conditions' tab is active, with 'Sort' and 'Columns' tabs also visible. The search level is set to 'File' (selected over 'Intellectual Entity' and 'Representation'). The logical set is 'fmt/353:sizeRisk'. There is an 'Add Conditions' section with an 'Add Conditions' button and a 'Search' button. Below the search area is a 'Results' section showing '1 - 10 of 38 Records'. A table lists the first four records, each with columns for File ID, File Original Name, Format Lib ID, File Ext, File MIME Type, and File Size Bytes. Each record has 'View', 'Info', and 'Download' links. At the bottom, there are '< Back', 'Save Query as a Set', and 'Launch Preservation Plan' buttons.

#	File PID	File Oriql Name	Format Lib Id	File Ext	File MIME Type	File Size Bytes			
1	FL1128	LZW_TIFF.tif	fmt/353	tif	image/tiff	1451556	View	Info	Download
2	FL1129	Copy of LZW_TIFF.tif	fmt/353	tif	image/tiff	1451556	View	Info	Download
3	FL1135	Copy of LZW_TIFF.tif	fmt/353	tif	image/tiff	1451556	View	Info	Download
4	FL1141	LZW_TIFF.tif	fmt/353	tif	image/tiff	1451556	View	Info	Download

Figure 98: Search Object Page

This page lists all objects in the repository affected by the given risk. The list is sortable. To proceed, see [Creating a Preservation Plan](#) on page 147.

- 2 (Optional) To apply additional conditions to the list, do the following:
  - a Under the Add Conditions bar, click the **Add Conditions** button.
  - b The Search page opens to the Search Conditions tab.

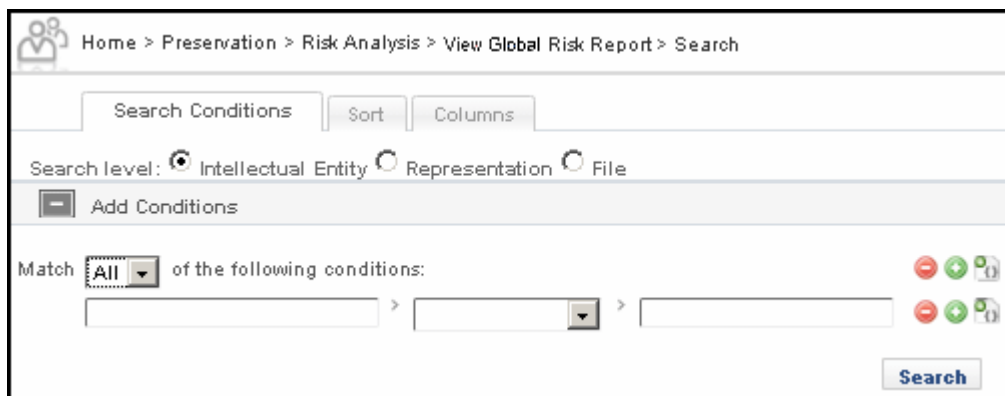


Figure 99: Search Page

- c Select **All** or **Any** from the **Match** drop-down menu.
- d Enter the field you want to search in the first text field. Matching fields display in a drop-down menu as you type.
- e Select a comparison value and enter a search term for each condition. To add more rows, click the plus icon beside the current row. To delete a row, click the corresponding minus icon.

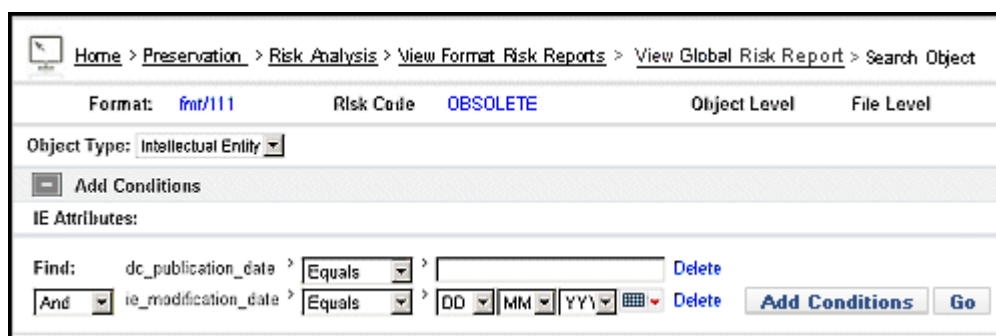


Figure 100: Conditions Added to Search

- f Click the **Go** button  
Results display in the **Results** section.

Home > Preservation > Risk Analysis > View Format Risk Reports > View Global Risk Report > Search Object

Format: `fmt/111` Risk Code: `OBSOLETE` Object Level: File Level

Object Type: Intellectual Entity

Add Conditions

IE Attributes:

Find: `ie_modification_date` Before 21 10 2009 Delete Add Conditions Go

Results

Primary sort: None Ascending Secondary sort: None Ascending Sort 1 - 7 of 7 Records

#	Title	Type	PID	SIP ID	Producer	Creation Date			
1	door	Intellectual Entity	IE1015	3	Demo Internal Producer	2009-09-22 12:09:22	View	Info	Export
2	image 1	Intellectual Entity	IE1219	24	Demo Internal Producer	2009-10-01 18:56:28	View	Info	Export
3	image 2	Intellectual Entity	IE1222	25	Demo Internal Producer	2009-10-01 18:57:08	View	Info	Export
4	image 3	Intellectual Entity	IE1225	26	Demo Internal Producer	2009-10-01 18:57:59	View	Info	Export
5	Producer	Intellectual Entity	IE1280	41	Auto_Prod2	2009-10-06 09:36:19	View	Info	Export
6	Producer	Intellectual Entity	IE1283	42	Auto_Prod1	2009-10-06 10:16:51	View	Info	Export
7	test 2	Intellectual Entity	IE1231	29	Demo Internal Producer	2009-10-01 21:26:02	View	Info	Export

< Back Save Query as a Set Launch Preservation Plan

Figure 101: Results from Single Format Search for Objects

- g If necessary, adjust the conditions and re-run the search until your search and results match the parameters you need.

To proceed, see [Creating a Preservation Plan](#) on page 147.

You can save the resulting set in the repository for purposes other than Preservation. To do that, click the **Save Query as a Set** button. The Set List page opens. It lists all sets stored in the system.

## Creating a Preservation Plan

After a Preservation set is selected, a Preservation plan should be created for it.

### To create a Preservation plan:

- 1 On the Search Object page, click the **Launch Preservation Plan** button. The Plan Details - Administrator Information page opens.

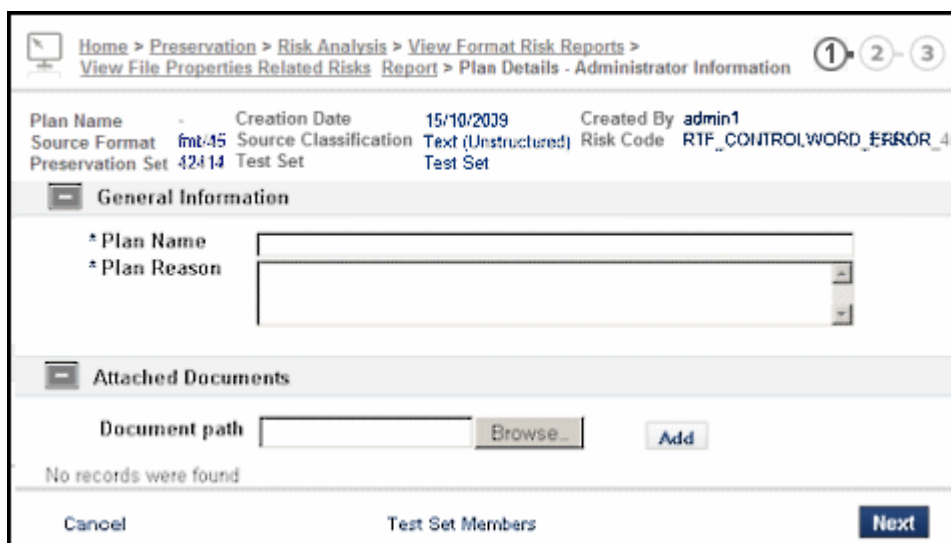


Figure 102: Plan Details - Administrator Information Page

- 2 Type the new Preservation plan's name and reason in the appropriate fields.
- 3 (Optional) To attach a document to the plan, click the **Browse** button in the Attached Documents area, choose the required file in the dialog box that opens, and click **Add**.  
The file is attached to the Preservation plan.
- 4 To proceed, see **Creating a Test Set** on page 148.

## Testing a Preservation Plan

Before the Preservation plan is applied to the whole Preservation set, it should be tested on a limited number of items.

### Creating a Test Set

#### To create a Test Set:

- 1 On the Plan Details - Administrator Information page, click the **Test Set Members** button.  
The Search Object page opens (slightly different from that in **Creating a Preservation Set**).

Home > Preservation > Preservation Plans > Preservation Plans List > Search Object

Preservation Set: fmt/7:COMPRESSION\_LZW\_7    Test Set: 47585    Number of Set Members:0

Search Conditions    Sort    Columns

Search level:  Intellectual Entity     Representation     File

Match  Or of the following conditions:

IE Modification Date > Before > 2012-01-01   

1 - 5 Records

#	<input type="checkbox"/>	Title (DC)	Type (DC)	IE PID	SIP ID	Authoritative Name	IE Creation Date			
1	<input checked="" type="checkbox"/>	Raider	Unpublished	IE8321	93	Ex Libris Demo Producer	10/03/2011	View	Info	Export
2	<input type="checkbox"/>	Fountain	Unpublished	IE13272	99	Ex Libris Demo Producer	15/03/2011	View	Info	Export
3	<input checked="" type="checkbox"/>	Taj Maha	Unpublished	IE8327	93	Ex Libris Demo Producer	10/03/2011	View	Info	Export
4	<input checked="" type="checkbox"/>	Siena	Unpublished	IE8324	93	Ex Libris Demo Producer	10/03/2011	View	Info	Export
5	<input checked="" type="checkbox"/>	Miro	Unpublished	IE13278	99	Ex Libris Demo Producer	15/03/2011	View	Info	Export

Figure 103: Search Object Page

- 2 Select the check boxes of the items you want to be included in the test set.
- 3 (Optional) To view all the items you have selected on a single page, click the **Review Set** button.

The Set Members page opens.

Home > Preservation > Preservation Plans > List of Preservation Plans > Preservation Plan Test Set Members

Itemized Set: Itemized from Logical : 9544048

Primary sort:   Secondary sort:    1 - 5 of 5 Records

	Title	Type	PID	SIP ID	Producer	Creation Date	Modification Date			
1	Fountain	Intellectual Entity	IE132	99	staffuser	15/03/2011 18:0	18/07/2012 05:25:16	View	Info	<a href="#">More...</a>
2	Fountain	Intellectual Entity	IE132	97	admin1	15/03/2011 11:2	08/07/2012 15:03:25	View	Info	<a href="#">More...</a>
3	Taj Mahal	Intellectual Entity	IE132	99	staffuser	15/03/2011 18:0	06/06/2012 17:18:25	View	Info	<a href="#">More...</a>
4	Pisa	Intellectual Entity	IE132	99	staffuser	15/03/2011 18:0	31/05/2012 13:22:36	View	Info	<a href="#">More...</a>
5	Parliment	Intellectual Entity	IE133	101	staffuser	15/03/2011 20:2	21/05/2012 07:45:57	View	Info	<a href="#">More...</a>

< Back

Figure 104: Set Members Page

Click **Back** to return to the Set Members page.

4 Click **Next**.

The Plan Details - Administrator Information page opens again.

5 Click **Next**.

The Plan Details - Alternatives Evaluation Form page opens.

Selected Evaluation Criteria	Evaluation Notes	
1 Importance	How important is this item	Delete
2 Integrity > Traceability of change	Choose the appropriate value	Delete
3 Integrity > File Format Verification	Choose the appropriate value	Delete
4 Cost-Software > Initial	Choose the appropriate value	Delete
5 Cost per Day	Choose the appropriate value	Delete
6 opinion	Describe in your own words	Delete

Figure 105: Plan Details - Alternatives Evaluation Form Page

This page displays a list of criteria for evaluation of the Preservation plan from the business point of view.

- To add an evaluation criterion, type the evaluation question in the Add New Evaluation Criterion field and click the **Add Criteria** button.

To delete a criterion from the list, click its **Delete** link.

- Click **Next**.

The Plan Details - Evaluation Assignment page opens.

No records were found

Figure 106: Plan Details - Evaluation Assignment Page

- Click the **Add User** button.

The User List page opens.

	Name	Record Type	Account Type	Telephone	Status	Status Date
1	Ido Peled	Staff	Internal	039668990	Active	15/11/2010 23:27:58
2	Zoltan Szatucse	Staff	Internal	0612252800	Active	30/01/2011 10:35:15
3	John Doe	Staff	Internal	03-9668990	Active	06/03/2011 13:20:27
4	Admin3	Staff	Internal	11111	Active	25/05/2011 10:57:26
5	Victoria Holmes	Staff	Internal	873-555-5478	Active	14/09/2010 14:30:16
6	John Smith	Staff	Internal	212-555-9874	Active	14/09/2010 14:30:16

Figure 107: User List Page

This page displays a list of users available for evaluating the Preservation plan.

- Choose a user from the list and click **Add**.

The user is added to the list on Plan Details - Evaluation Assignment page.

Plan Name	Plan C	Creation Date	01/08/2012	Created By	admin1
Source Format	x-fmt/392	Source	Image (Mix)	Risk Code	ZERO_APPLICATIONS
Preservation Set	9585306	Classification			
		Test Set	9585307		

Name	Role	Status Date	
1 admin1	-	22/09/2009	Remove

Figure 108: Plan Details - Evaluation Assignment Page - User Added

- To proceed, see **Adding Alternatives** on page 156.

## Viewing and Editing a Preservation Plan

Preservation plans can be viewed during any stage in their lifecycle. They can be edited when they are still in the draft stage.

**To view or edit a Preservation plan:**

- 1 Access the existing list of Preservation plans from the Management home page by clicking **Preservation > List of Preservation Plans**.

A list of existing plans opens on the List of Preservation Plans page (see **Figure 109**).

Name	Description	Format	Updated Date	Life Cycle	View	Edit	Alternatives List	More Actions
1 Plan_2012-08	Regression test	fmt/353	04/08/2012	Draft	View	Edit	Alternatives List	More Actions
2 from_report_2	Regression test	fmt/353	04/08/2012	Ready For Sign Off	View	Revert	More Actions	Plan Summary   Duplicate   Delete

Figure 109: List of Preservation Plans

**NOTE:**

In the figure above, both plans can be viewed but only the second plan, which is in the lifecycle of Draft, can be edited.

- 2 To view the plan, click **View** beside the plan you want to view. To edit a plan (in this example, the second plan), click the **Edit** text corresponding to the plan you want to edit.

The Plan Details - Administrator Information page opens.

Home > Preservation > List of Preservation Plans > Plan Details - Administrator Information

Plan Name	preservation_10038	Creation Date	26/09/2011	Created By	admin1
Source Format	fmt/7	Source	Image (Mix)	Risk Code	lzv
Preservation Set	30208	Test Set	30209		

Plan Details | Plan Evaluation Criteria | Evaluation Assignment | Notes

**General Information**

\* Plan Name: preservation\_ta\_tests\_10038  
\* Plan Reason: Preservation TA Regression test

**Attached Documents**

Document path:  Browse... Add

No records were found

Cancel Test Set Members Save

Figure 110: Preservation Plan Details - Administrator Information

The **Plan Name** field is view-only, but in the editing mode, the **Plan Reason** and **Attached Documents** can be updated.

---

**NOTE:**

The same tabs display for the view option as for the edit option. The tabs also correspond to the progressive numbers of the Add Plan wizard (see **Creating a Preservation Plan** on page 147). This example shows the edit option.

---

- 3 Make changes to any of the tabs on the Plan Details page. See below for information on each subsequent tab.

Home > Preservation > List of Preservation Plans > Plan Details - Alternatives Evaluation Form

Plan Name: preservation\_ta\_110038    Creation Date: 26/09/2011    Created By: admin1  
 Source Format: **fmt/7**    Source Classification: **Image (Mix)**    Risk Code: **lzw**  
 Preservation Set: **30208**    Test Set: **30209**

Plan Details | **Plan Evaluation Criteria** | Evaluation Assignment | Notes

**Additional Evaluation Criteria**

Selected Evaluation Criteria	Evaluation Notes	
1 Integrity > Traceability of change	Choose the appropriate value	<a href="#">Delete</a>
2 Integrity > File Format Verification	Choose the appropriate value	<a href="#">Delete</a>
3 Cost-Software > Initial	Choose the appropriate value	<a href="#">Delete</a>
4 Cost per Day	Choose the appropriate value	<a href="#">Delete</a>
5 opinion	Describe in your own words	<a href="#">Delete</a>

Add New Evaluation Criterion:(Open Question)  [Add Criterion](#)

Select Evaluation Criterion:  [Add Criterion From Existing Criteria](#)

[Cancel](#) [Save](#)

Figure 111: Plan Details - Alternatives Evaluation Form

On the Plan Evaluation Criteria tab, each existing criterion can be deleted, left as is, or used to create an additional criterion (using the **Add Criterion From Existing Criteria** button after selecting an existing one from the **Select Evaluation Criterion** drop-down list). New criteria can be added in the fields below the list of existing criteria.

Home > Preservation > List of Preservation Plans > Plan Details - Evaluation Assignment

Plan Name: preservation\_10038    Creation Date: 26/09/2011    Created By: admin1  
 Source Format: **fmt/7**    Source Classification: **Image (Mix)**    Risk Code: **lzw**  
 Preservation Set: **30208**    Test Set: **30209**

Plan Details | Plan Evaluation Criteria | **Evaluation Assignment** | Notes

[Add User](#)

	Name	Role	Status Date	
1	Victoria Holmes	-	25/09/2011	<a href="#">Remove</a>

[Cancel](#) [Save](#)

Figure 112: Plan Details - Evaluation Assignment

The Evaluation Assignment tab names the user and role of the person assigned to evaluate the plan. In the editing mode, an existing evaluator can be deleted by clicking the **Remove** text in the row corresponding to that user. Users can be added by clicking the **Add User** button.

Plan Name	preservation_10038	Creation Date	26/09/2011	Created By	admin1
Source Format	fmt/7	Source Classification	Image (Mix)	Risk Code	lzw
Preservation Set	30208	Test Set	30209		

Plan Details | Plan Evaluation Criteria | Evaluation Assignment | **Notes**

No notes added

Add Note:

**Add Note**

**Cancel** **Save**

Figure 113: Plan Details - Notes

The Notes tab on the Plan Details page allows users in edit mode to enter notes about the plan. Users enter information in the text box, then click the **Add Note** button.

- 4 When all changes have been made on the tabs (in edit mode), click the **Save** button to save the edits to the database.

## Adding Alternatives

One or more methods of format conversion (alternatives) can be attached to a Preservation plan.

### To add an alternative to a Preservation plan:

- 1 On the Plan Details - Evaluation Assignment page, click the **Alternatives List** button.

The Alternatives Details - General Information page opens.

Home > Preservation > Preservation Plans > Preservation Plans List > Alternatives Details - General Information

Alternative Name - Target Format ID tmt/10 Alt. Created By admin1  
Plan Name TIFF Preservation 5 Plan Creation Date 20/10/2009 Plan Created By admin1  
Source Classification Image (Raster) Source Format tmt/? Risk Code COMPRESSION\_LZW\_?

Alternative Name  
Description

Select Target Format  
tmt/10

Alternative Type  
 Internal  External

Select Plug-in  
TIFFLZWMigrationTool

Cancel Next

Figure 114: Alternatives Details - General Information Page

- 2 Type in the name of the alternative in the Alternative Name field and a description in the Description field.
- 3 Select the target format of the intended conversion. To do that, click the button to the right of the **Select Target Format** field.

The List of Formats page opens.

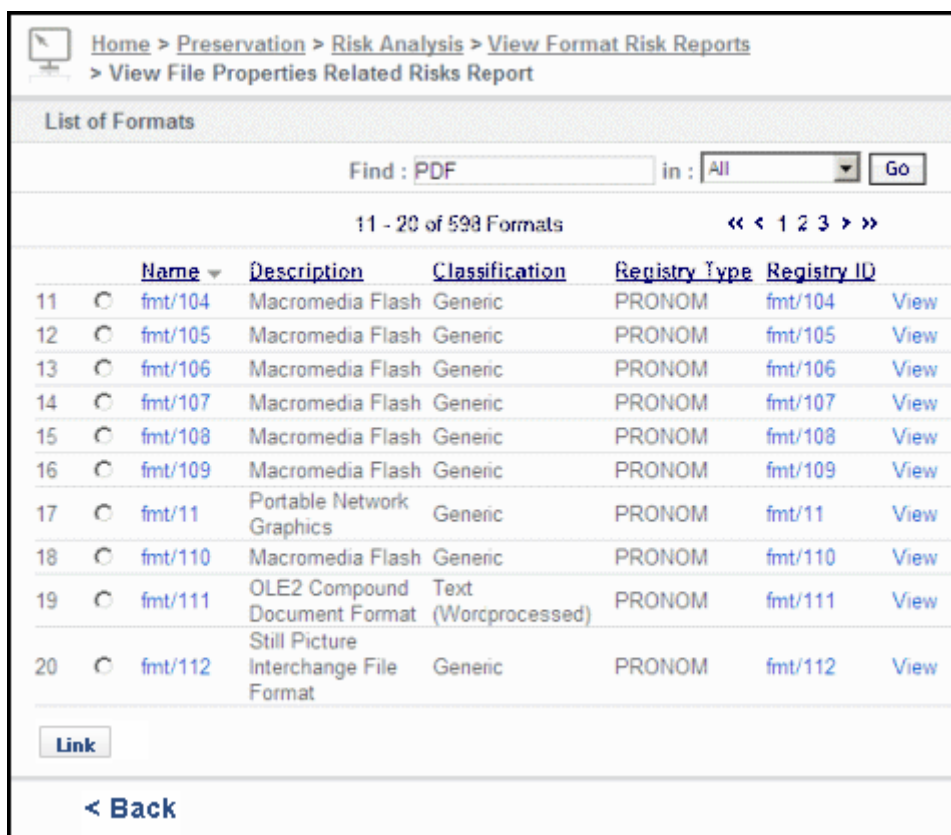


Figure 115: List of Formats Page

- 4 Select the required format and click the **Link** button.

The Alternatives Details - General Information Page opens again. The selected format appears in the Select Target Format field.

- 5 Select one of the Alternative Type radio buttons: **Internal** (if the conversion is to be performed inside the system) or **External** (if the files at risk are to be sent out for conversion).

If the Internal radio button is selected, the Select Plug-in field appears on the page (see [Figure 114](#)).

If the External radio button is selected, the page displays the paths to the Export and the Import directories.

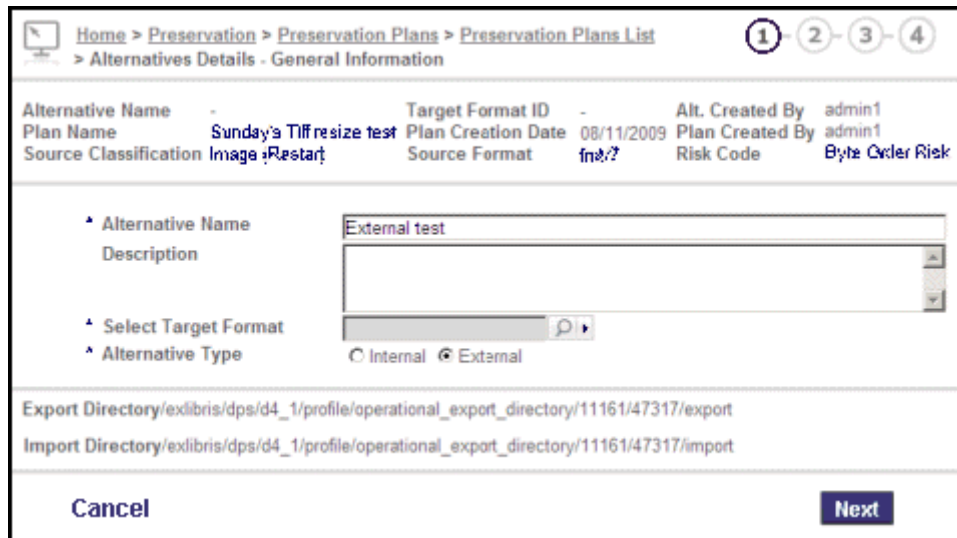


Figure 116: Alternatives Details - External Alternative Type

- 6 If the External type has been chosen, proceed to Step 8.
- 7 If the Internal type has been chosen, do the following:
  - a Select a conversion tool from the drop-down menu of the Select Plug-in field. Click **Next**.

The Plug-in Parameters page opens.

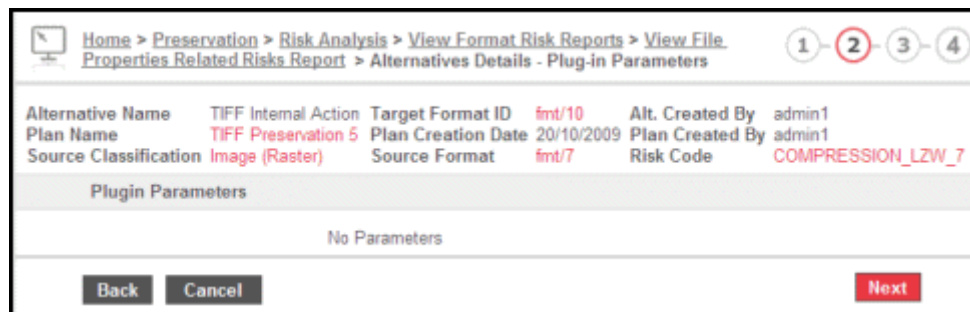


Figure 117: Plug-in Parameters Page

- b Select the required parameters if there are any (in the example above, there is none).
- 8 Click **Next**.

The Evaluation Configuration page opens.

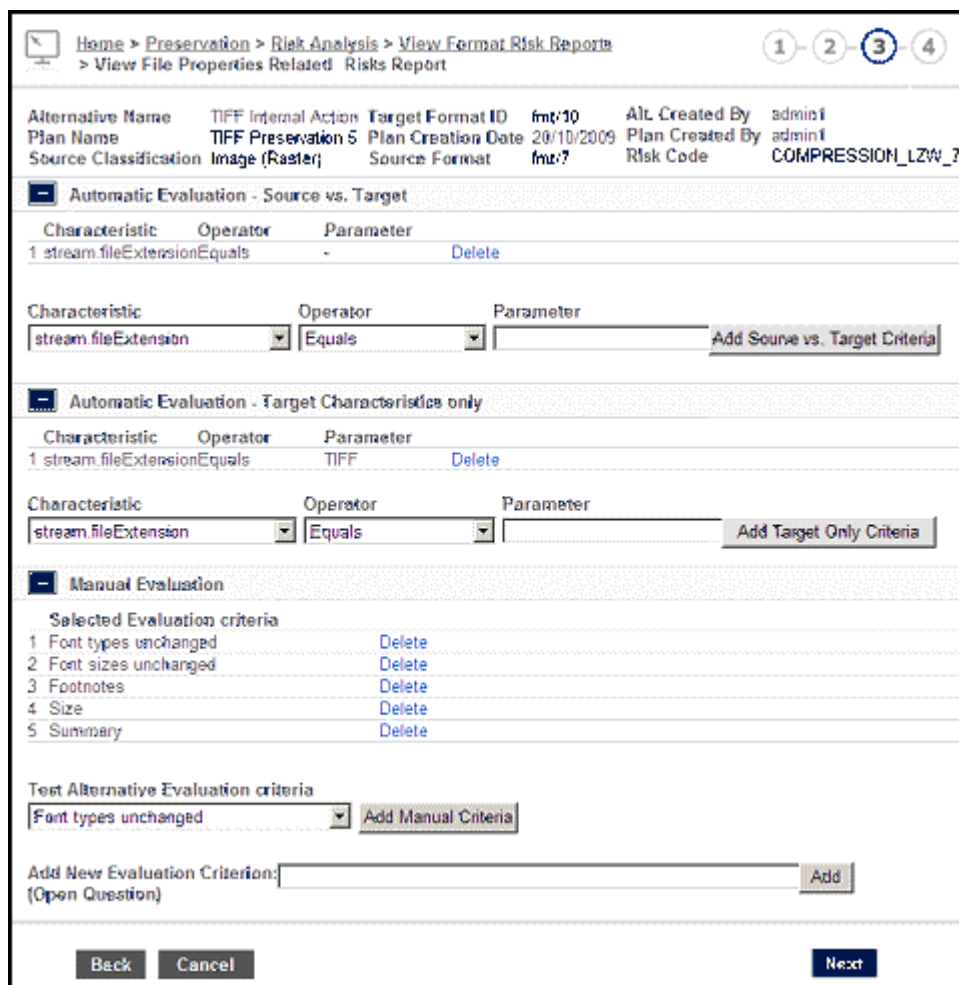


Figure 118: Evaluation Configuration Page

- 9 In the Automatic Evaluation - Source vs. Target area, do the following:
  - a Select the required characteristic from the Characteristic drop-down list.
  - b Select the required operator from the Operator drop-down list. The Greater and Smaller operators mean comparison of the target files against the source files. For example, stream.FileSizeBytes Not Greater Than means that the size of each target file is not greater than the size of its source file.
  - c Type in the parameter value in the Parameter field, if needed, and click the **Add Source vs. Target Criteria** button.

The added criterion appears as a line in the table. In the example above, the criterion that has been added means that the file extensions of the source and target files are the same. Such a criterion does need any parameter value.

- 10 In the Automatic Evaluation - Target Characteristics Only area, do the following:
  - a Select the required characteristic from the Characteristic drop-down list.
  - b Select the required operator from the Operator drop-down list.
  - c Type in the parameter value in the Parameter field and click the **Add Target Only Criteria** button.

The added criterion appears as a line in the table. In the example above, the criterion that has been added means that the file extension of the target files should be TIF.

- 11 In the Manual Evaluation area, do the following:
  - a To remove unsuitable criteria from the Selected Evaluation Criteria list, click their **Delete** links.
  - b To add a criterion to the Selected Evaluation Criteria list, select the required criterion from the Test Alternative Evaluation Criteria drop-down list and click the **Add Manual Criteria** button.

The selected criterion is added to the Selected Evaluation Criteria list.

- c (Optional) To add a criterion that does not appear in the drop-down list, type the criterion (in the form of a question) in the Add New Evaluation Criterion field and click the **Add** button.

The new criterion is added to the Selected Evaluation Criteria list.

- 12 Click **Next**.

The Alternatives Details - Evaluation Criteria page opens.

Alternative Name	TIFF Internal Action	Target Format ID	fmt/10	Alt. Created By	admin1
Plan Name	TIFF Preservation 5	Plan Creation Date	20/10/2009	Plan Created By	admin1
Source Classification	Image (Raster)	Source Format	fmt/7	Risk Code	COMPRESSION_LZW_7

**Evaluation Details**

Integrity > Traceability of change	Yes
Integrity > Traceability of change	Yes
Cost.Softwre > Initial	10000\$ a year
Cost per Day	

Figure 119: Alternatives Details - Evaluation Criteria Page

13 Select the required values for the criteria from the drop-down lists or type them in where appropriate. For information on configuring evaluation criteria, see [Evaluation Criteria](#) on page 121.

14 Click **Save**.

The Alternatives List page opens.

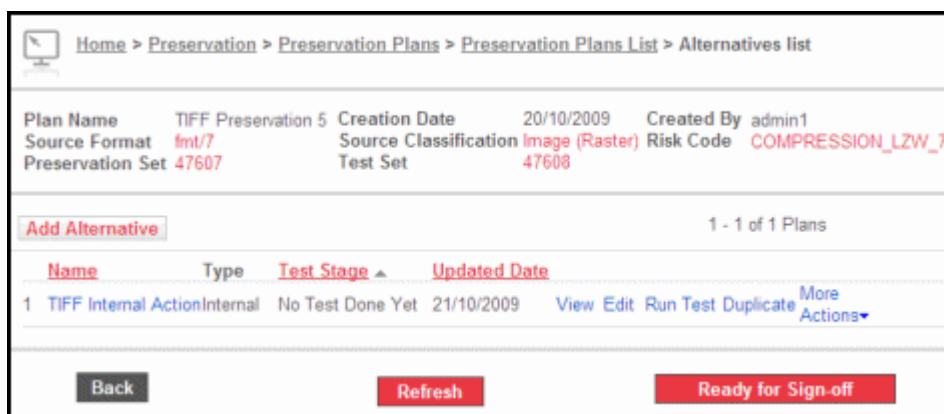


Figure 120: Alternatives List Page

15 To proceed, see [Running a Test](#) on page 162.

## Running a Test

After the Preservation plan has been prepared and a test set created, the test should be run and its results evaluated.

Each alternative of a test goes through the following lifecycle stages:

Table 30. Test Alternative's Lifecycle Stages

Stage	Next Stage	Actions Allowed
Ready for Test	Running, Waiting for Import (for External-type alternatives)	View, Edit, Run Test, Duplicate, Delete
Running	Errors in..., Ready for Evaluation,	View, Duplicate
Errors in... (Loading, Converting, Enrichment, Validation)	Ready for Evaluation	View, Handle Technical Issues, Duplicate
Ready for Evaluation	Completed	Evaluate Results, View, Duplicate

Table 30. Test Alternative's Lifecycle Stages

Stage	Next Stage	Actions Allowed
Completed	Running	View, Edit, Duplicate, Delete, Run Test, Test Results
Waiting for Import (for External-type alternatives)	Ready for Import	Abort, Duplicate
Ready for Import (for External-type alternatives)	Running	View, Import, Duplicate

**To run a test:**

- 1 On the Alternatives List page, click the **Run Test** link of the alternative you want to test. (In the case of an External-type alternative, clicking the **Run Test** link places the test set files in the Export directory for converting outside the system.)

If the selected alternative is of the Internal type, the test stage changes to Running.

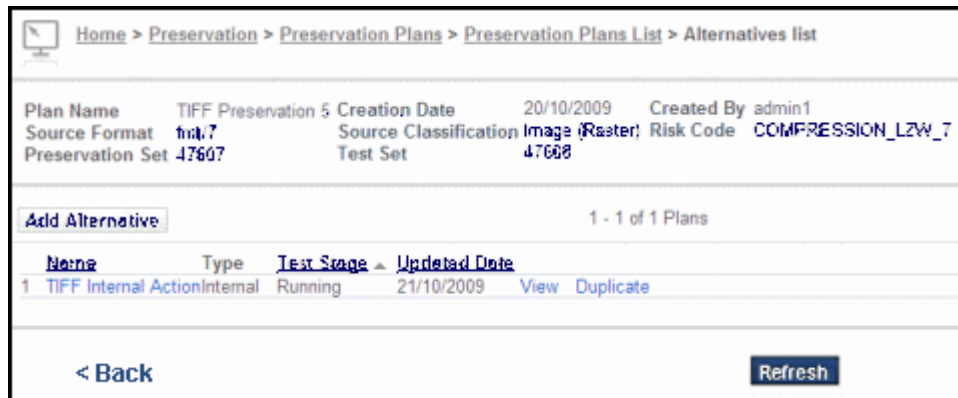


Figure 121: Running Test Page

If the selected alternative is of the External type, the test stage changes to Waiting for Import.

- 2 Click the **Refresh** button to see the updated test stage of the alternatives.
  - If the selected alternative is of the Internal type, the test stage changes to Ready for Evaluation. If the test stage changes to one of the intermediary stages (Loading, Converting, Enrichment, or Validation), click the **Refresh** button again.

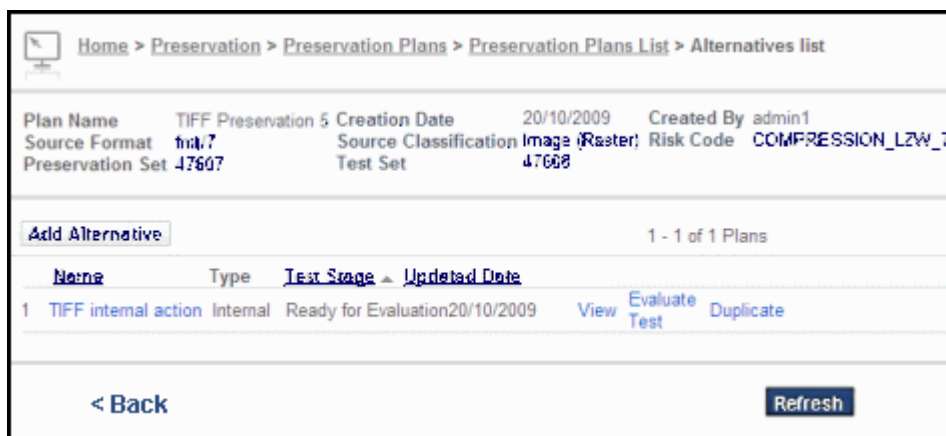


Figure 122: Running Test Page - Ready for Evaluation

Alternatively, the test stage may change to Errors (in the example below, Errors in Loading).

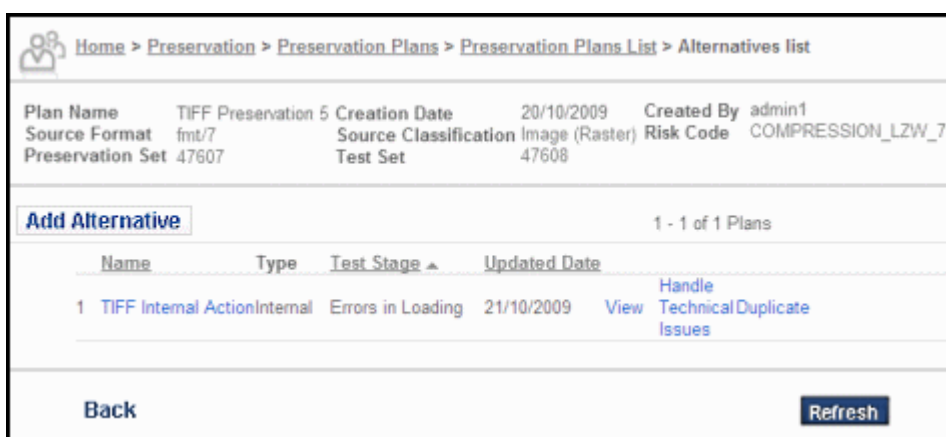


Figure 123: Running Test Page - Errors in Loading

- If the selected alternative is of the External type, after the files of the test set have been manually taken from the Export directory, converted outside the system, and placed in the Import directory, the test stage changes to Ready for Import.
- 3 If the selected alternative is of the Internal type, proceed to Step 5. If the selected alternative is of the External type, click **Import**.
- 4 Click the **Refresh** button to see the updated test stage. The test stage changes to Running, then to Ready for Evaluation. Alternatively, the test stage may change to Errors.

- 5 If the test stage is Ready for Evaluation, see [Evaluating Test Results](#) on page 165 to proceed.

If the test stage is Errors, see [Resolving Technical Issues](#) on page 185 to proceed.

## Evaluating Test Results

### To evaluate the test results:

- 1 On the Alternatives List - Ready for Evaluation page, click the **Evaluate Test** link.

The Test Evaluation Content List page opens.

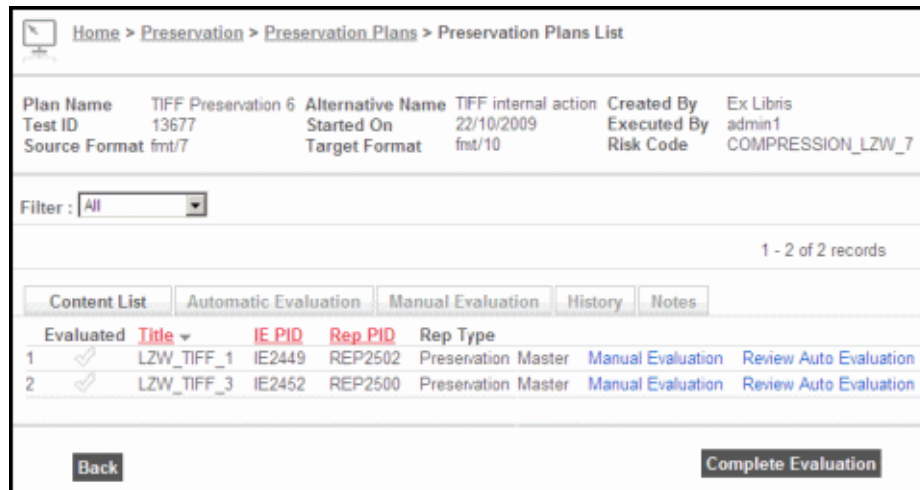


Figure 124: Test Evaluation Content List Page

This page displays the members of the test set. For each member of the test set, the user can manually evaluate the test results and review the results of the automatic evaluation.

- 2 To manually evaluate the test results, click the **Manual Evaluation** link. The manual Evaluation page opens.

Plan Name	TIFF Preservation 7	Alternative Name	TIFF internal action	Created By	admin1
Test ID	2851	Started On	26/10/2009	Executed By	admin1
Source Format	fmt/7	Target Format	fmt/10	Risk Code	COMPRESSION_LZW_7

Font types unchanged  
Evaluate the fonts of the new format

Word Count

Footnotes  
Evaluate the footnotes of the new format

Font sizes unchanged  
Evaluate the fonts size of the new format

Size  
Evaluate the size of the new format

Summary  
Summarize your impressions

Back Export IE View Original Rep IE Info View Migrated Rep Save

Figure 125: Manual Evaluation Page

This page enables the user to open the original and the converted files and evaluate the results of the test conversion in accordance with the manual evaluation criteria that are part of the Preservation plan configuration.

- 3 To view the original file, click the **View Original Rep** button. The file is opened in a new tab of the browser.
- 4 To view the converted file, click the **View Migrated Rep** button. The file is opened in a new tab of the browser.
- 5 After evaluating the conversion results, enter the answers to the evaluation criteria by selecting them from the drop-down lists or typing them where appropriate. Click **Save**.

The Test Evaluation Content List page opens again.

- 6 To review the results of the automatic evaluation, click the **Review Auto Evaluation** link.

The Automatic Evaluation page opens.

Home > Preservation > Preservation Plans > Preservation Plans List

Plan Name	TIFF Preservation 7	Alternative Name	TIFF internal action	Created By	admin1
Test ID	2851	Started On	26/10/2009	Executed By	admin1
Source Format	fmt/7	Target Format	fmt/10	Risk Code	COMPRESSION_LZW_7

### Source format vs. Target format

Attribute	Operator	Check Status	Failed Files	N/A
stream.fileExtension	Equals	✓	0	0

### Target format only

Attribute	Operator	Parameter	Check Status	Failed Files	N/A
stream.fileExtension	In List	tif,tiff	✓	0	0

[Back](#)

Figure 126: Automatic Evaluation Page

- 7 After verifying that the IE did not fail the evaluation, click **Back**.  
The Test Evaluation Content List page opens again.
- 8 Repeat the evaluation for all IEs in the list. Click the check mark in the Evaluation column for each IE that passed the evaluation.
- 9 Click the **Complete Evaluation** button.  
If all IEs do not display Evaluated check marks, a confirmation is requested.
- 10 Click **Yes**.  
Note that by completing the evaluation you delete the files that were created in the course of the test run. A warning to that effect is displayed.
- 11 Click **OK**.  
The Alternatives List page opens. The test stage of the alternative that has been tested is Completed.

The screenshot shows a web interface for managing test alternatives. At the top, there is a breadcrumb trail: Home > Preservation > Preservation Plans > List of Preservation Plans > Alternatives list. Below this, a summary table displays key information:

Plan Name	Test sustainability factor report	Creation Date	08/07/2012	Created By	admin1
Source Format	fmt/353	Source Classification	Generic	Risk Code	Zero Applications
Preservation Set	1038992985	Test Set	1038993780	Sustainability Factors	Comparison Report

Below the summary table, there is an "Add Alternative" button and a "1 - 2 of 2 Plans" indicator. A table lists the alternatives:

Name	Type	Test Stage	Updated Date	View	Edit	Run Test	More Actions
1 External test	External	Draft	08/07/2012	View	Edit	Run Test	More Actions▼
2 Tiff 2 jpeg2	Internal	Completed	08/07/2012	View	Edit	Run Test	More Actions▲

At the bottom of the table, there are links for "Test Summary", "Duplicate", "Delete", and "View Notes". Below the table, there are four main action buttons: "Back", "Refresh", "Compare Alt.", and "Ready for Sign-off".

Figure 127: Alternatives List Page - Evaluation Completed

- 12 If there are several alternatives in the list, the results of their evaluation can be compared. To do this, click the **Compare Alt.** button.

The Compare Alternatives page opens, showing a side-by-side comparison of the results.

Home > Preservation > Preservation Plans > List of Preservation Plans > Evaluation of Alternatives - Comparison

<b>Plan Name</b>	Test sustainability factor report	<b>Creation Date</b>	08/07/2012	<b>Created By</b>	admin1
<b>Source Format</b>	fmt/353	<b>Source Classification</b>	Generic	<b>Risk Code</b>	Zero Applications
<b>Preservation Set</b>	1038992985	<b>Test Set</b>	1038993780	<b>Sustainability Factors</b>	Comparison Report

**Alternative Evaluation Results**

	<u>External test</u>	<u>Tiff 2 jpeg2</u>
Cost per Day		545
Cost-Software > Initial	30000	50000
Integrity > File Format Verification	yes	no
Integrity > Traceability of change opinion	no	yes
		Not good

Back View as PDF

Figure 128: Compare Alternatives Page

Click **Back** to return to the Alternatives List page.

**NOTE:**

To see detailed explanations of the evaluation factors, click **Comparison Report** next to Sustainability Factors in the top section of the page.

13 To proceed, see **Test Sign-Off** on page 169.

**Test Sign-Off**

Signing off on a Preservation plan makes it available for actual execution.

**To sign off on a Preservation plan:**

- 1 On the Alternatives List page, click the **Ready for Sign-off** button. The List of Preservation Plans page opens.

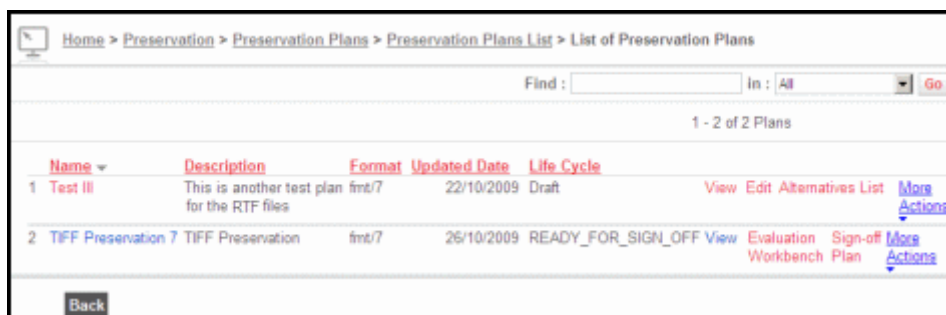


Figure 129: List of Preservation Plans Page

The Preservation Plans that have been successfully tested have the **Sign Off Plan** option.

- 2 Click the **Sign Off Plan** link.

The Plan Sign-off Form page opens.

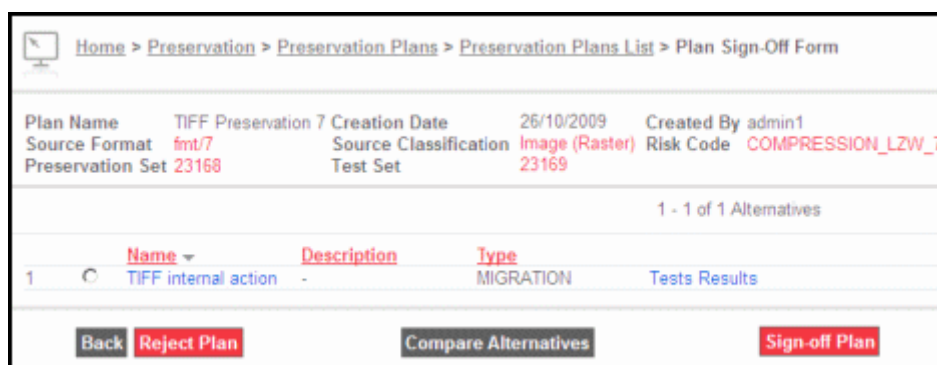


Figure 130: Plan Sign-off Form Page

This page lists all alternatives of the given plan (in the example above, there is only one alternative).

- 3 If none of the alternatives has been found suitable, the entire plan can be rejected by clicking the **Reject Plan** button.
- 4 Select the radio button of the alternative you have chosen and click the **Sign Off Plan** button.

The Plan Sign-Off Note page opens.

Plan Name	Test_Plan_7/31/11	Creation Date	31/07/2011	Created By	admin1
Source Format	fmt/7	Source Classification	Image (Mix)	Risk Code	lzw
Preservation Set	26586	Test Set	26748		

You have signed-off plan: Test\_Plan\_7/31/11 5:41 AM. Selected alternative is: internal. Please add a note.

\* Note

Preserve PP Docs

Cancel Save

Figure 131: Sign-off Page

- 5 You can add a sign-off note to the plan by typing it in the **Note** field.
- 6 To keep a record of the preservation plan documents in the repository, click the **Preserve PP Docs** check box below the Note field.

Rosetta saves the preservation plan materials to the following shared folder:  
.../operational\_shared/preserve\_pp\_docs/[signed-off plan ID]/  
.... All of the plan's relevant documents are stored in this folder.  
Additional signed-off plans are placed in the same `preserve_pp_docs` directory with the signed-off plan ID as the sub-folder holding all of the plan's documents.

**NOTE:**

Once the preservation plan information has been exported to the `preserve_pp_docs` directory, it can be deposited into Rosetta using the Submission Job, which reads the exported information in its current structure, transforms it to a valid Rosetta METS file, and uploads it. For more details regarding the Submission Job, see the *Staff User's Guide*.

- 7 Click **Save**.  
The List of Signed-Off Plans page opens.

	Active	Name ▲	Description	Status						
1	<input checked="" type="checkbox"/>	plan_created -11-05T03:44	Regression test	Signed Off	<a href="#">View</a>	<a href="#">Execute</a>	<a href="#">Executions History</a>	<a href="#">Plan Summary</a>	<a href="#">View Selected Alternative</a>	
2	<input checked="" type="checkbox"/>	plan_created -11-05T08:34	Regression test	Running Action	<a href="#">View</a>	<a href="#">Monitor</a>	<a href="#">Executions History</a>	<a href="#">Plan Summary</a>	<a href="#">View Selected Alternative</a>	<a href="#">More Actions</a> ▲
3	<input checked="" type="checkbox"/>	Test_Plan-13	Regression test	Signed Off	<a href="#">View</a>	<a href="#">Execute</a>	<a href="#">Executions History</a>	<a href="#">Plan Summary</a>	<a href="#">View Selected Alternative</a>	

Figure 132: List of Signed-Off Plans Page

This page displays a list of all Preservation plans that have been signed off in the system. From this page, any signed-off plan can be executed. For instructions on how to execute a Preservation plan, see [Preservation Plan Execution](#) on page 173.

---

**NOTE:**

If you try to create a preservation plan for the same formats and risks as an existing plan, you are presented with the existing plan to use.

---

# 13

---

## Preservation Plan Execution

This section contains:

- **Executing a Preservation Plan** on page 173
- **Evaluating Execution Results** on page 180

### Executing a Preservation Plan

Once a tested Preservation plan has been signed off, it can be executed. In the course of the plan's execution, the IEs that comprise the plan's Preservation set are converted, and the results of the conversion are evaluated in accordance with the parameters of the plan.

#### To execute a Preservation plan:

- 1 Open the Preservation page of the system. Under Preservation Executions, click **Signed-off Plans List**.

The List of Signed-off Plans page opens.

Active	Name ▲	Description	Status						
1	plan_created -11-05T03:44	Regression test	Signed Off	View	Execute	Executions History	Plan Summary	View Selected Alternative	
2	plan_created -11-05T06:34	Regression test	Running Action	View	Monitor	Executions History	Plan Summary	View Selected Alternative ▲	More Actions
<a href="#">View Execution Form</a>									
3	Test_Plan-13	Regression test	Signed Off	View	Execute	Executions History	Plan Summary	View Selected Alternative	

Figure 133: Signed-off Preservation Plans

This page lists all Preservation plans in the system that are signed off.

For each plan, its life cycle stage is indicated (Signed Off or Running Action when the plan is being executed) and the following options are available:

- **View** - Shows the details of the plan in view mode
  - **Execute/Monitor** - Starts executing the plan. When the plan's Life Cycle is Running Action, the **Execute** option changes to **Monitor**.
  - **Execution History** - Shows previous executions of the plan if there were any
  - **Plan Summary** - Shows the report of the Preservation planning tests
  - **View Selected Alternative** - Shows the details of the plan's alternative that was chosen
  - More Actions (available after plan has been executed):
    - **View Execution Form** - Shows the details of the plan's execution, such as block size and date scheduled.
    - **Abort**: Stops the execution of the plan.
- 2 Find the plan you want to execute and click **Execute**.

The Plan Execution Form page opens (the pages for internal and external plans differ as shown in the examples below).

Home > Preservation > Preservation Plans > Preservation Plans List > Plan Execution Form

Plan Name	TIFF Preservation 7	Creation Date	26/10/2009	Created By	admin1
Target Format ID	fml/10	Updated On	26/10/2009	Updated By	admin1
Source Classification	Image (Raster)	Source Format	fml/7	Risk Code	COMPRESSION_LZW_7

**Plan Execution Parameters**

\* Block Size (No. of IEs)

**Plan Execution Scheduling**

Schedule the plan execution starting time:

Immediately

Start At:

Date:  /  /

Time:  :

Cancel Refine Execution Set Execute

Figure 134: Plan Execution Form Page - Internal Plan

Home > Preservation > Preservation Executions > Signed-off Plans List > Plan Execution Form

Plan Name	RTF - 51 mitigation PLAN	Creation Date	01/11/2009	Created By	admin1
Target Format ID	fml/51	Updated On	02/11/2009	Updated By	Admin
Source Classification	Text (Unstructured)	Source Format	fml/51	Risk Code	RTF_CHARSET_ERROR_51

**Export/Import Directories**

Export Directory: /exlibris/dps/d4\_1/profile/operational\_export\_directory/5832  
 Import Directory: /exlibris/dps/d4\_1/profile/operational\_export\_directory/5832

**Plan Execution Parameters**

\* Block Size (No. of IEs)

**Plan Execution Scheduling**

Schedule the plan execution starting time:

Immediately

Start At:

Date:  /  /

Time:  :

Cancel Refine Execution Set Execute

Figure 135: Plan Execution Form Page - External Plan

- 3 Choose when you want to run the execution. If you want to start it immediately, select the **Immediately** radio button. If you want to delay the execution, select the **Start At** radio button and type the required date and time in the appropriate fields. The **Unschedule** action is also available if Plan execution is scheduled to start at a future date and time.
- 4 (Optional) To split the Preservation set of the plan into blocks and process them separately, type the required size of the blocks in the Block Size field.

- 5 (Optional) If you choose not to process the entire Preservation set at the same time, you can reduce the set by introducing an additional condition.

To reduce the set, do the following:

- a Click the **Refine Execution Set** button.

The Refine Execution Set page opens.

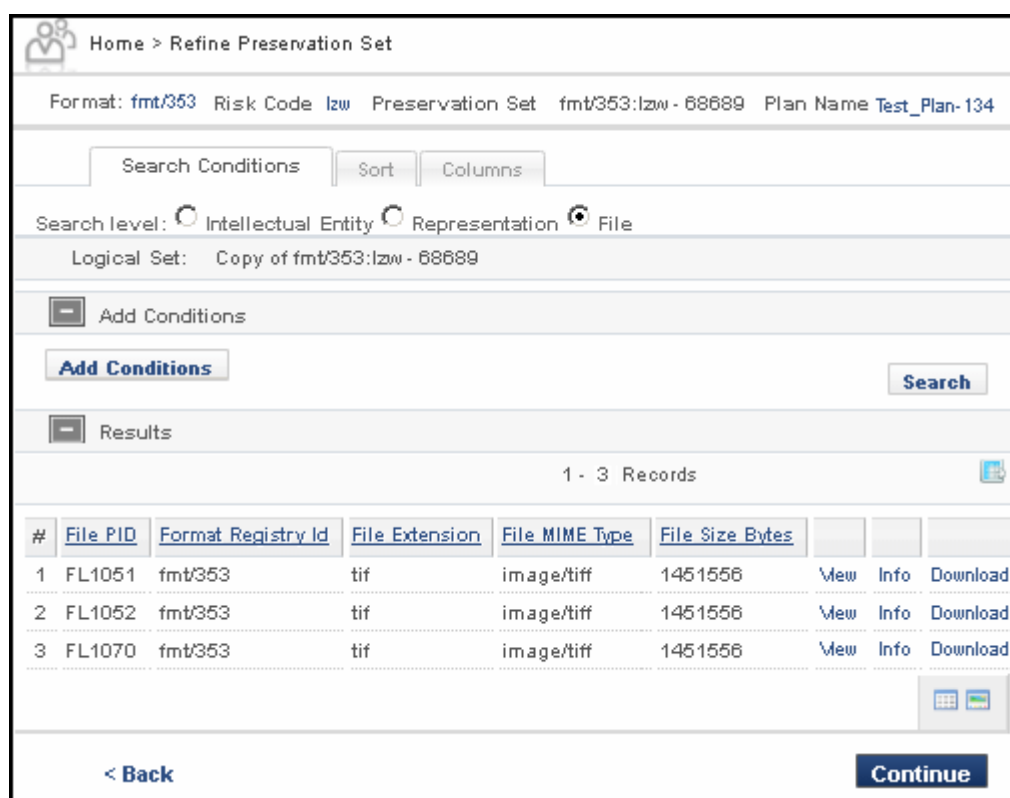


Figure 136: Refine Execution Set Page

This page displays a list of all members of the Preservation set. The list is sortable.

- b Click the **Add Conditions** button.

A field for adding conditions opens beside the button.

- c Type the search field you want to use.

Rosetta automatically drops down a list of matching fields as you type.

- d Select the field from the drop-down selection and enter values in the operator and search term fields.



Figure 137: Added Condition

- e Type in the required value for the condition that has been added and click **Go**.  
 The list of the set now includes only those entries that meet the additional condition. Note that this action only reduces the set for one specific execution but does not affect the saved Preservation set.
  - f Click **Continue** to return to the Plan Execution Form page.
- 6 Click the **Execute** button.  
 The Signed-off Plans List Page opens again. The plan that is being executed now has the **Monitor** option instead of **Execute**.
  - 7 Click the **Monitor** link of the plan.  
 The Monitor Plan Execution page opens.



Figure 138: Monitor Plan Execution Page - Internal Plan

This page shows the progress of the plan execution.

- Click the **Refresh** button to update the page.

When the stage changes to Ready for Evaluation, an additional option appears in the list - Evaluate Results.

Alternatively, the stage may change to Errors.

Home > Preservation > Preservation Plans > Preservation Plans List > Monitor Plan Execution

Plan Name TIFF Preservation 7 Creation Date 26/10/2009 Created By Smith John  
 Execution ID 2889 Started On 26/10/2009 Executed By Smith John  
 Target Format fmf/10 Source Format fmf/7 Risk Code COMPRESSION\_LZW\_7

1 - 2 of 2 Blocks

	<input type="checkbox"/>	Block ID	Set ID	Stage	End Date/Time	
1	<input type="checkbox"/>	2890	23241	Ready for Evaluation	-	Evaluate Results
2	<input type="checkbox"/>	2891	23243	Ready for Evaluation	-	Evaluate Results

Back View Skipped Objects View Notes Refresh Action Rollback Execute

Figure 139: Monitor Plan Execution Page - Ready for Evaluation

In the case of an External-type plan, when the stage changes to Ready for Import, an additional option appears in the list - **Import**.

Home > Preservation > Preservation Executions > List of Signed-off Plans > Monitor Plan Execution

Plan Name RTF Migration Plan Creation Date 26/09/2011 Created By John Smith  
 Execution ID 2552401 Started On 26/09/2011 Executed By John Smith  
 Target fmf/117 Source fmf/7 Risk Code Low Compression

1 - 4 of 4 Blocks

	<input type="checkbox"/>	Block ID	Set ID	Stage	End Date/T		
1	<input type="checkbox"/>	2552402	2552309	Ready for Import	-	Abort	Import
2	<input type="checkbox"/>	2552403	2552311	Ready Evaluation	-	Evaluate Results	View Execution Form
3	<input type="checkbox"/>	2552404	2552313	Ready for Import	-	Abort	Import
4	<input type="checkbox"/>	2552405	2552315	Ready for Import	-	Abort	Import

Back View Skipped Objects View Notes Refresh Action Rollback Execute

Figure 140: Monitor Plan Execution Page - External Plan

- 9 If the selected alternative is of the Internal type, proceed to Step 12.  
If the selected alternative is of the External type, click **Import**.  
The system validates the descriptor CSV that comes with the converted files (automatic validation).  
If the validation failed, an error message is displayed.  
If the validation is successful, the Execution Form page opens. This page allows you to schedule the loading of the imported files. Note that it is impossible to change the block size or to narrow the set.

The screenshot shows a web interface for the 'Plan Execution Form'. At the top, there is a breadcrumb trail: 'Preservation > List of Signed-Off Plans > Plan Execution Form'. Below this is a table with the following data:

Plan ID	TIFF to JPEG2000	Creation Date	10/02/2009	Created By	Asaf K.
Target Format	JPEG2000	Updated On	10/10/2007	Update By	Tsach M
Source Classification	Image	Source Format	TIFF 4.0	Risk Code	color_encod

Below the table are several sections:

- Import/Export Directories:**
  - Export Directory: /exlibris/dps/d4\_1/profile /Plan\_ID/Alt\_Name/Export
  - Import Directory: /exlibris/dps/d4\_1/profile /Plan\_ID/Alt\_Name/Import
- Plan Execution Parameters:**
  - Block Size (No. of IEs): 1000
- Plan Execution Scheduling:**
  - Schedule the plan execution starting time:
    - Immediately
    - Start At:
  - Date: dd (dropdown), mm (dropdown), yyyy (text input)
  - Time: 01 (dropdown), : 00 (dropdown)

At the bottom, there are three buttons: 'Cancel', 'View Execution Set', and 'Execute'.

Figure 141: Execution Form Page - Import

- 10 Choose when you want to start the loading. If you want to start it immediately, select the **Immediately** radio button. If you want to delay the loading, select the **Start At** radio button and type the required date and time in the appropriate fields.
- 11 Click the **Execute** button.  
The Monitor Plan Execution page opens.

- 12 If the stage of the execution is Ready for Evaluation, see **Evaluating Execution Results** on page 180 to proceed.  
If the stage of the execution is Errors, see **Resolving Technical Issues** on page 185 to proceed.
- 13 (Optional) To view objects that were skipped in the course of execution for technical reasons, click the **View Skipped Objects** button (available only if objects were skipped).

## Evaluating Execution Results

### To evaluate execution results:

- 1 On the Monitor Plan Execution page, click **Evaluate Results**.  
The Execution Evaluation page opens.

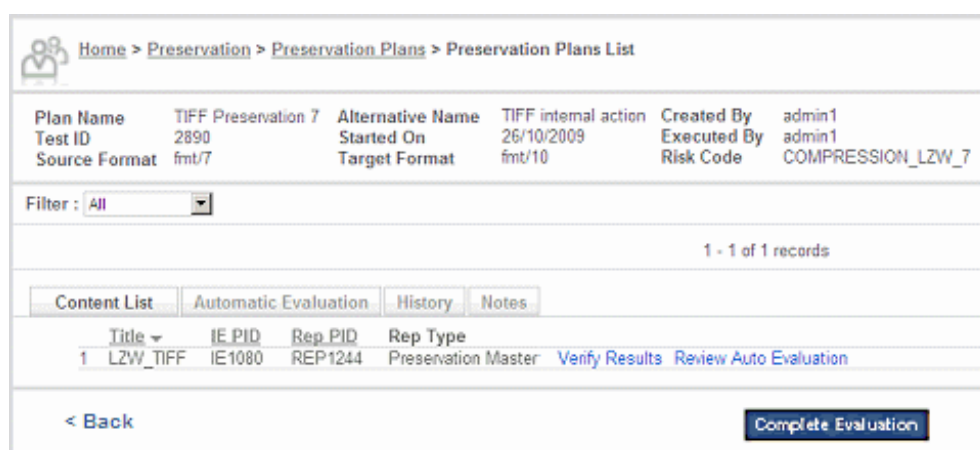


Figure 142: Execution Evaluation Page

- 2 To review the results of the automatic evaluation performed by the system, click **Review Auto Evaluation**.
- 3 To evaluate the execution results manually, click **Verify Results**.  
The Manual Evaluation page opens.

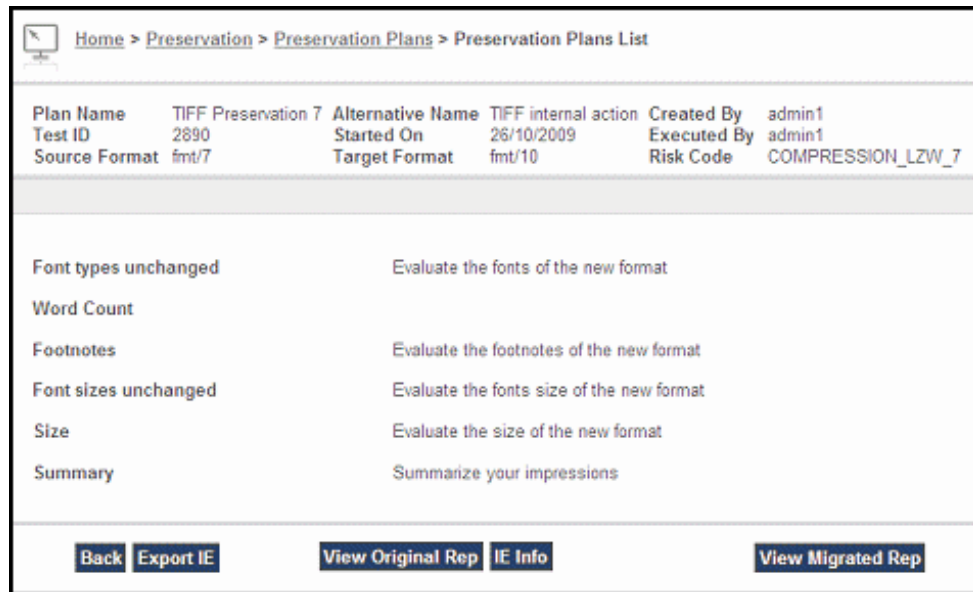


Figure 143: Manual Evaluation Page

This page displays the criteria for manual evaluation set in the given Preservation plan. To verify the execution results, you have to open the source IE (by clicking **View Original Rep**) and the converted IE (by clicking **View Migrated Rep**) and to check them manually. Note that no record of the results of this manual evaluation remains in the system.

- 4 Click **Back** to return to the Execution Evaluation page.
- 5 Click **Complete Evaluation**.

The Monitor Plan Execution page opens again. Repeat step 1 for all entries in the list.

After evaluation is completed, new options appear in each line of the list - **Commit** and **Rollback**. The same options appear in the drop-down **Action** list in the lower right corner of the page.

**NOTE:**

Evaluation is not mandatory. Users can complete the evaluation at any time, and they do not need to evaluate each of the IEs.

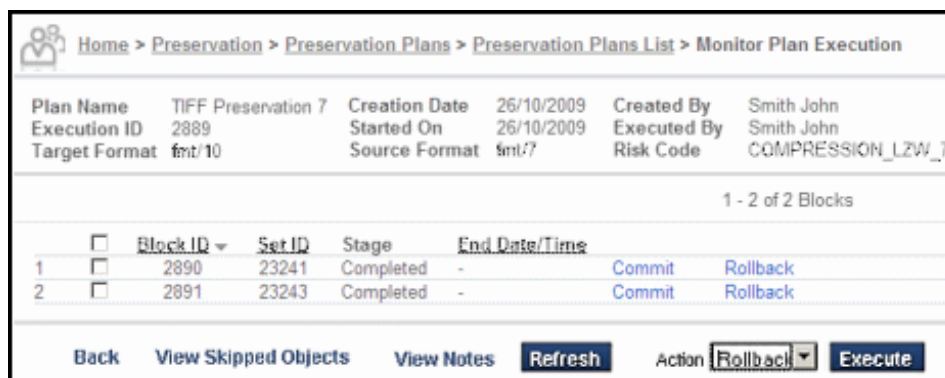


Figure 144: Monitor Plan Execution Page - Evaluation Completed

- To make the conversion permanent, click **Commit**.  
To delete the converted files and keep the source files, click **Rollback**.  
Alternatively, you may select the check boxes of several entries, select the required action in the Action drop-down list and click the **Execute** button. This performs the selected action on all selected entries.  
In the example below, all blocks have been committed.

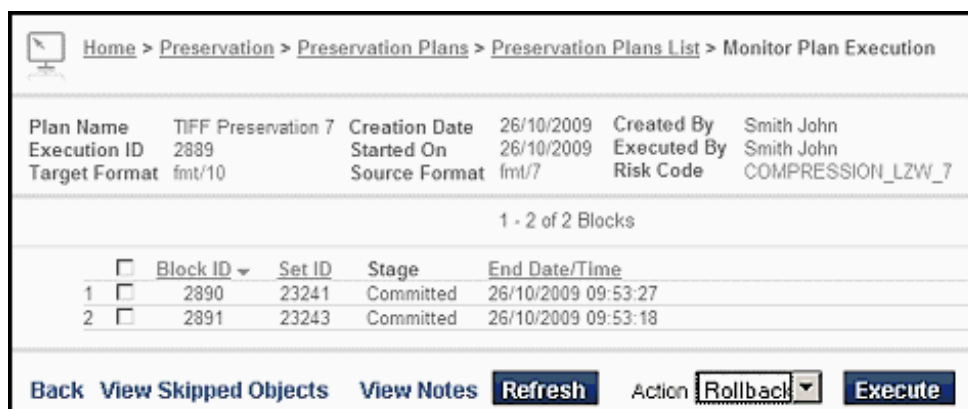


Figure 145: Monitor Plan Execution Page - Committed

- The Preservation plan has been executed.
- To view the history of executions for any Preservation plan, on the List of Signed-off Plans page, click its **Executions History** link.  
The List of Execution History page opens.

The screenshot displays a web application interface for managing preservation plans. At the top, there are navigation tabs: Deposits, Submissions, Data Management, and Preservation. The current page is titled 'Preservation: Signed-off Plans / Details'. Below the title, there are several key-value pairs: Plan Name (6.3.1), Target Format (x-fmt/455), Source Classification (Text (Structured)), Creation Date (10-06-2020), Updated On (07-10-2020), Source Format (fmt/49), Created By (John Smith), Updated By (John Smith), and Risk Code (RTF\_CHARSET\_ERROR\_49). Below this, there is a 'View' dropdown menu set to 'Default Paging' and a '1 - 1 of 1 Actions' indicator. The main content is a table with the following data:

Execution ID	Executed By	Start Date/Time	End Date/Time	Block Size	No. Of Blocks	Status	View Notes	View Report	Blocks History
1 26430591	admin1	24-09-2020 18:25:23	07-10-2020 18:17:00	1000	1	Completed			

At the bottom left, there is a 'Back' button. At the bottom right, there is another '1 - 1 of 1 Actions' indicator.

Figure 146: List of Execution History Page

The following options are available:

- View Notes – displays any notes added to the plan
- View Report – displays the Preservation Executions History report that shows the history of migrated IEs of executed signed off plans.
- Blocks History – displays the history of preservation plan blocks



# 14

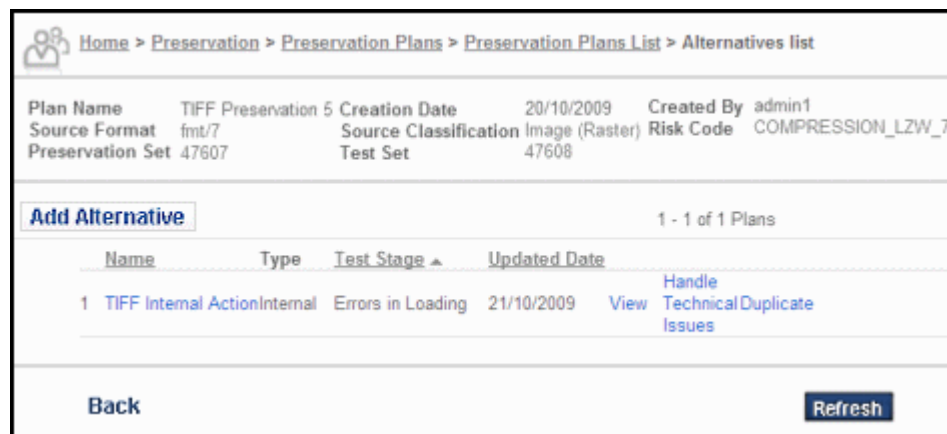
## Resolving Technical Issues

This section contains:

- [Handling Technical Issues During Testing](#) on page 185
- [Handling Technical Issues During Plan Execution](#) on page 189

### Handling Technical Issues During Testing

In the course of a test run, on the Alternatives List page, the test stage of the alternative that is being tested may change to Errors (in the example below, Errors in Loading). This means that the test run encountered technical problems, which have to be handled.



The screenshot shows a web interface for 'Alternatives list'. At the top, there is a breadcrumb trail: Home > Preservation > Preservation Plans > Preservation Plans List > Alternatives list. Below this, there is a summary table with the following data:

Plan Name	TIFF Preservation 5	Creation Date	20/10/2009	Created By	admin1
Source Format	fmt/7	Source Classification	Image (Raster)	Risk Code	COMPRESSION_LZW_7
Preservation Set	47607	Test Set	47608		

Below the summary table, there is a button labeled 'Add Alternative' and the text '1 - 1 of 1 Plans'. The main table has the following columns: Name, Type, Test Stage, Updated Date, and a set of action links (Handle, View, Technical Duplicate, Issues). The table contains one row:

Name	Type	Test Stage	Updated Date	Handle	View	Technical Duplicate	Issues
1 TIFF Internal Action	Internal	Errors in Loading	21/10/2009	Handle	View	Technical Duplicate	Issues

At the bottom of the page, there are two buttons: 'Back' and 'Refresh'.

Figure 147: Alternatives List Page - Errors in Loading

#### To handle the technical issues:

- 1 Click the **Handle Technical Issues** link of the alternative.  
The page of the corresponding process stage opens.

- 2 In the Filter drop-down list, select **Preservation Test**.
- 3 If the page belongs to any stage other than Validation (Converting, Loading, Enrichment, or To Permanent), see [Handling Technical Issues at a Non-Validation Stage](#) on page 186

If the page that you have opened is Validation, see [Handling Technical Issues at the Validation Stage](#) on page 187 to proceed.

## Handling Technical Issues at a Non-Validation Stage

After a user clicks the **Handle Technical Issues** link, the system lists all Preservation plans that encountered technical problems at this stage.

Plan Name	Block ID	User	Submitted On	Actions
1 Copy of tsache - test11	12921	Preservation PA	19/10/2009 12:01:47	Rerun Abort Events <a href="#">More</a>
2 CREATE SETDFSD	13050	admin1	19/10/2009 13:55:37	Rerun Abort Events <a href="#">More</a>
3 TIFF Preservation 3	13578	admin1	22/10/2009 14:26:28	Rerun Abort Events <a href="#">More</a>
4 TIFF Preservation 5	13632	admin1	22/10/2009 16:01:15	Rerun Abort Events <a href="#">More</a>
5 TIFF Preservation 5	13553	admin1	22/10/2009 14:22:57	Rerun Abort Events <a href="#">More</a>
6 test1At	1913	admin1	22/09/2009 15:36:28	Rerun Abort Events <a href="#">More</a>
7 TIFF Preservation 8	15038	admin1	27/10/2009 12:45:30	Rerun Abort Events <a href="#">More</a>

Figure 148: Loading Page

Choose an appropriate option(s) for each plan on the list:

- To repeat the process, click **Rerun**.
- To stop the process and roll back the conversion, click **Abort**.
- To view events in the lifecycle of the plan, click **Events**.
- Click **More** to open another two options: **Skip and Continue** (available only in execution mode, not testing mode) and **View Problematic Files**.
- If you are in execution mode (non-validation stage), you can skip the problematic files and continue the process by clicking **Skip and Continue**. This will remove the problematic IEs from the test set (even for the subsequent run)
- To view the list of the problematic files that indicates the problems, click **View Problematic Files**. In the example below, one file has a problem that the files are locked and unavailable for loading and another has a file conversion error.

IE PID	Stage	Reason	
1	Converting	IE_LOCKED	
2	Converting	File Conversion Failed	<a href="#">View Error</a>

Figure 149: List of Problematic IEs

Click **View Error**. A box is displayed with a description of the error.

## Handling Technical Issues at the Validation Stage

After a user clicks the **Handle Technical Issues** link, the system lists all Preservation plans that encountered technical problems at the Validation stage.

Plan Name	Block ID	User	Problems	Assigned To	Actions
1 plan 2	2261	admin1	100% failed		Work On Abort Events

Figure 150: Validation Page

Choose an appropriate option(s) for each plan in the list:

- To stop the process and roll back the conversion, click **Abort**.
- To view the events in the lifecycle of the plan, click **Events**.
- To open various options of handling the problem, click **Work On**.

The Content List page opens.

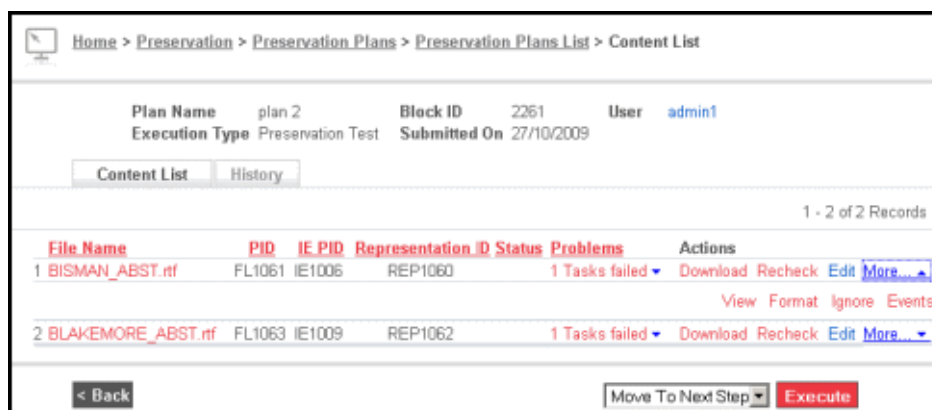


Figure 151: Content List Page

This page indicates the problem of each file. In this example, the problem is **1 Tasks Failed**. If you click this link, the problem description becomes more specific.

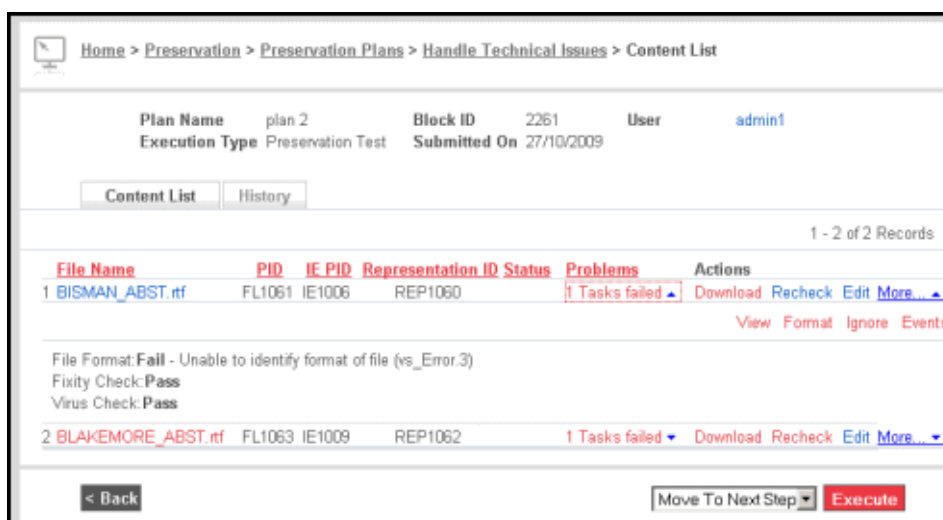


Figure 152: Content List Page - Problem Description

Use appropriate options for correcting the problem:

- To download the original file onto your computer, click **Download**.
- To recheck the file, click **Recheck**.
- To open the file in Web Editor, click **Edit**.
- Click **More...** to open additional options: **View**, **Format**, **Ignore**, and **Events**.
- To open the file for viewing, click **View**.
- To assign a different format to the file, click **Format**.

- To resume the conversion ignoring the problem (if possible), click **Ignore**.
- To view events of the file's lifecycle, click **Events**.

After using appropriate options for correcting the problem, select an action from the drop-down list in the lower left corner of the page (Move to Next Step or Skip and Continue) and click **Execute**.

## Handling Technical Issues During Plan Execution

In the course of a plan execution, on the Monitor Plan Execution page, the stage of the execution process may change to Errors. This means that the execution encountered technical problems, which have to be handled.

### To handle the technical issues:

- 1 Click the **Handle Technical Issues** link of the block.  
The page of the corresponding process stage opens.
- 2 In the **Filter** drop-down list, select **Preservation Execution**.
- 3 Proceed as described in **Handling Technical Issues During Testing** on page 185, starting from step 3.



# Part VI

---

## Storage Migration

This part contains the following:

- **Chapter 15: Storage Migration** on page 193



# 15

## Storage Migration

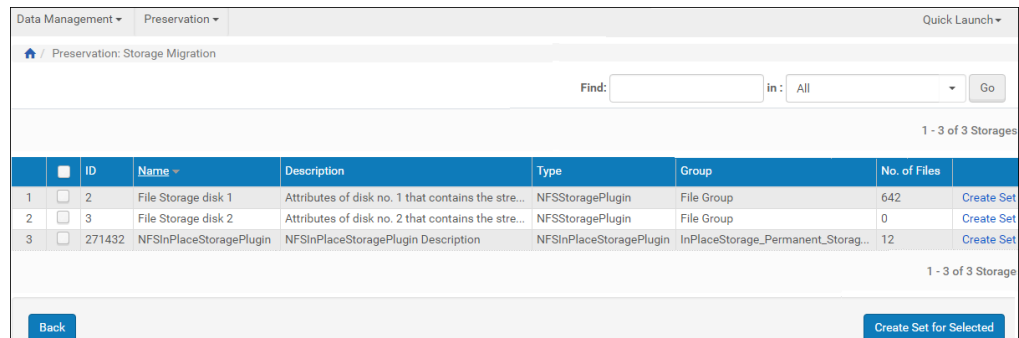
This section describes how to migrate files from one permanent storage location to another one. The migration is based on recommitting files to permanent storage. A fixity check confirms that the source and target files are identical. Storage rules must be reconfigured to save the files in the target storage location before you perform the migration. For more information, see the **Configuring Storage Rules** section of the *Rosetta Administration Guide*.

### NOTE:

Disconnecting legacy storage is not recommended as it may prevent the possibility of reverting to a previous IE version.

### To migrate files to another permanent storage location:

- 1 For a consortia, select **Home > Preservation > Storage Migration**. The following appears:



The screenshot shows a web interface for 'Preservation: Storage Migration'. At the top, there are navigation tabs for 'Data Management' and 'Preservation', and a 'Quick Launch' button. Below the navigation is a search bar with 'Find:' and 'in:' fields, and a 'Go' button. The main content area displays a table with 3 rows of storage information. The table has columns for 'ID', 'Name', 'Description', 'Type', 'Group', 'No. of Files', and 'Create Set'. The first two rows are for 'File Storage disk 1' and 'File Storage disk 2', both using 'NFSStoragePlugin'. The third row is for 'NFSInPlaceStoragePlugin' with ID '271432'. At the bottom of the table, there are 'Back' and 'Create Set for Selected' buttons.

	ID	Name	Description	Type	Group	No. of Files	Create Set
1	2	File Storage disk 1	Attributes of disk no. 1 that contains the stre...	NFSStoragePlugin	File Group	642	Create Set
2	3	File Storage disk 2	Attributes of disk no. 2 that contains the stre...	NFSStoragePlugin	File Group	0	Create Set
3	271432	NFSInPlaceStoragePlugin	NFSInPlaceStoragePlugin Description	NFSInPlaceStoragePlugin	InPlaceStorage_Permanent_Storage...	12	Create Set

Figure 153: List of File Storages

- 2 Select the storage that you want to migrate and click **Create Set for Selected**. The following appears:

The screenshot shows a search interface with the following elements:

- Search Conditions: Sort, Columns
- Search level:  Intellectual Entity  Representation  File
- Logical Set: storage\_migration (2)
- Add Conditions: Add Conditions button
- Clear Search and Search buttons
- Results: Results header with list and grid icons, and a share icon
- 1 - 10 of 643 Records
- Table with columns: File PID, File Original Name, Format Library Id, File Extension, File MIME Type, File Size Bytes, View, Info, Download
- 1 - 10 of 643 Records
- Back, Save Query as a Set, and Launch Preservation Plan buttons

	File PID	File Original Name	Format Library Id	File Extension	File MIME Type	File Size Bytes			
1	FL1092	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download
2	FL1095	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download
3	FL1098	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download
4	FL1101	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download
5	FL1104	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download
6	FL1107	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download
7	FL1110	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download
8	FL1113	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download
9	FL1116	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download
10	FL1119	door.jpg	fmt/44	jpg	image/jpeg	32882	View	Info	Download

Figure 154: Add Conditions

- 3 Add conditions to refine your search, and click **Launch Preservation Plan**. The following appears:

Plan Name	-	Creation Date	21/03/2017	Created By	admin1
Storage ID	2	Risk Code	storage_migration		
Preservation Set	443515	Test Set	-		

**General Information**

\* Plan Name

\* Plan Reason

**Attached Documents**

Document path

No records were found

Figure 155: Preservation Plan Details

- 4 Fill in the preservation plan details and click **Test Set Members**. The test includes all the files in same representation. The following appears:

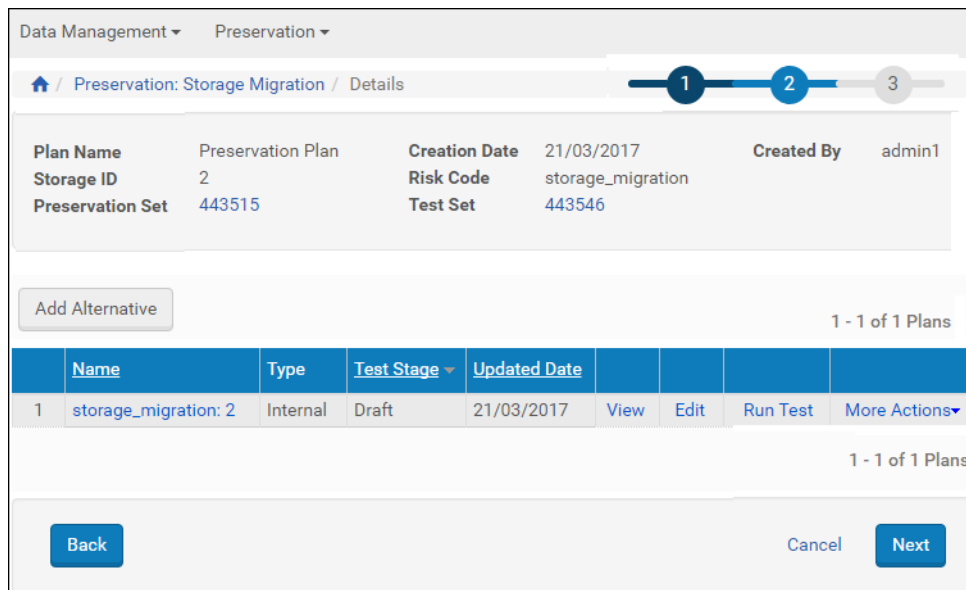


Figure 156: Add Alternatives

- 5 An alternative is automatically created containing the fixity criteria. Click **Run Test** to test the alternative.
- 6 Click **Next**.
- 7 Continue with the steps for signing off on the plan and executing it as described in **Test Sign-Off** on page 169 and **Preservation Plan Execution** on page 173.

# Part VII

---

## Basic Preservation Plan

This part contains the following:

- **Basic Preservation Plan** on page 199



# 16

---

## Basic Preservation Plan

This section contains:

- [Creating a Preservation Set](#) on page 199
- [Creating a Preservation Plan – Basic Workflow](#) on page 201
- [Executing the Basic Preservation Plan](#) on page 205

The Basic Preservation Plan consists of the following steps:

- Create a Preservation Set – The workflow starts by creating a preservation set of files.
- Create a Preservation Plan – Once a preservation set is created, the analyst can create a plan that is built around the preservation set.
- Execute the Preservation Plan – After the plan is created it can be signed-off on and executed. There is no testing or alternatives involved.

## Creating a Preservation Set

You begin creating a basic preservation plan by creating a preservation set.

---

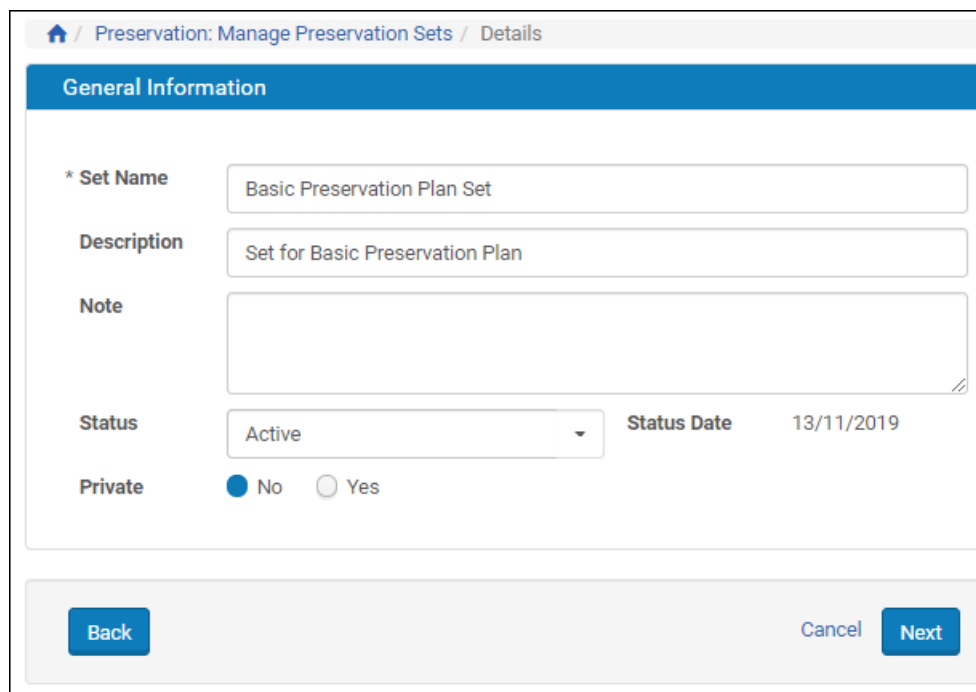
**NOTE:**

You can also create a set from the risk report, although this is not the standard workflow for the Basic preservation Plan.

---

### To create a preservation set:

- 1 Click **Add Set** from the manage Preservation Sets page:



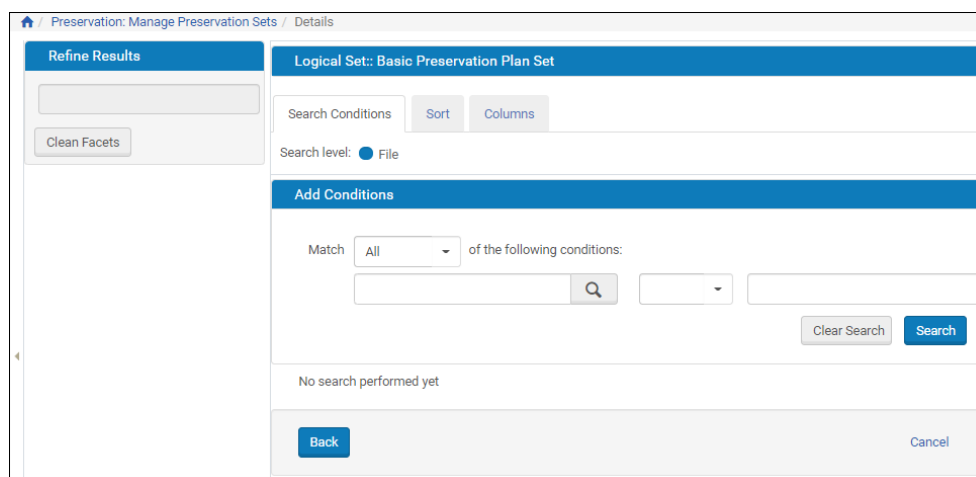
The screenshot shows a web form titled "Preservation: Manage Preservation Sets / Details". The form has a blue header "General Information". It contains the following fields and controls:

- \* Set Name:** Text input field containing "Basic Preservation Plan Set".
- Description:** Text input field containing "Set for Basic Preservation Plan".
- Note:** Large text area, currently empty.
- Status:** Dropdown menu set to "Active".
- Status Date:** Text field containing "13/11/2019".
- Private:** Radio buttons for "No" (selected) and "Yes".

At the bottom of the form are three buttons: "Back", "Cancel", and "Next".

Figure 157: Create Set – General Information

- 2 Fill in the fields and click **Next**. A search page appears to create a logical set of files.



The screenshot shows a search interface titled "Preservation: Manage Preservation Sets / Details". The main heading is "Logical Set: Basic Preservation Plan Set".

On the left is a "Refine Results" sidebar with a "Clean Facets" button.

The main area has tabs for "Search Conditions", "Sort", and "Columns". Below these is a "Search level" section with a radio button for "File".

The "Add Conditions" section includes a "Match" dropdown set to "All" and the text "of the following conditions:". Below this is a search input field with a magnifying glass icon, a dropdown menu, and another search input field. There are "Clear Search" and "Search" buttons.

Below the search area, it says "No search performed yet".

At the bottom are "Back" and "Cancel" buttons.

Figure 158: Create Set - Details

- 3 Search for the files to create the set. For example:

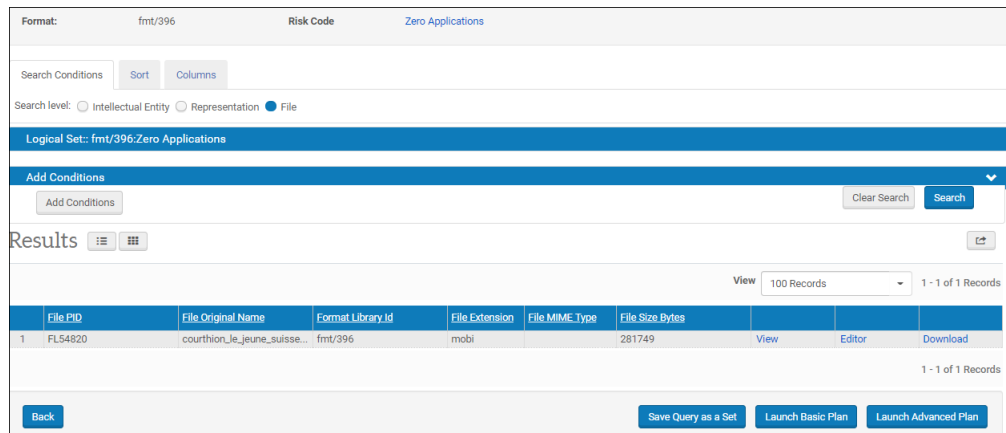


Figure 159: Search Results

- 4 Click **Launch Basic Plan** to create a preservation plan with the basic workflow.

## Creating a Preservation Plan – Basic Workflow

After you create a preservation set and click **Launch Basic Plan**, the following appears:

Preservation: View Global Risk Report

1 2 3

### General Information

\* Plan Name

\* Plan Reason

### Attached Documents

Document path

Figure 160: Create Basic Preservation Plan - Step 1

- 5 In the General Information section of the page, enter a name for this plan and a reason for adding it to the Preservation plan database.
- 6 To attach a supporting document to the test plan, click the **Browse** button in the Attached Documents section, locate the document you want to attach, and select it.  
The path and filename display in the Document path field.
- 7 To upload the file, click the **Add** button. Information about the file displays in the Attached Documents section.
- 8 Click **Next**. The following appears:

Home / Preservation: View Global Risk Report / Details

1 2 3

\* Target Format

\* Migration Type  External  Internal

Export Directory /exlibris/dps/d4\_1/profile/operational\_shared/operational\_export\_directory

Import Directory /exlibris/dps/d4\_1/profile/operational\_shared/operational\_export\_directory

Figure 161: Create Basic Preservation Plan - Step 2

- 9 Select a target format. This is the format to which the source files' common significant properties should be automatically compared. The drop-down opens a list of available formats in the Format Library.
- 10 Select a migration type:
  - Internal – The plug-in field is displayed. Select a plug-ins that work with the selected format.
  - External – read-only directory paths for outgoing files (Export Directory) and returning files (Import Directory) are displayed.

**NOTE:**

The exact mechanism for uploading the new files coming from an external preservation action is described in the of the *Rosetta Staff Guide*.

- 11 Click **Next**. The following appears:

Figure 162: Create Basic Preservation Plan - Step 3

Three types of evaluation, based on the format source and target for the alternative, display on this page.

Table 31. Basic Preservation Plan - Step 3

Type	Description
Automatic Evaluation - Source vs. Target	The user selects the properties of the classification group that should be measured by the system when it compares the original format file to the migrated file (for example, <b>File extension must equal file extension</b> ).

Table 31. Basic Preservation Plan - Step 3

Type	Description
Automatic Evaluation - Target Characteristics only	The user selects the target file properties that are not compared to those of the original file, but are measured according to the selected operators and parameters (for example, <b>File size smaller or equal 3MB</b> ).  Select <b>Validate Format ID</b> to validate the target's file format (as selected in the first step of the alternative wizard) and inform the user when viewing the plan results if conversion succeeded or not.
Automatic Evaluation – File Comparison Plugin	The user selects a plugin, an operator, and a parameter to define the criteria for comparing the files.

- 12 Use the drop-down menus and text fields to indicate parameters for automatically evaluating the alternative source compared to the target or the target on its own.
- 13 Click Save. Your signed off preservation plan is completed.

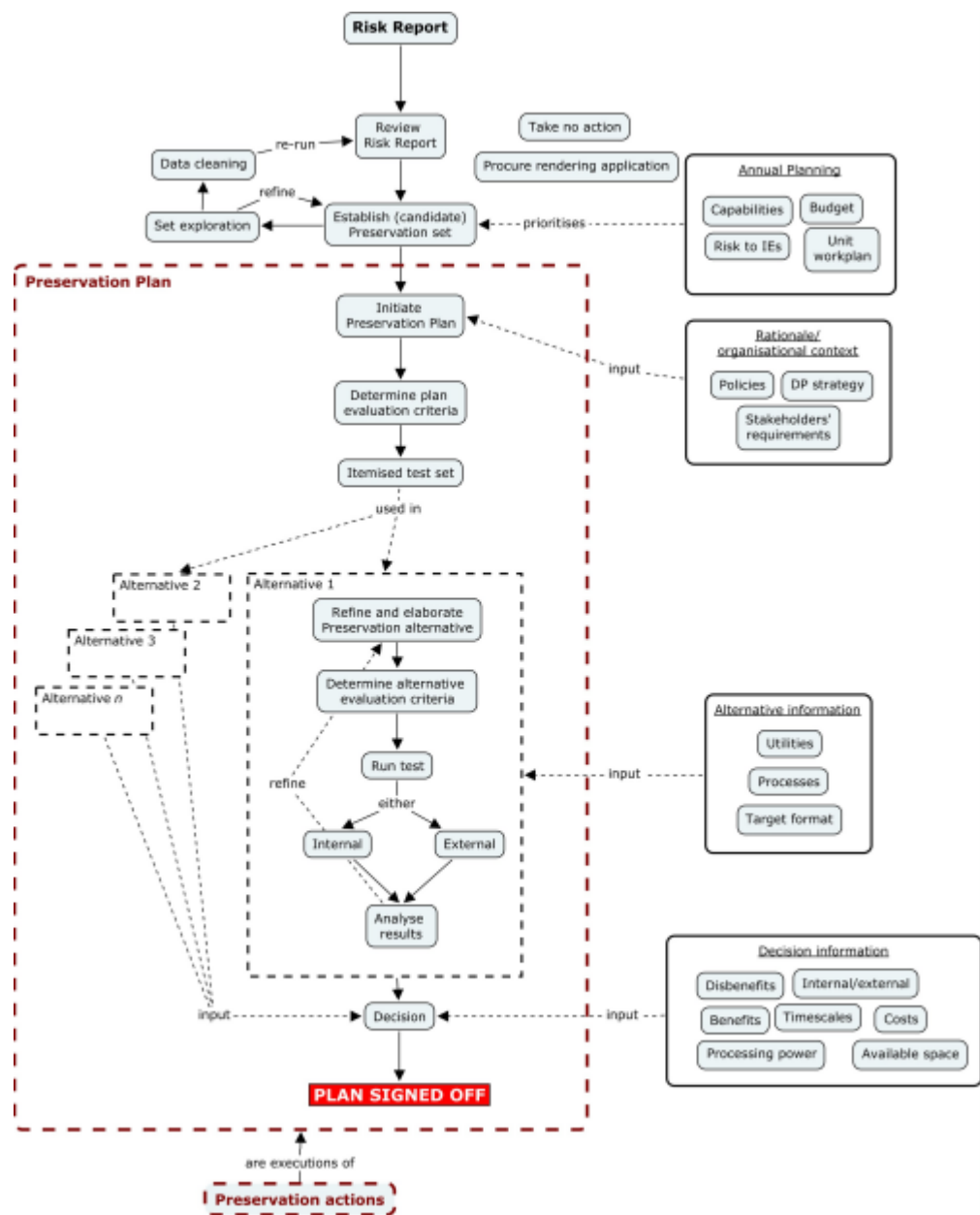
## Executing the Basic Preservation Plan

You execute the basic preservation plan as you do the advanced preservation plan. For information, see [Preservation Plan Execution](#) on page 173.



# A

## Preservation Action Flow Diagram





# Index

---

## A

- application
  - general details, 65
  - related formats, 66
- Application Details form, 57
- Application Library, 53
  - editing/viewing, 55
  - Global, 63
  - Local, 53

## C

- Classification Group Library, 77
  - Global, 82
    - editing, 84
    - viewing, 72, 78
- code table, 31, 57
- configuring
  - building a plan, 115
  - plan alternatives, 125
  - plan components, 112
  - plan preparation, 115
    - based on at-risk formats, 116
- consortium scope, 16

## D

- descriptor file
  - contents, 136
  - generation, 135
  - validation, 138

## E

- edit
  - Preservation plan, 153
- evaluating execution results, 180
- executing a plan, 173
- exploratory
  - set, 103

## F

- Format Details form, 30
- Format Library, 21
  - audit trail, 24
  - editing, 28
  - formats, 26

- Global, 21
  - editing, 43
- Local, 21
- update
  - automatically, 23
  - manually, 23
- updates, 22
- versions, 22

## formats

- General Details, 28
  - adding field, 30, 57
  - custom fields, 30, 56
  - global, 44
- History, 38
  - global, 50
- Notes, 37
- Related Applications, 34
  - custom fields, 35
  - global, 46
- Risk Identifiers, 35
  - global, 47
- sustainability Factors, 36
- viewing/editing, 28

## G

- General Details
  - adding field, 30, 57
  - code tables, 31, 57
- global risk report, 101

## I

- institutional scope, 16
- introduction to Preservation, 11

## L

- List of Formats, 27

## M

- Manage Format Local Fields, 30, 57
- MD extractors
  - bundled, 88
  - custom, 89
  - mapping fields, 89
- metadata extractor library, 87

## O

### overview

- execution, 12
- Format Library, 12
- planning, 12
- purpose, 11
- risk analysis, 12
- staff roles, 16
- sub-modules, 11
- terminology, 13
- workflow, 15

## P

### plan

- alternatives, 125
  - descriptor file, 135
  - editing, 134
- configuration, 111
  - stages, 111
- execution, 173
- testing, 148
  - adding alternatives, 156

Plan Details page, 154

Plan Evaluation Criteria tab, 155

### plug-in

- MD extractor, 90

### Preservation

- introduction, 11
- plan, 152
  - save plan documents, 171
- plan configuration, 111
- plan elements, 112
- risk analysis, 93
- set, 95
- testing, 141

Preserve PP Docs check box, 171

process flow, 14

PRONOM registry, 21

property-driven risk, 35

## R

resolving technical issues, 185

- during plan execution, 189
- during testing, 185
- non-validation stage, 186
- validation stage, 187

### risk analysis

- file properties
  - research set, 102
  - view, 102
- global risks, 101
- identification, 97
- identifying risks, 94

ongoing identification, 94

overview, 93, 199

Preservation set, 95

reports, 95, 97

scheduling, 98

types of risks, 93

risk identifier, 35, 39, 47

adding, 41, 48

editing, 35, 42, 50

risk reports

generating, 95

rvH3EditingSignificantProperties, 74

## S

significant properties, 71

adding and editing, 74

global, 73

local, 71

## T

technical issues, 185

testing, 141

creating a plan, 147

creating a set, 144

plans, 148

preparing test plans, 141

process flow, 141

running a test, 162

results, 165

sign-off, 169

viewing risk reports, 142

tool-driven risk, 35

## V

view Preservation plan, 153