Preservation Guide

Version 5.2

The bridge to knowledge

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Updates to This Guide

This guide is being reissued due to the following changes:

- **Storage Migration** on page **185** has been added.

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 **15**
- **Consortial Versus Institutional Scope** on page **15**
- **Format Library Updates** on page **16**

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*.)

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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

Each preservation plan may 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

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

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

The following diagram shows the various aspects of the Preservation module and the connections between them.

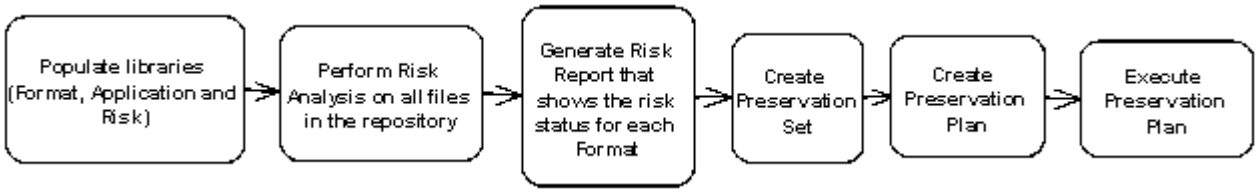

Figure 1: Basic Preservation Workflow

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

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- Populate Libraries (Format, Application, Classification, and Risk) – Each of these libraries can be managed through the UI.
- Perform 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 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 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 Preservation Plan – Once a preservation set is created, the analyst can create a plan that is built around the preservation set
- Execute 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.

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.

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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.

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Part II

Preservation Libraries

This part contains the following:

- **Chapter 2: Format Library** on page **19**
- **Chapter 3: Application Library** on page **45**
- **Chapter 4: Significant Properties** on page **63**
- **Chapter 5: Classification Group Library** on page **69**
- **Chapter 6: Metadata Extractor Library** on page **79**

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Format Library

This section includes:

- **The Format Library** on page **19**
- **Updating a Format Library Version** on page **19**
- **Format Library Audit Trail** on page **21**
- **Working with Formats** on page **24**
- **Editing the Global Format Library** on page **36**

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 10**) 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 the **Preservation > Format Library > Manage Format Library Version**.

Figure 2: Format Library Versions

The Format Library Versions page contains all versions of the Format Library since your initial Rosetta installation. In **Figure 2**, **Format Library Versions**, there are five new versions since this library's version (4.11) was installed. Furthermore, the version prior to the current 4.11 is available for rolling back, if necessary.

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).

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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.

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 Formal Library file from your hard drive or from a server where it resides.

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.

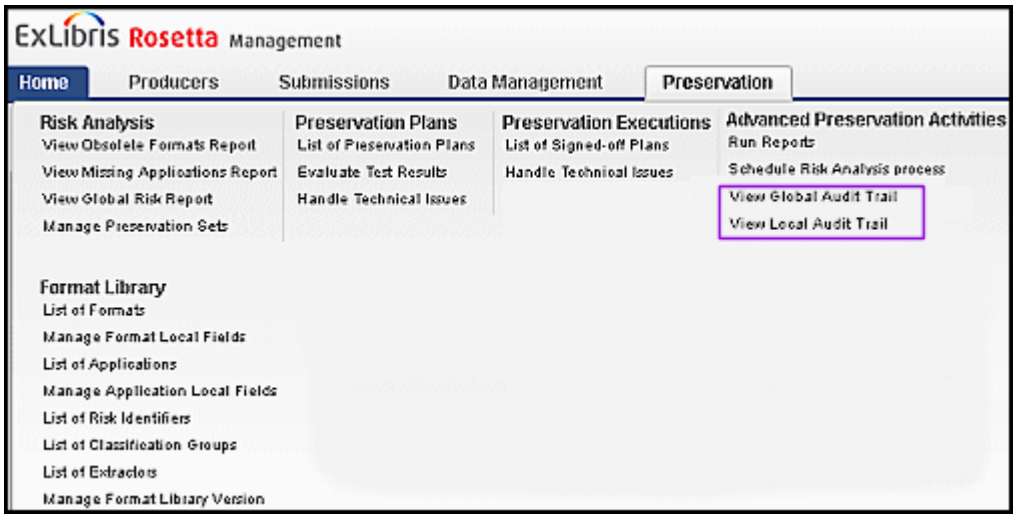

Figure 3: ViewAudit Trail on Preservation Menu

The Format Library Audit Trail opens to the Format Changes tab (see **Figure 4**, **Format Changes Tab of the Audit Trail Page**).

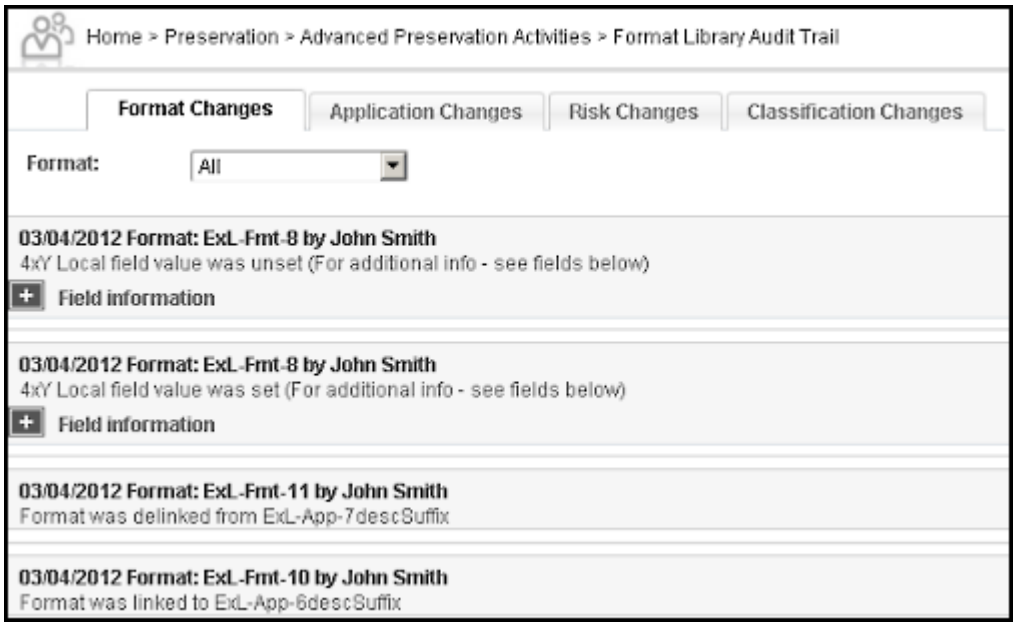

Figure 4: Format Changes Tab of the Audit Trail Page

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 5**, **Expanded Field Information**).

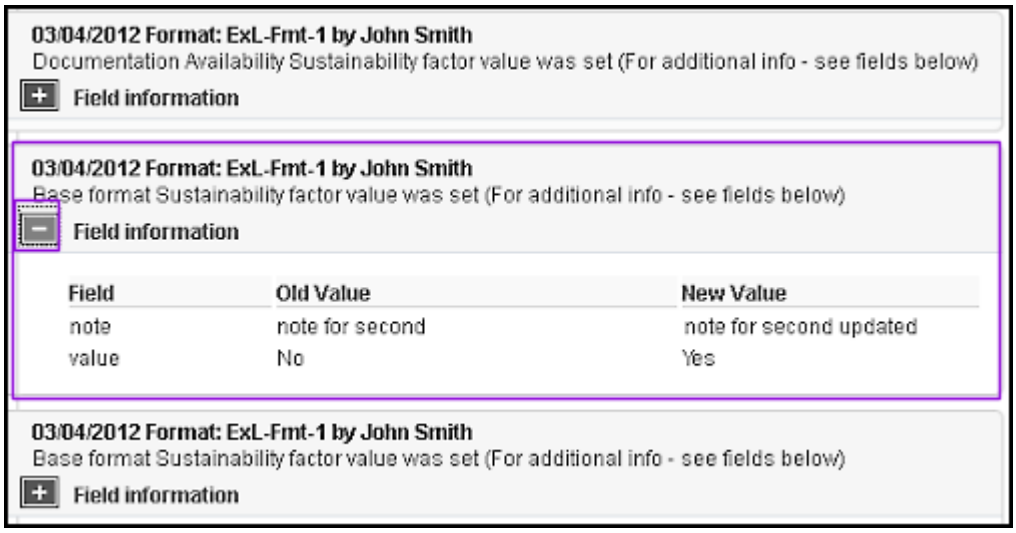

Figure 5: Expanded Field Information

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

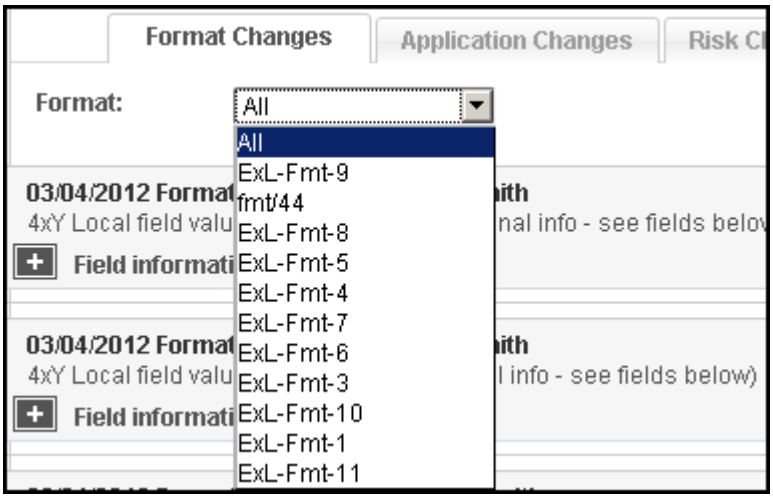

Figure 6: Format Drop-Down Menu Filter

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**.

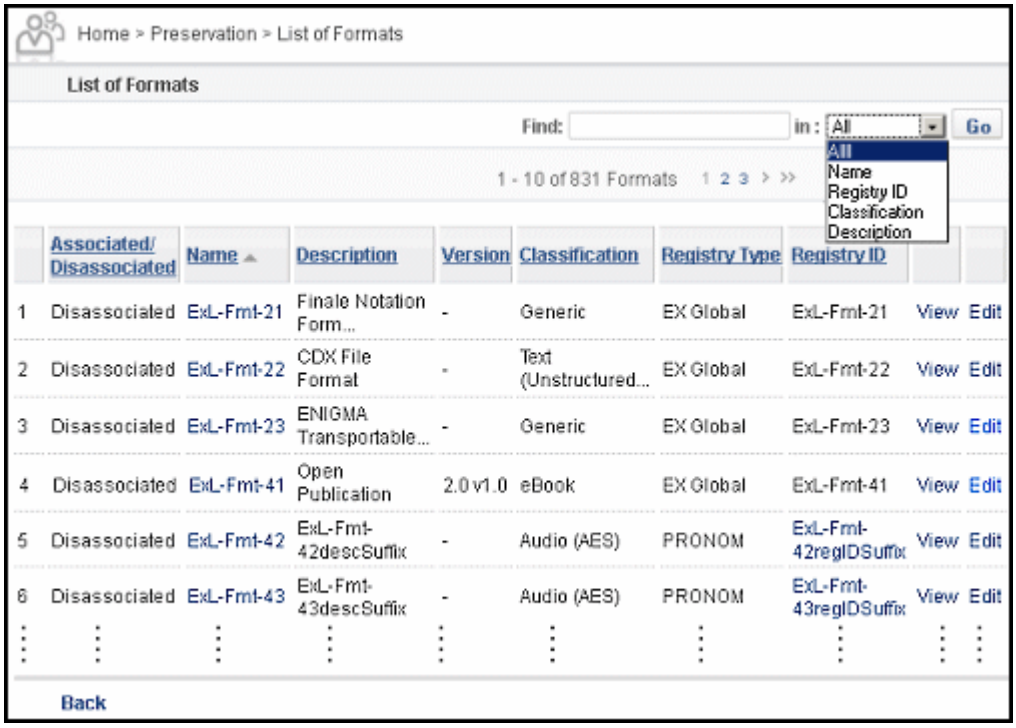

Figure 7: List of Formats (dots indicate entries not shown)

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

Table 1. List of Formats

Column	Description
Associated/Disassociated	Indicates whether the format is associated with applications in the Format Library.
Name	The name of the format, either the PRONOM name or the name from the Preservation format library.
Description	The common name of the format

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Table 1. List of Formats

Column	Description
Classification	The Classification Group to which the format belongs
Registry Type	The registry used to name the format
Registry ID	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 **25**
- **Related Applications** on page **31**
- **Risk Identifiers** on page **32**
- **Sustainability Factors** on page **43**
- **Notes** on page **43**
- **History** on page **43**

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 **36**.

General Details

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

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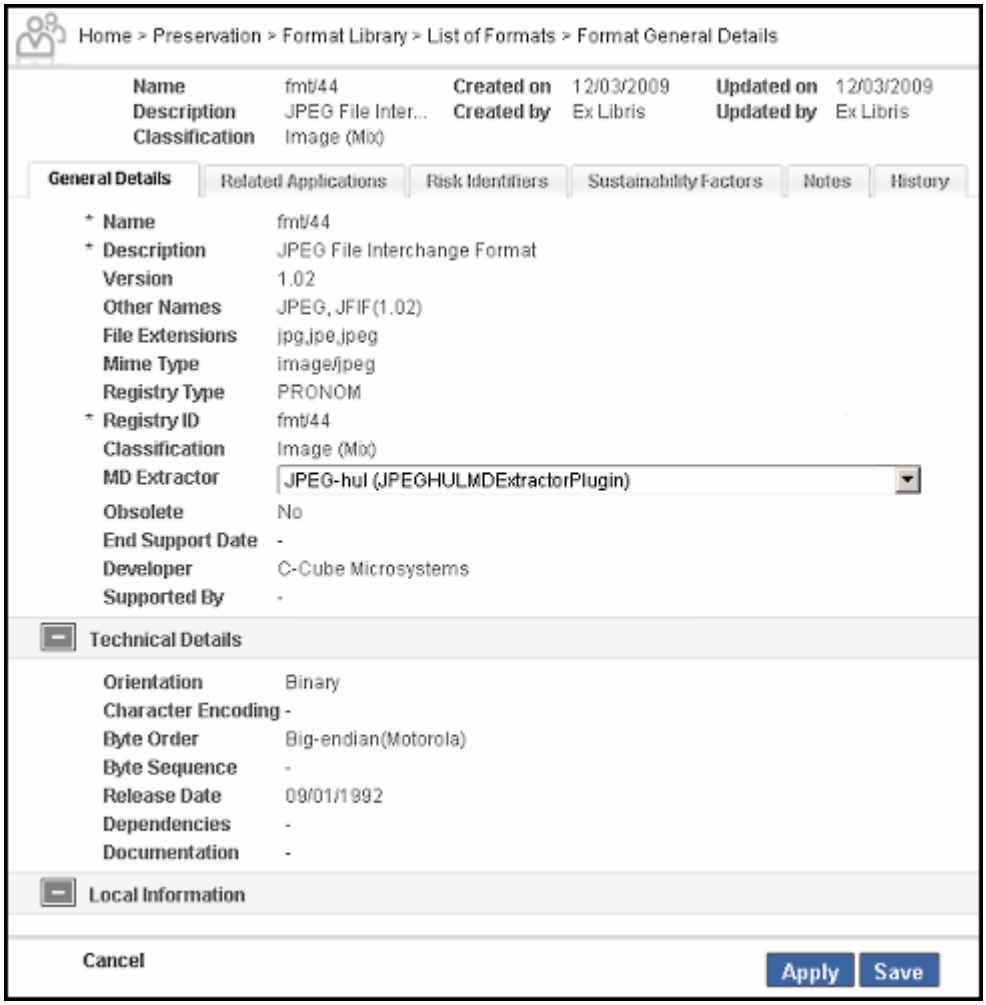

Figure 8: Editing Formats/MD Extractor

The information presented on this tab includes the fields from the List of Formats (see **Table 1** on page **24**) and fields described in the following table:

Table 2. General Details

Field	Description
Version	The version number of the format
File Extensions	The file extension associated with the format
Mime type	A file format identifier of the format
MD Extractor	The metadata extractor used with the format
Obsolete	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 **79**.

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.

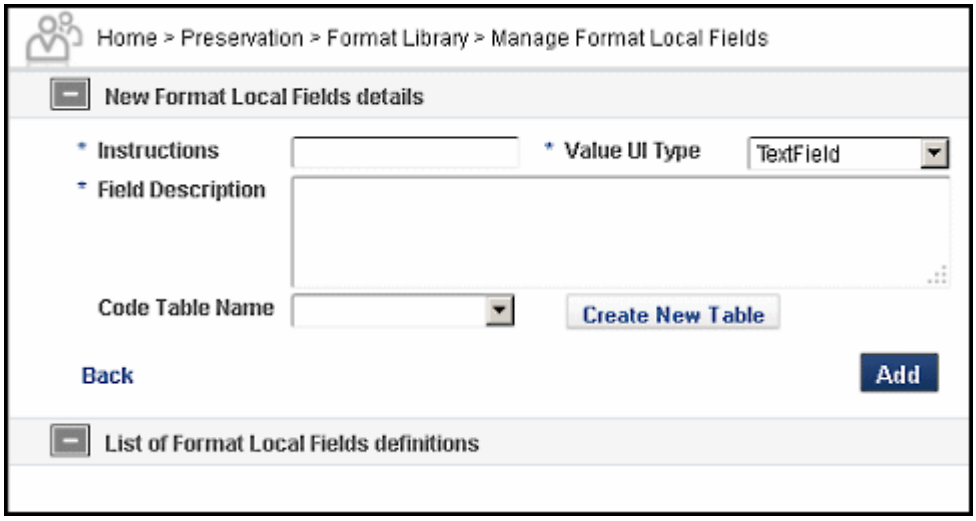

Figure 9: New Format Details Form

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.

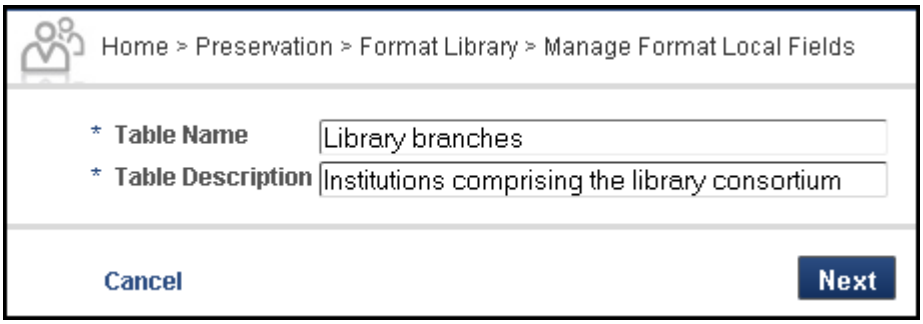

Figure 10: Adding a code table

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.

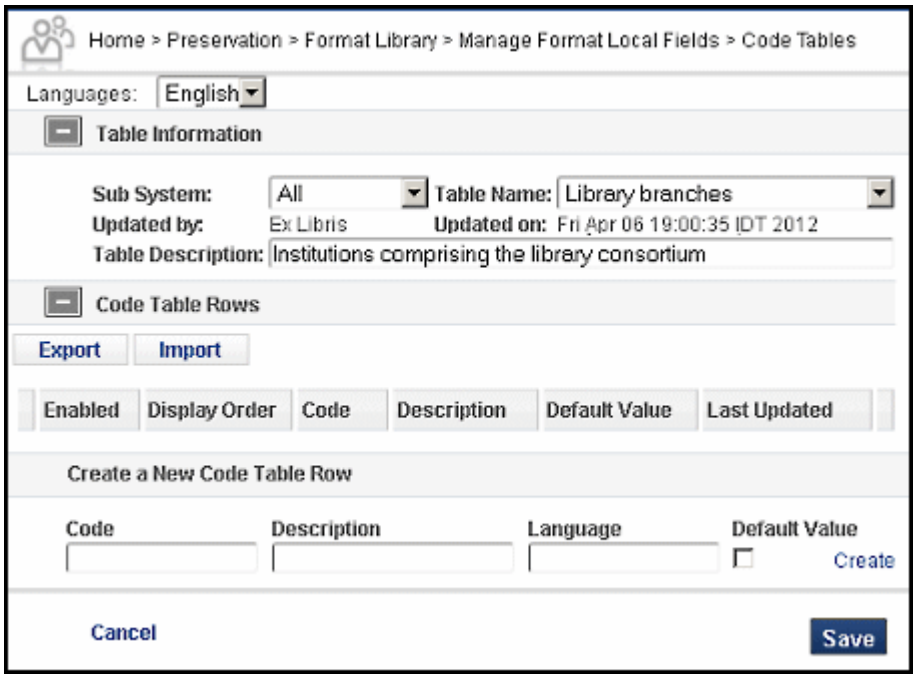

Figure 11: Code Table Creation Page

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.

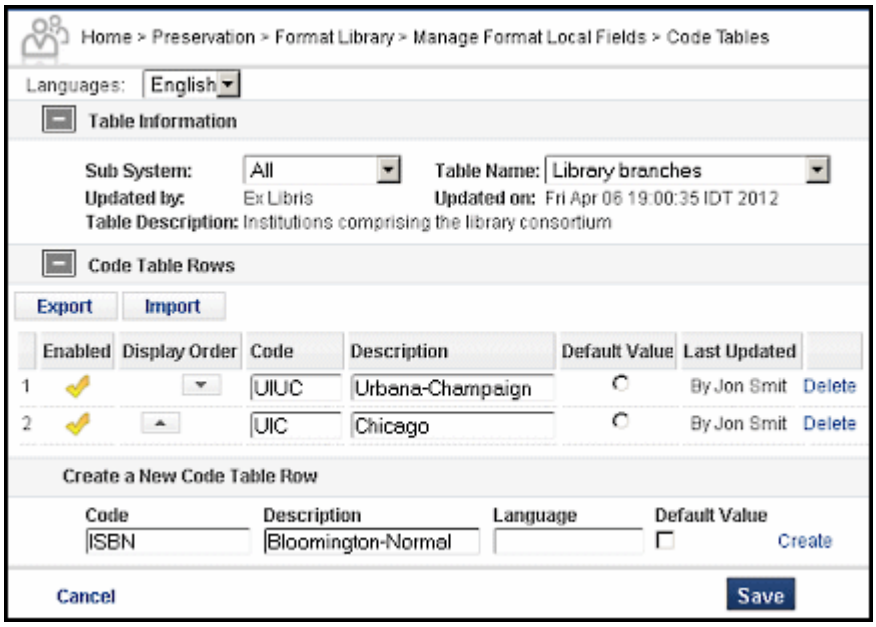

Figure 12: Code Table with Entries

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.

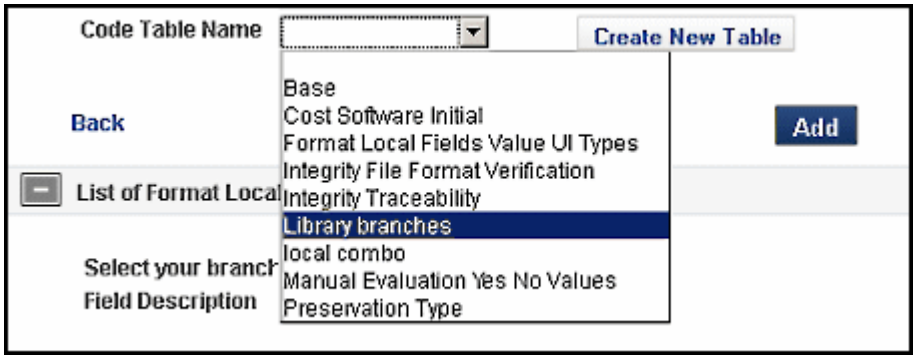

Figure 13: Code Table Name drop-down menu

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**Figure 14, New Local Information Fields in General Details**).

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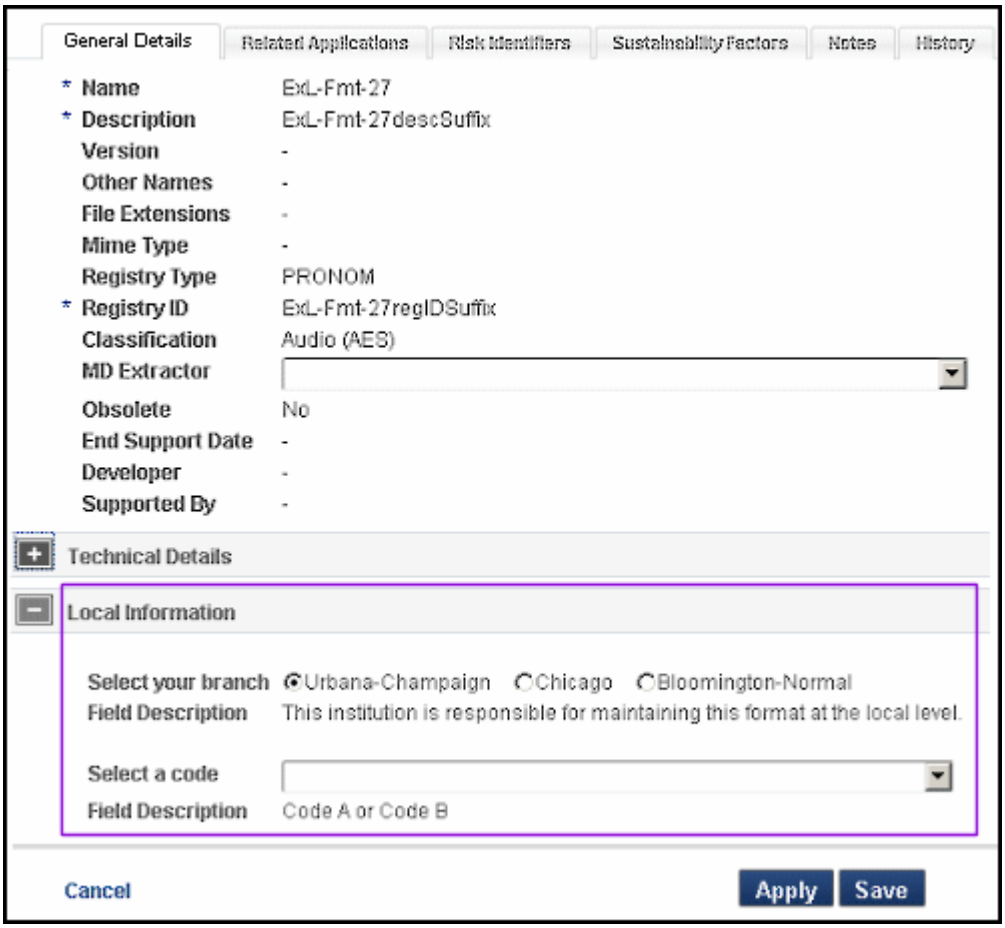

Figure 14: New Local Information Fields in General Details

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.

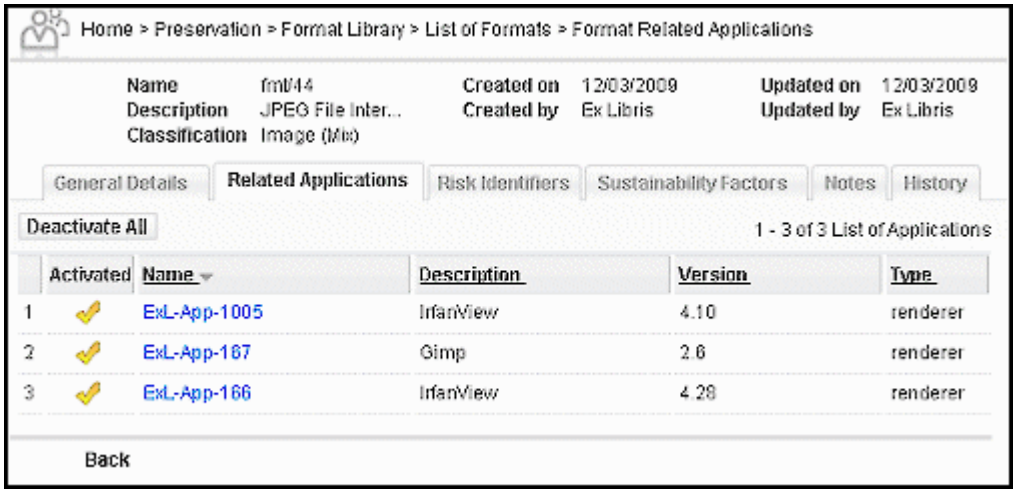

Figure 15: Editing Related Applications

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 **27**.

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.

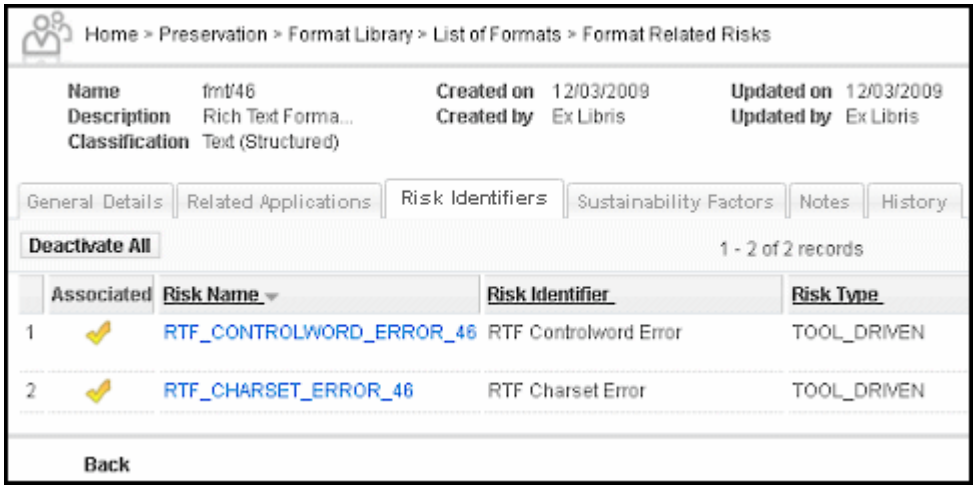

Figure 16: Editing Risk Identifiers

The following information is displayed:

Table 4. List of Risk Identifiers

Field	Description
Risk 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

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.

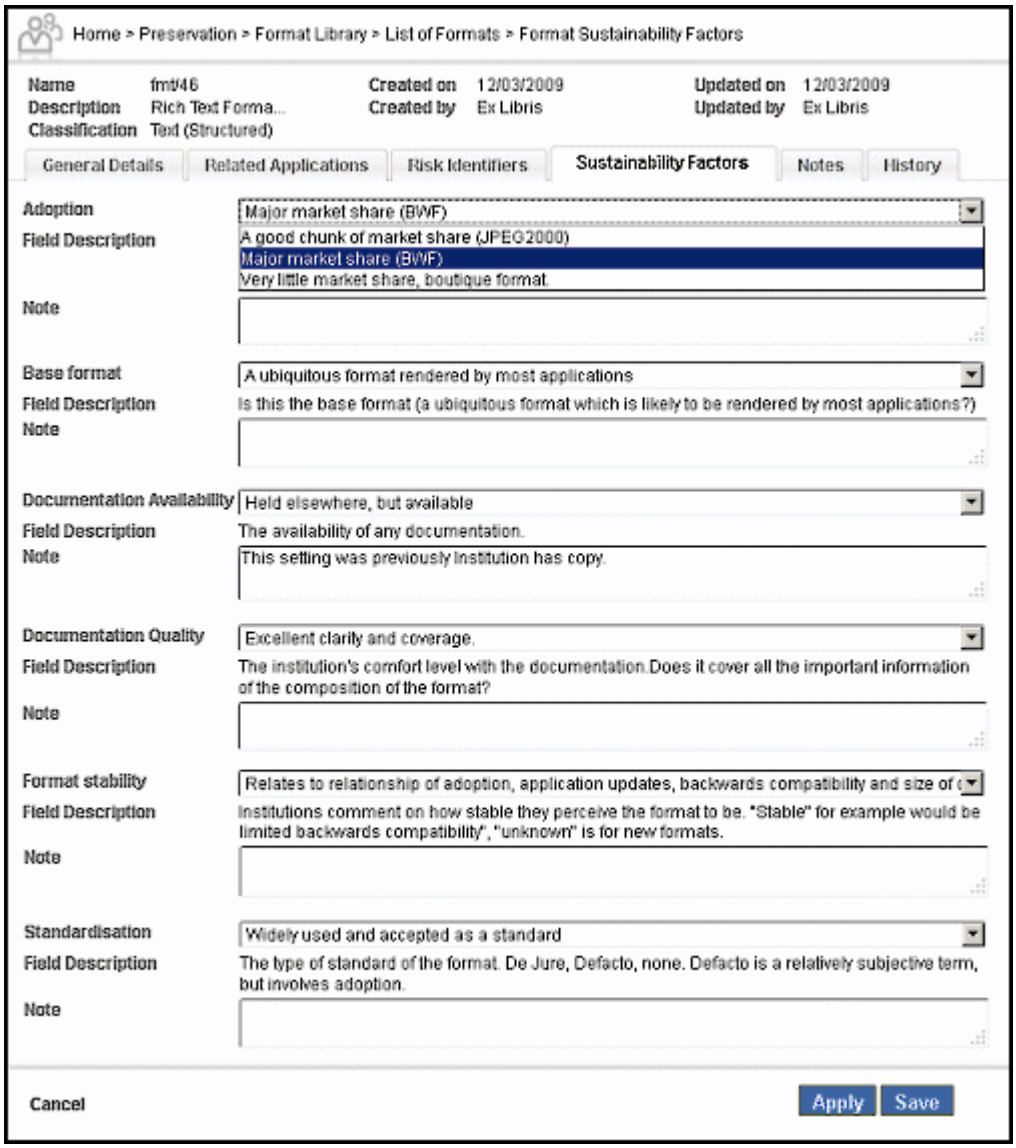

Figure 17: Sustainability Factors

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.

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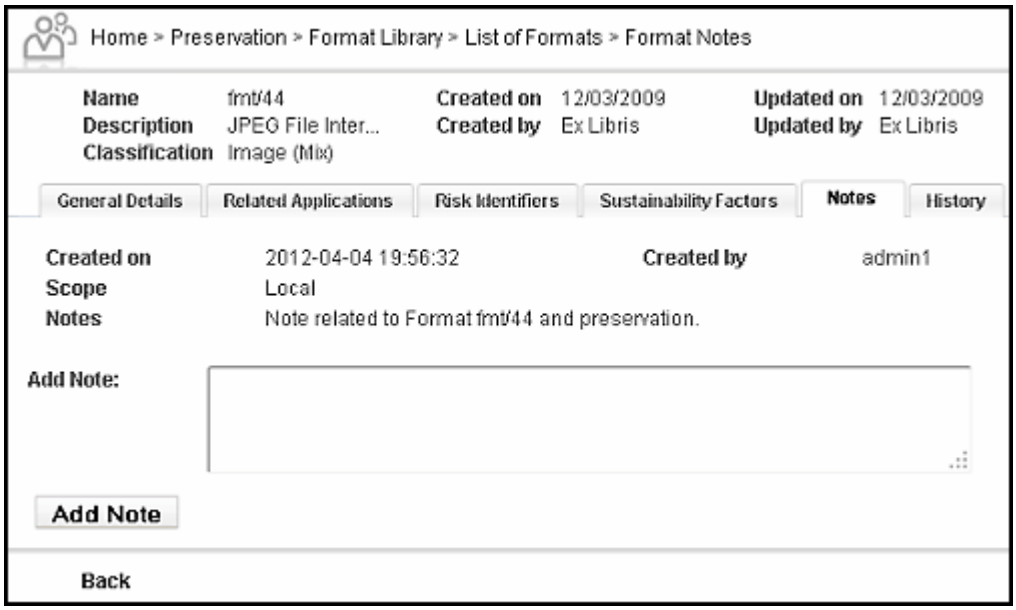

Figure 18: Notes

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.

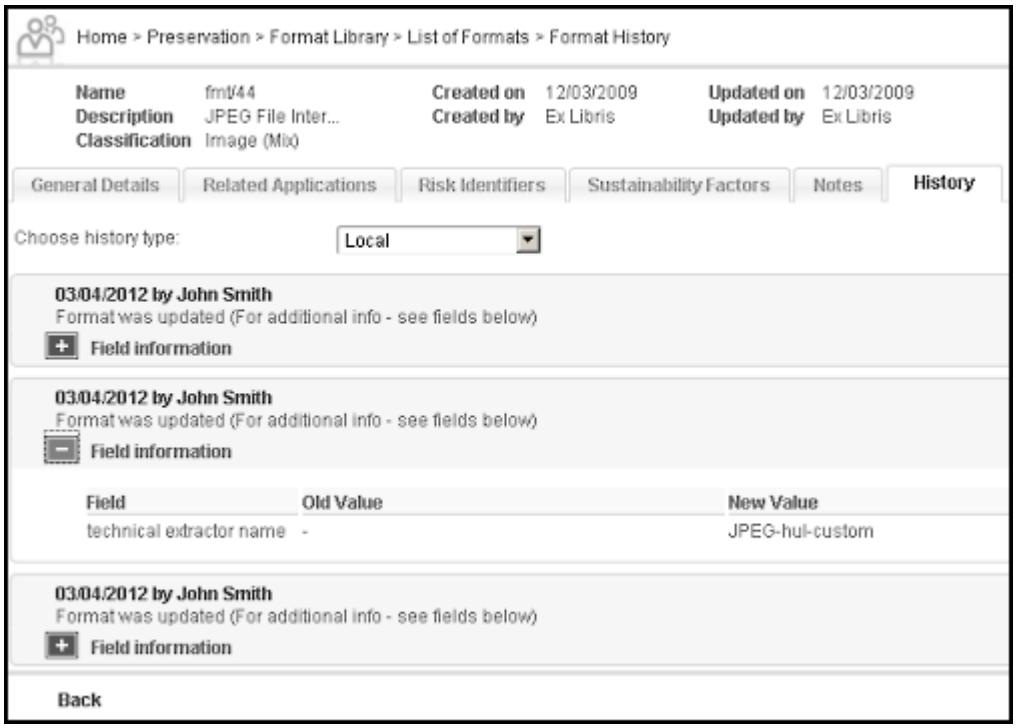

Figure 19: History Tab

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.

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.

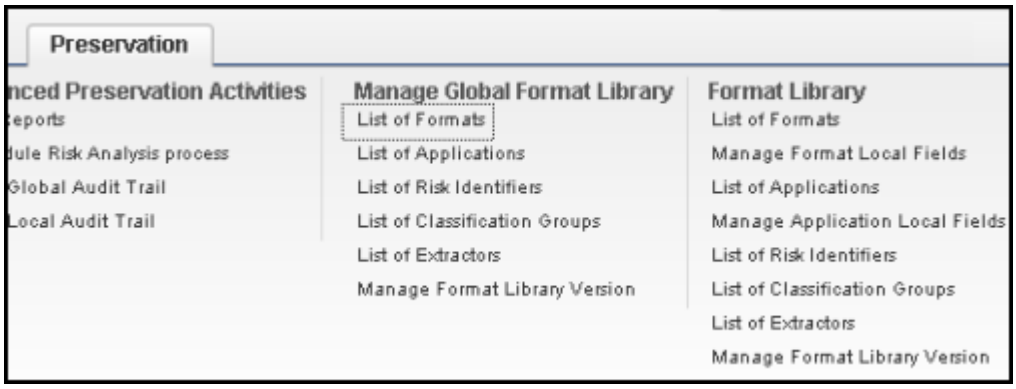

Figure 20: List of Formats for the Global Library

The List of Formats page opens (see **Figure 21, 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.

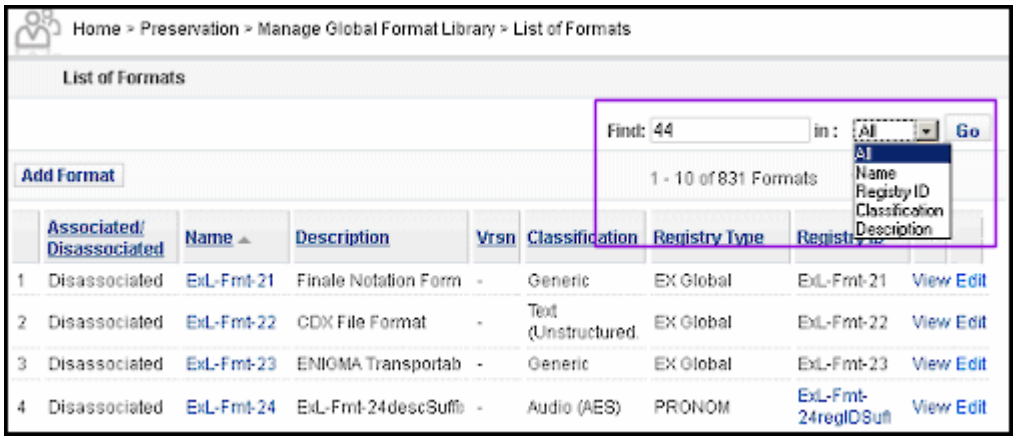

Figure 21: Searching for a Specific Format

General Details

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

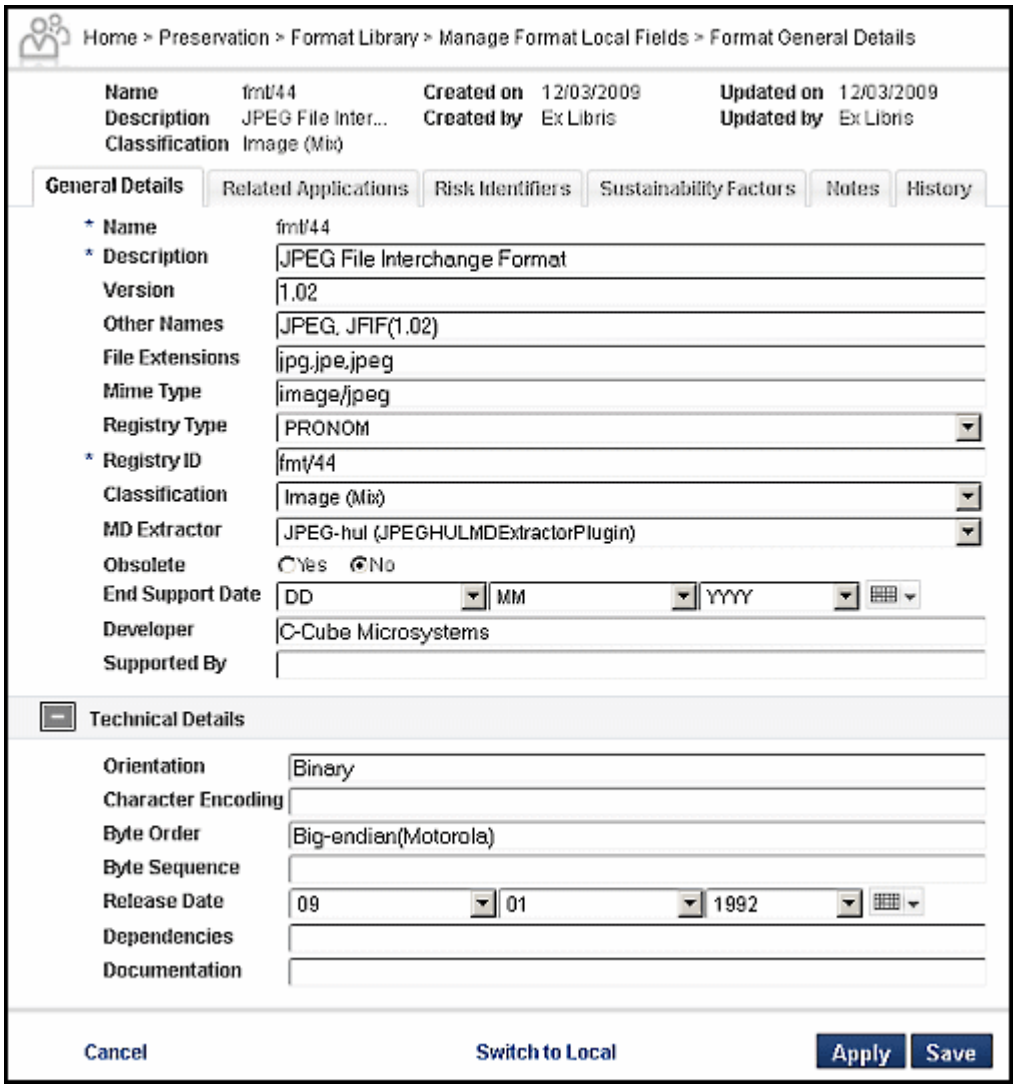

Figure 22: General Details Form, Global Library View

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**.

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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 **45**

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

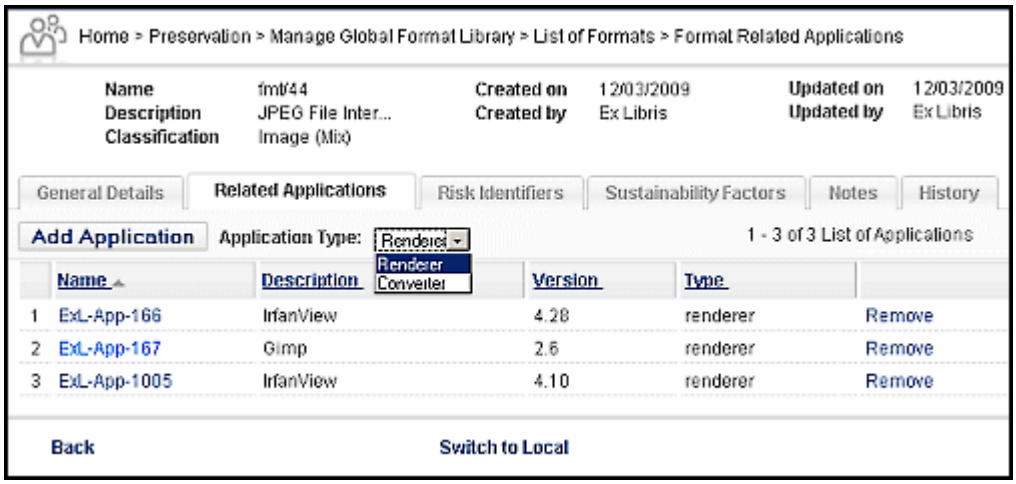

Figure 23: Applications Associated with Format 44

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.

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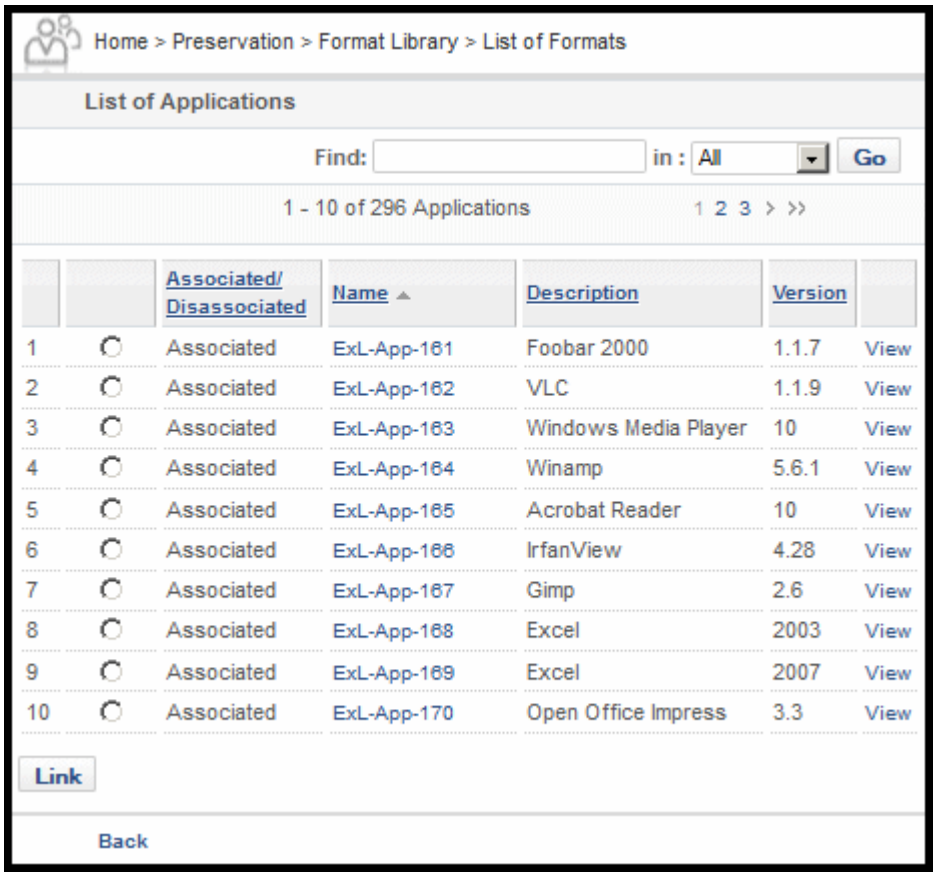

Figure 24: Associating Applications

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.

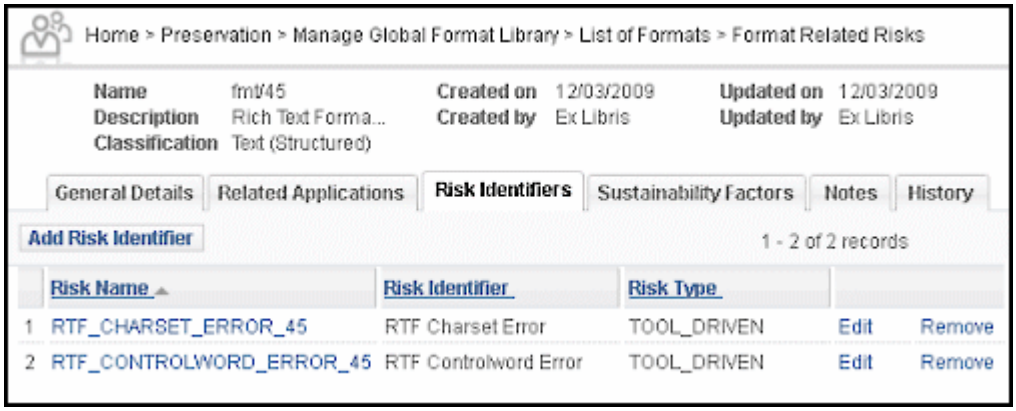

Figure 25: Editing Risk Identifiers

To add a new risk identifier:

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

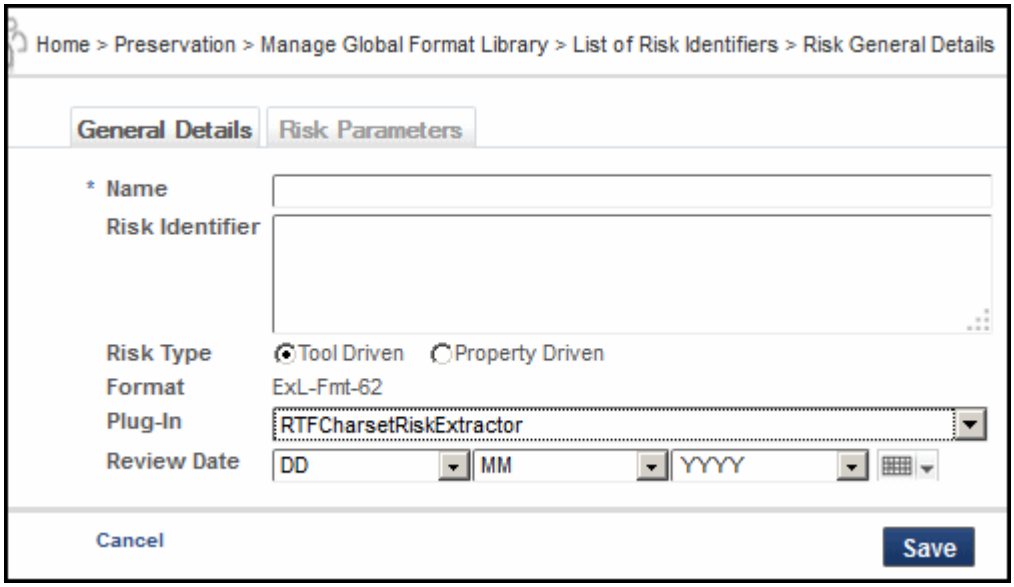

Figure 26: Adding Risk Identifiers

2 Fill in the fields according to the following table

Table 6. Add Risk Identifier

Field	Description
Name	The name of the risk identifier
Risk Identifier	A description of the risk identifier

Table 6. Add Risk Identifier

Field	Description
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:

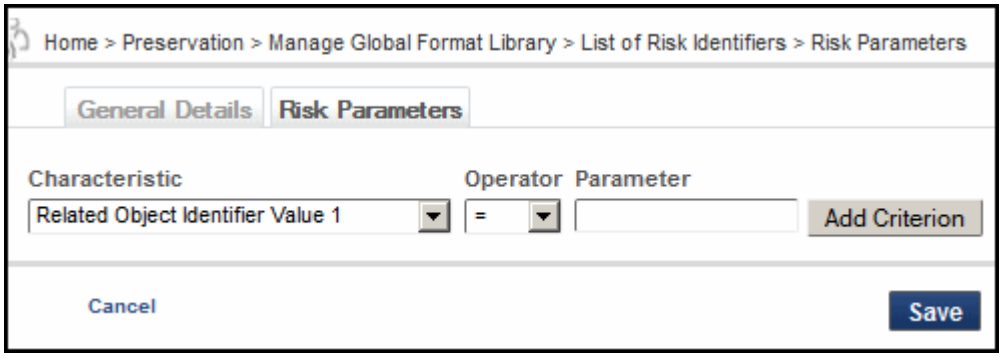

Figure 27: Adding Risk Parameters

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 **76** 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 6** 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 **60**.

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 **43**.

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.

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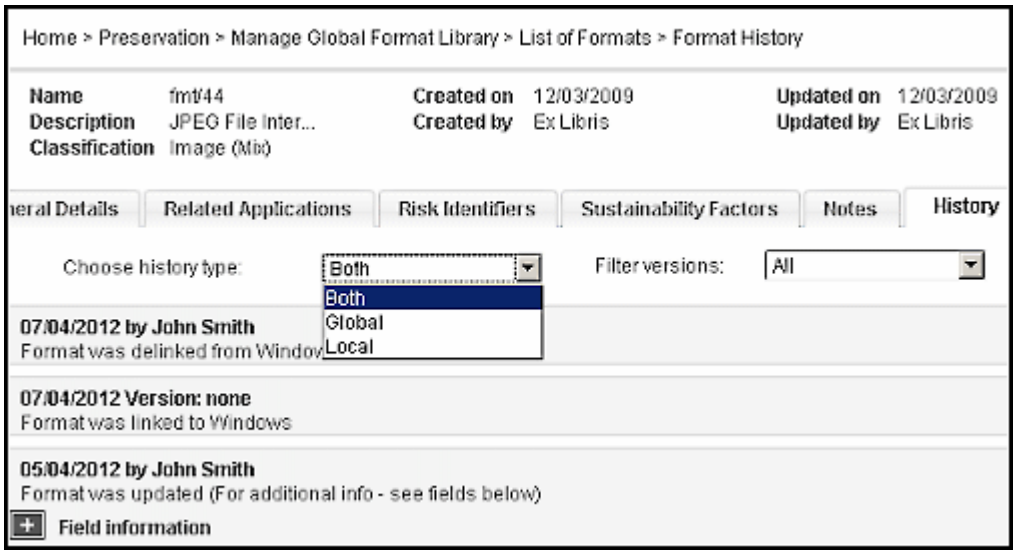

Figure 28: Global History Tab

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

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3

Application Library

This section includes:

- **Application Library** on page **45**
- **Global Application Library** on page **55**

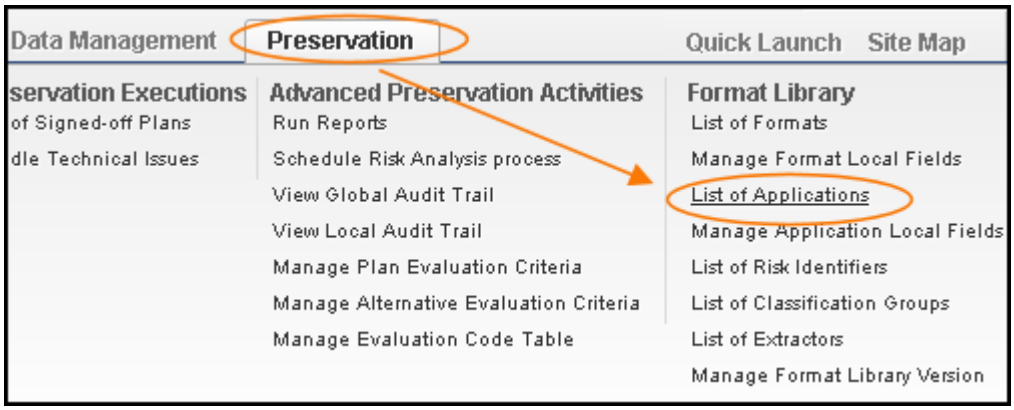
Application Library

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.

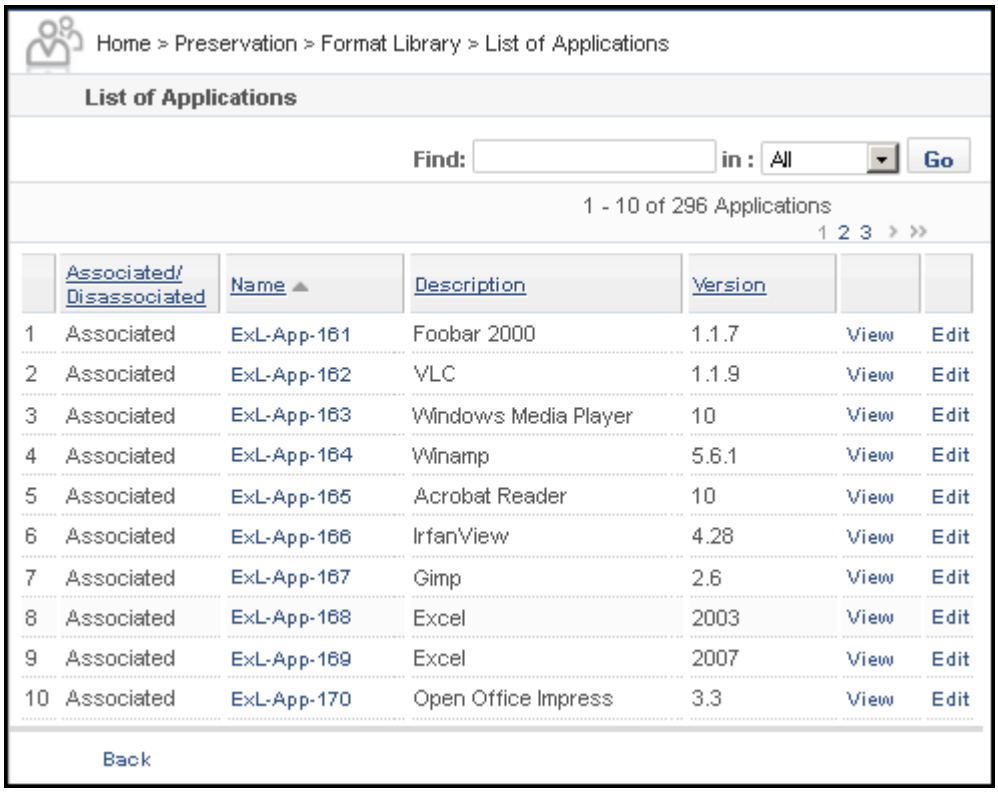
The Application Library has a local branch for each institution. The local branch is an extension of the global Application Library, containing the master list of applications along with customizations for the particular institution.

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 29**).



	Associated/ Disassociated	Name	Description	Version		
1	Associated	ExL-App-161	Foobar 2000	1.1.7	View	Edit
2	Associated	ExL-App-162	VLC	1.1.9	View	Edit
3	Associated	ExL-App-163	Windows Media Player	10	View	Edit
4	Associated	ExL-App-164	Winamp	5.6.1	View	Edit
5	Associated	ExL-App-165	Acrobat Reader	10	View	Edit
6	Associated	ExL-App-166	IrfanView	4.28	View	Edit
7	Associated	ExL-App-167	Gimp	2.6	View	Edit
8	Associated	ExL-App-168	Excel	2003	View	Edit
9	Associated	ExL-App-169	Excel	2007	View	Edit
10	Associated	ExL-App-170	Open Office Impress	3.3	View	Edit

Figure 29: List of Applications

The List of Applications provides information described in **Table 7**.

Table 7. 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 29**).

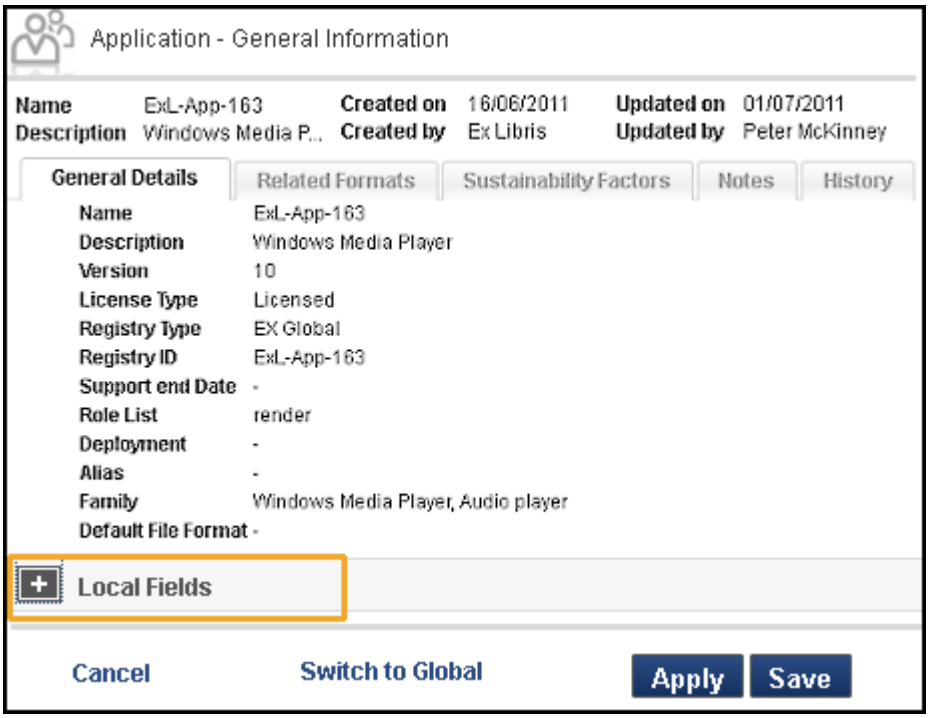


Figure 30: Local Applications

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 29**).

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 7** on page **47**), the following information appears:

Table 8. 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 30**). To view any such fields, click the plus sign.

The Local heading bar opens to display any additional fields (see **Figure 32**). 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 **48**.

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.

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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.

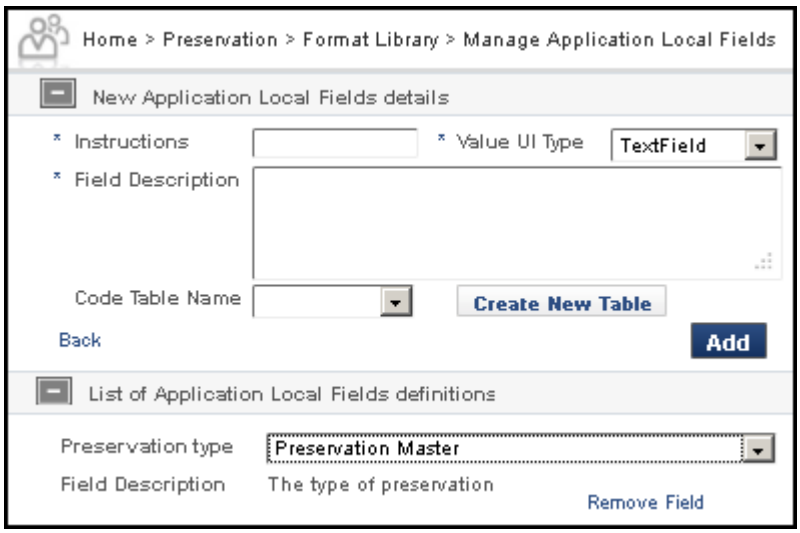

Figure 31: New Application Details Form

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

Table 9. 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 27 of the **Format Library** chapter.

4 Select the code table you want to use from the **Code Table Name** drop-down menu.

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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 32**, **Local Fields Expanded on General Information Tab**).

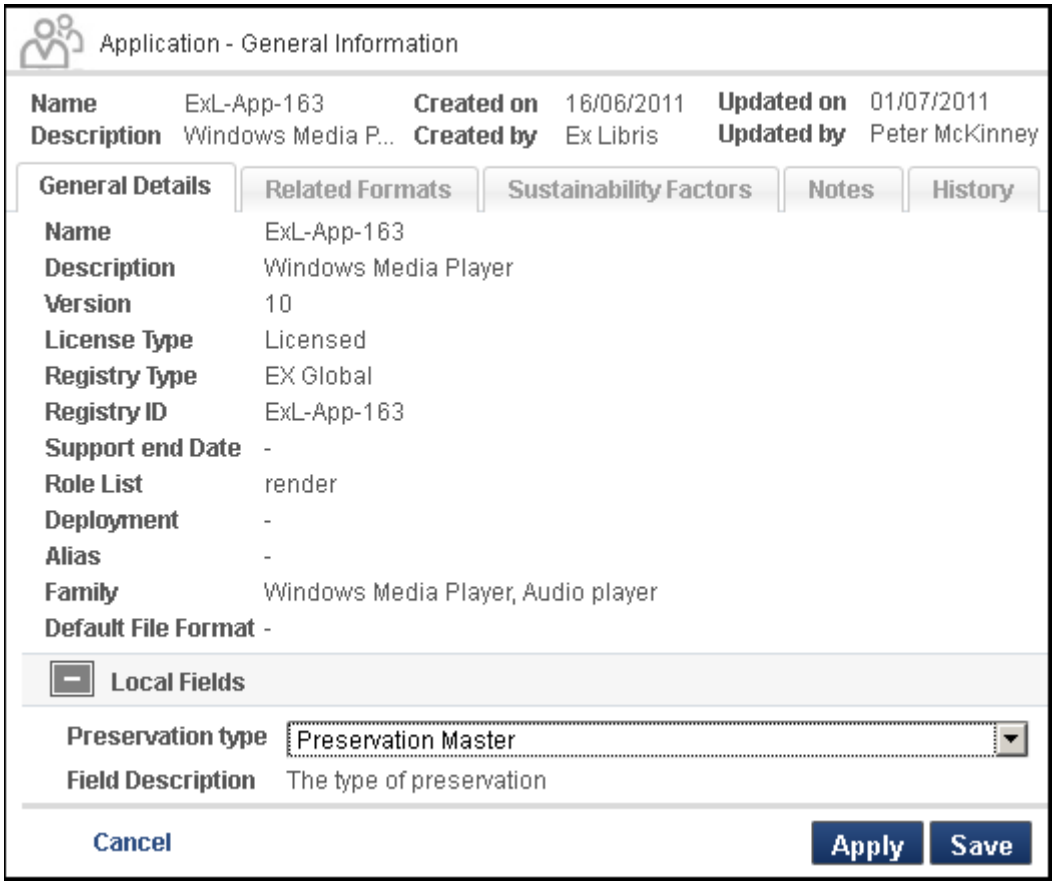

Figure 32: Local Fields Expanded on General Information Tab

Related Formats

The Related Formats tab displays formats associated with the application (see **Figure 33**). None of the fields on this tab can be edited. However, you can activate or deactivate a format's association with an application.

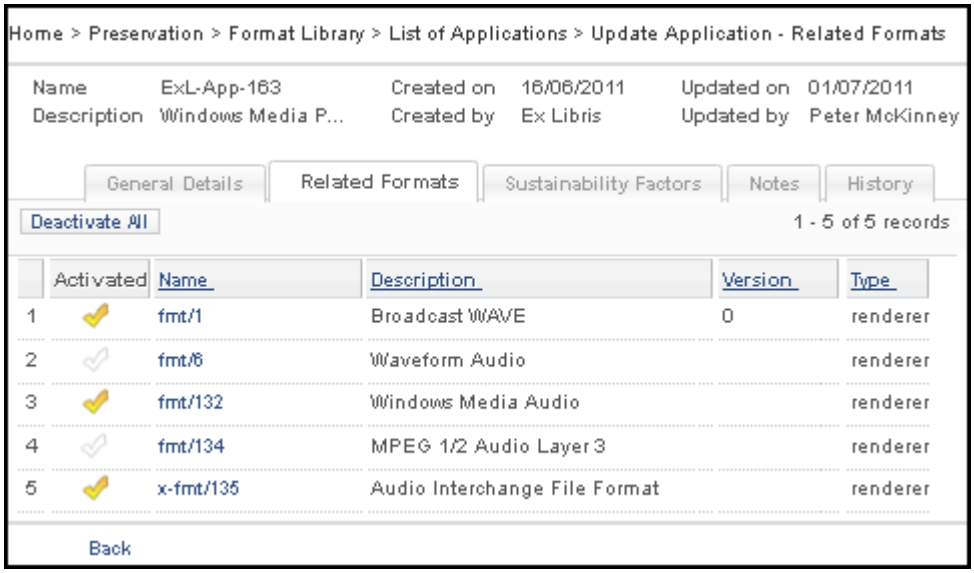

Figure 33: Related Formats

The following information is provided on the Related Formats tab:

Table 10. Related Formats

Field	Description
Activated	Indicates if the association between format and application is active
Name	The name of the application
Description	A description of the application
Version	The version number of the application
Type	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.

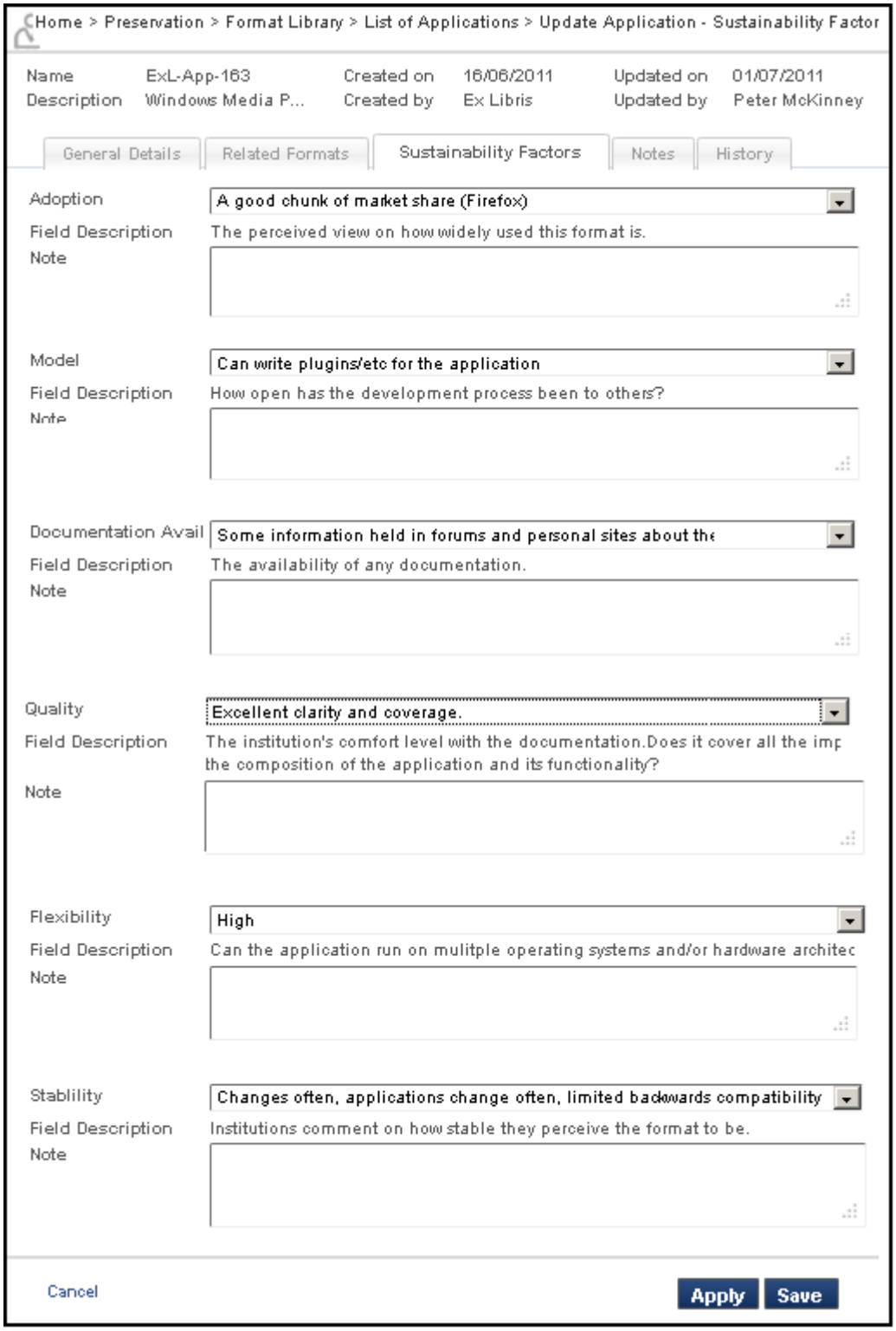

Figure 34: Sustainability Factors

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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.

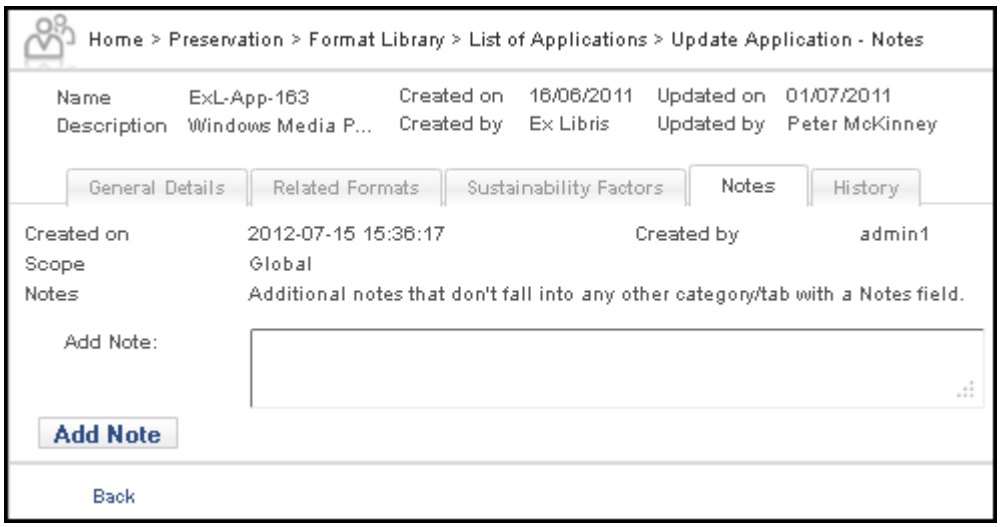


Figure 35: Notes Tab

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.

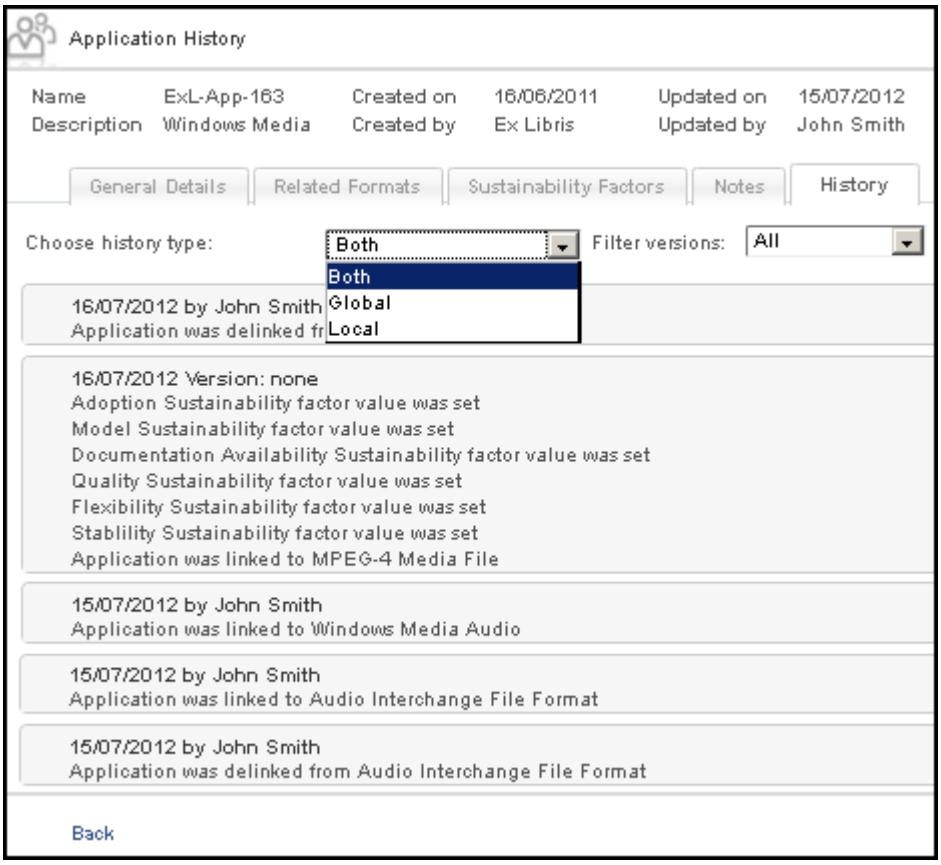


Figure 36: Application History

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.

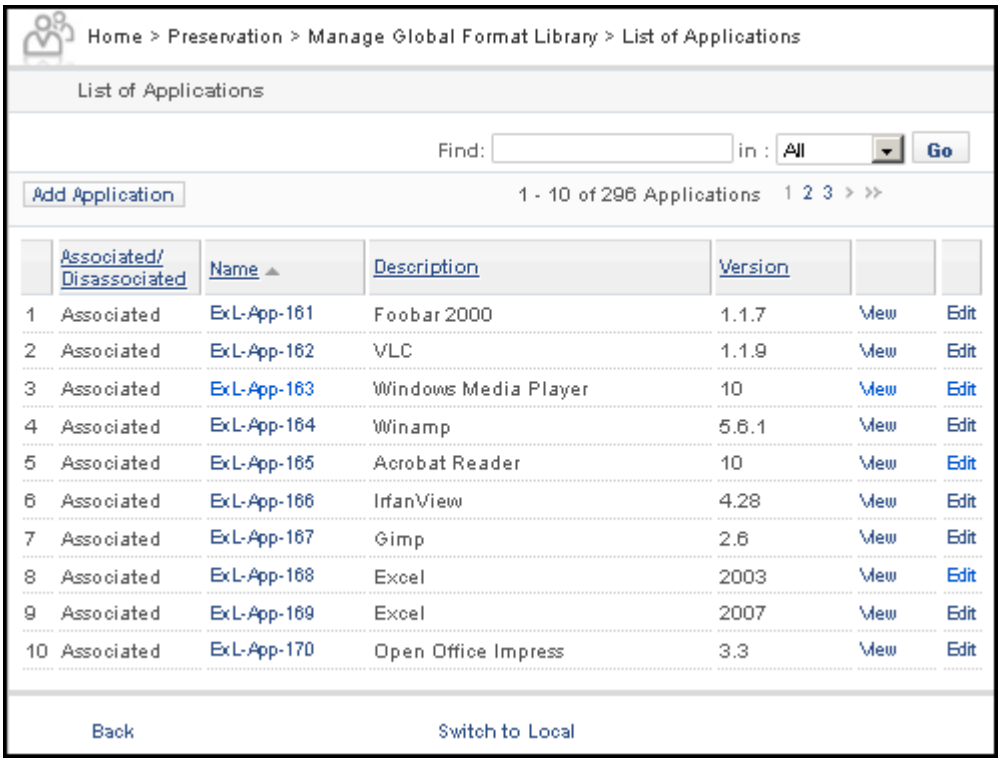


Figure 37: List of Applications

The List of Applications displays the following information:

Table 11. List of Applications

Column	Description
Associated/Disassociated	Indicates if the application is associated with a format. This information is key to identifying risks in the database.
Name	The PRONOM name of the application
Description	The common name of the application
Version	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 38**).

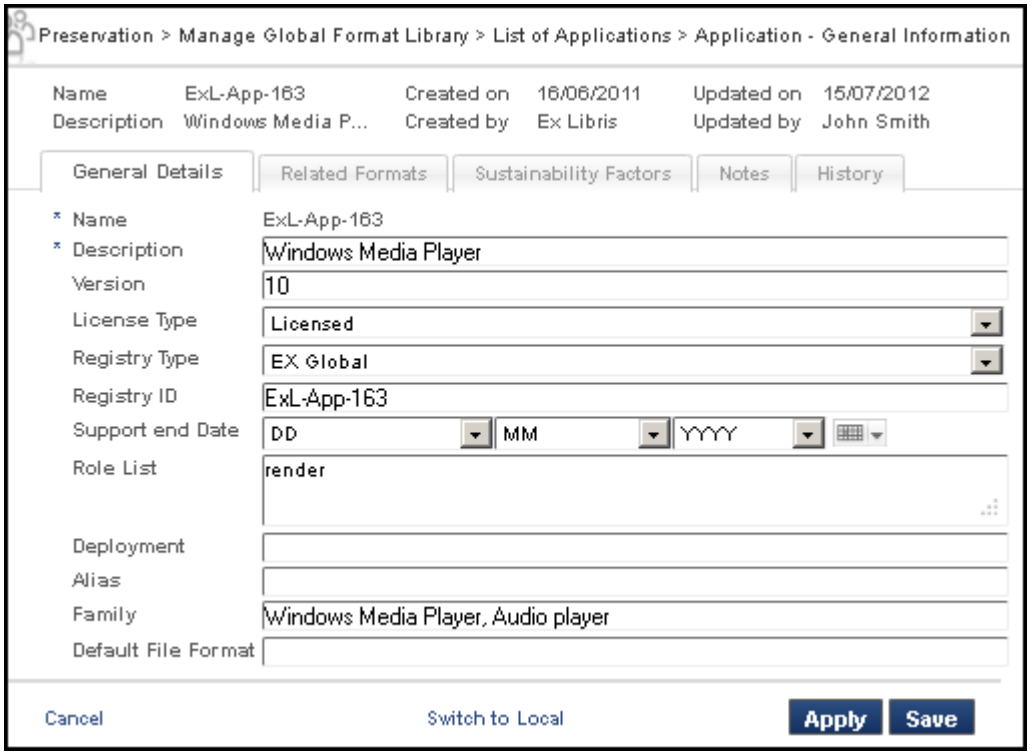


Figure 38: General Details - Global Library

In addition to the information displayed in the List of Applications (**Table 11** on page **56**), these fields may contain information:

Table 12. 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.

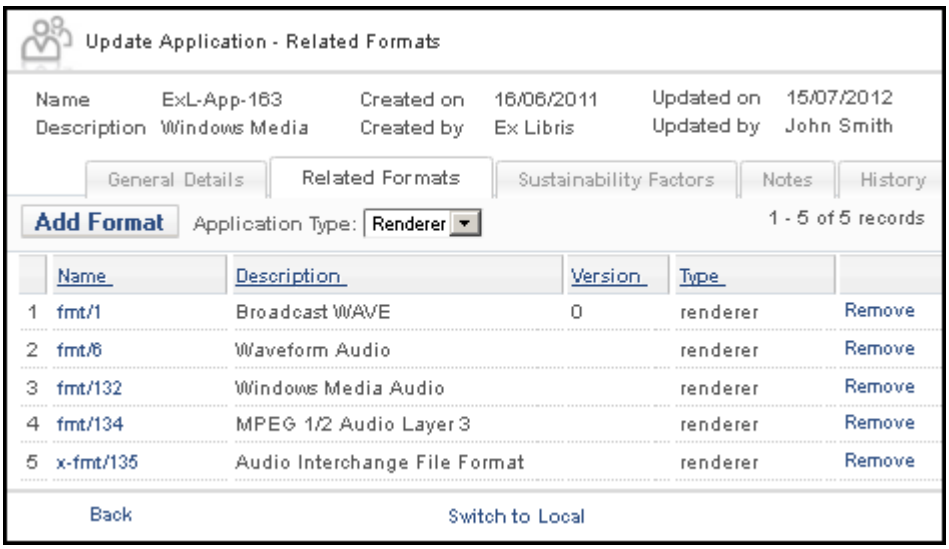


Figure 39: Related Formats, Global Library

The following information is displayed:

Table 13. 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 40**)

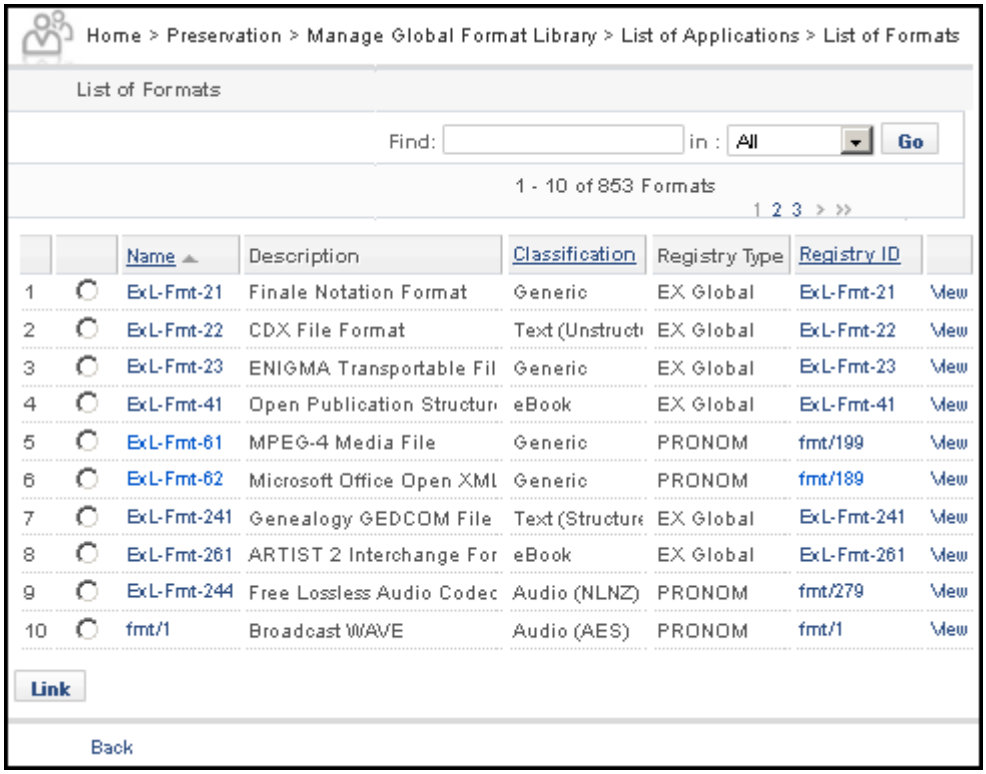


Figure 40: Add Format

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.

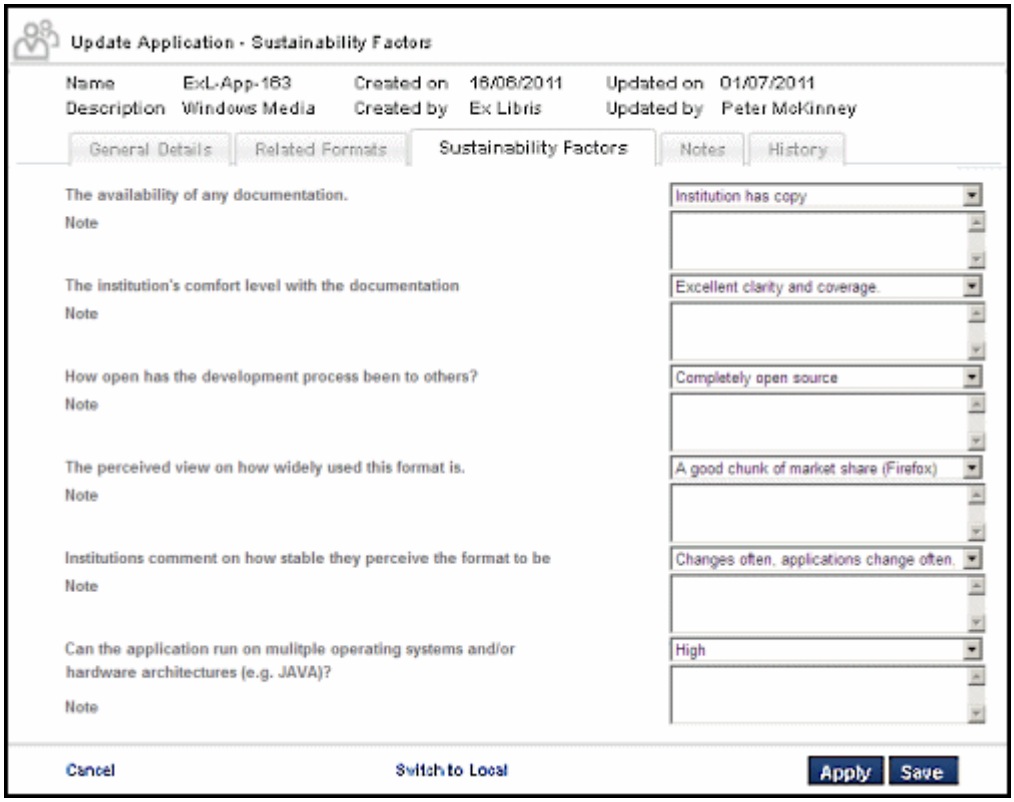


Figure 41: Editing Sustainability Factors

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.

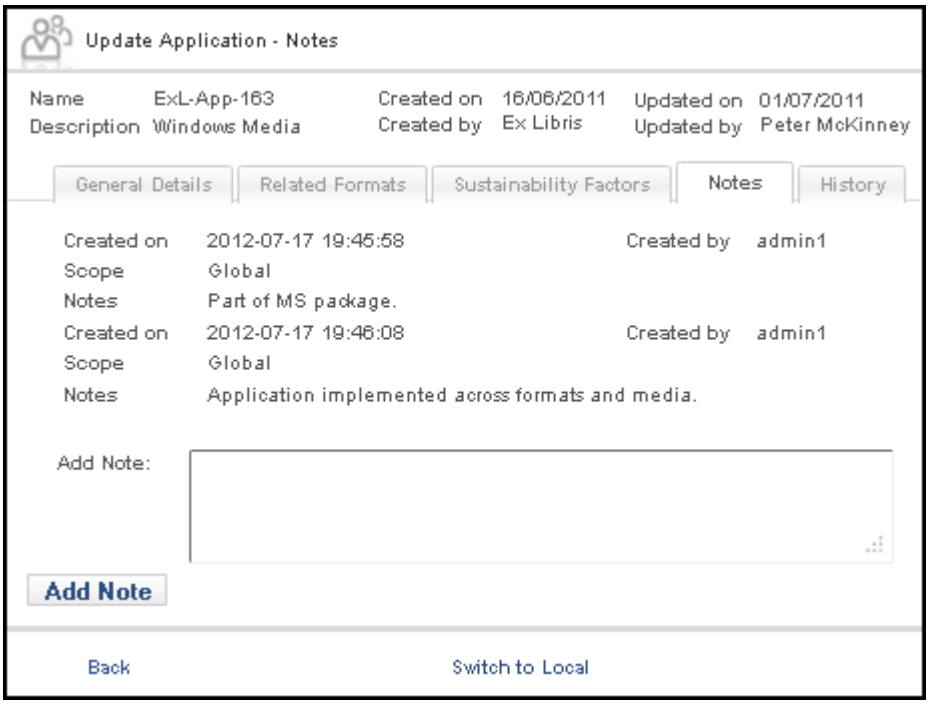


Figure 42: Application Notes - Global View

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 14. 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.

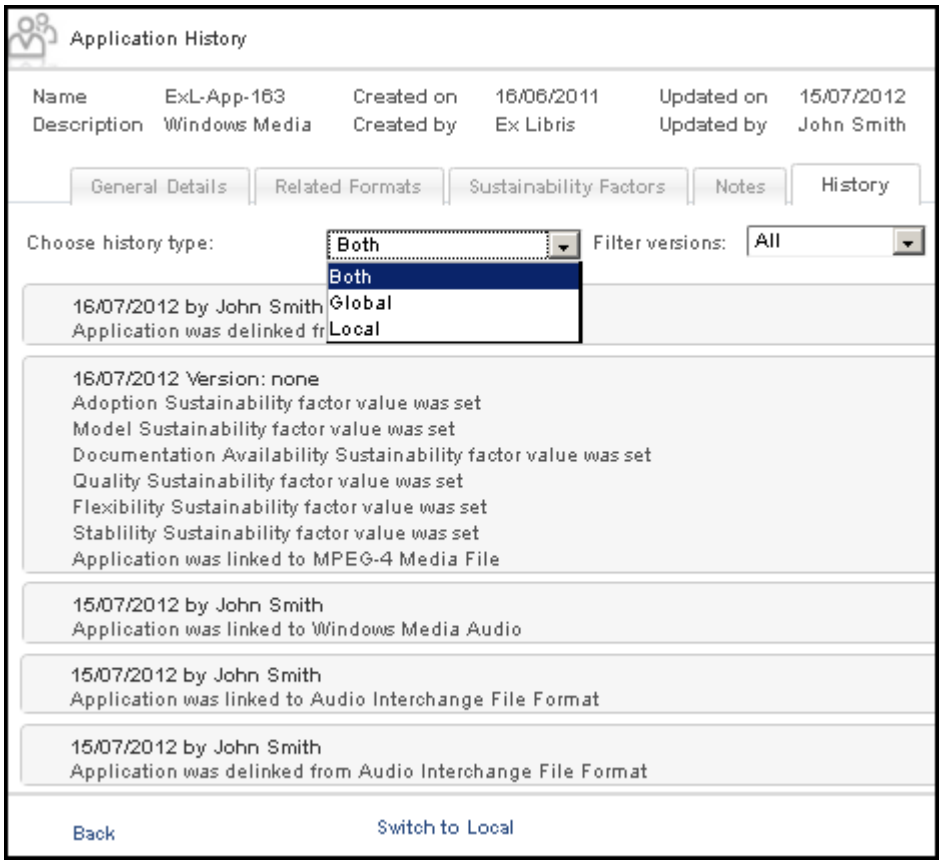


Figure 43: Application History

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:

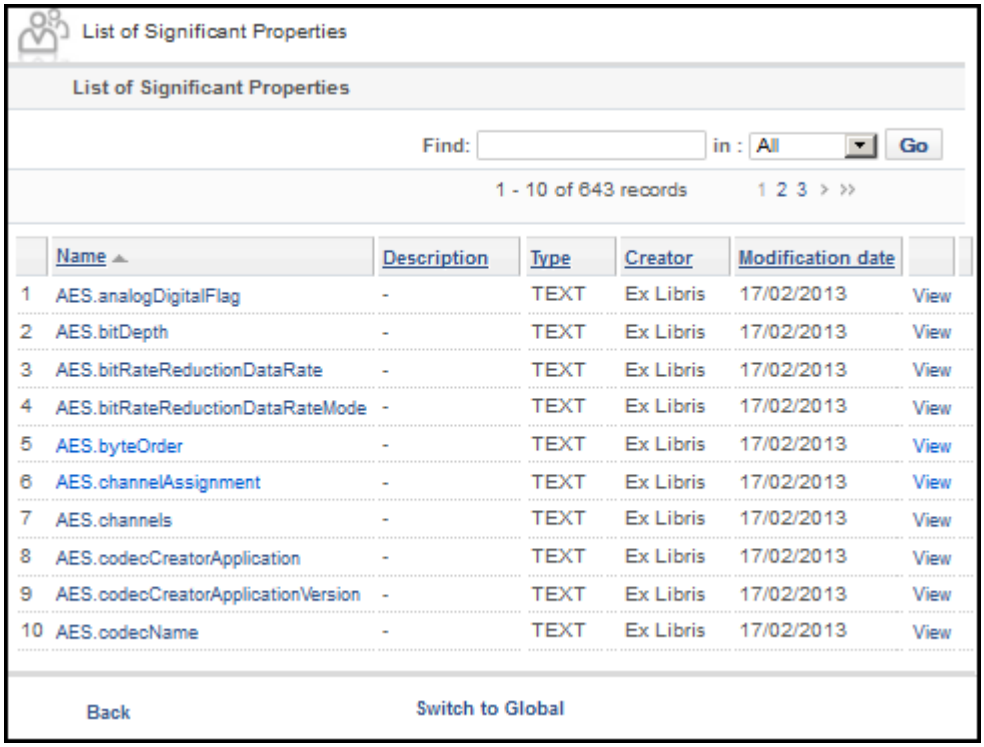
- **Significant Properties in the Local Library** on page **63**
- **Significant Properties at the Global Library Level** on page **65**

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 **65**.

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 44**).



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

Figure 44: 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 44**). The details open on the Significant Properties Details page (see **Figure 45**).

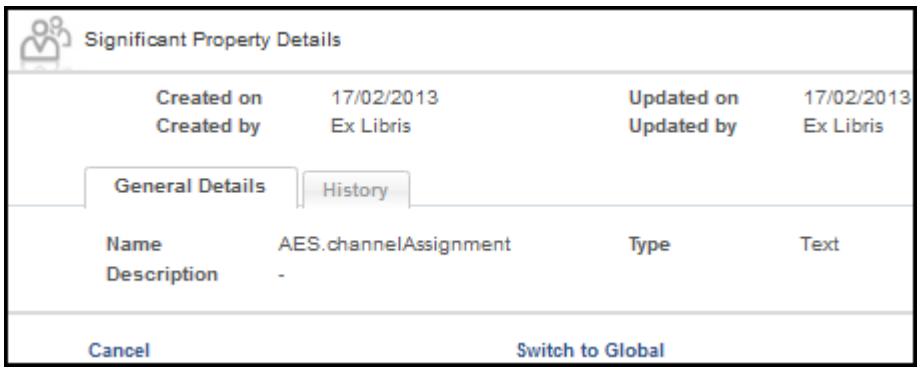


Figure 45: Significant Properties Details Page

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

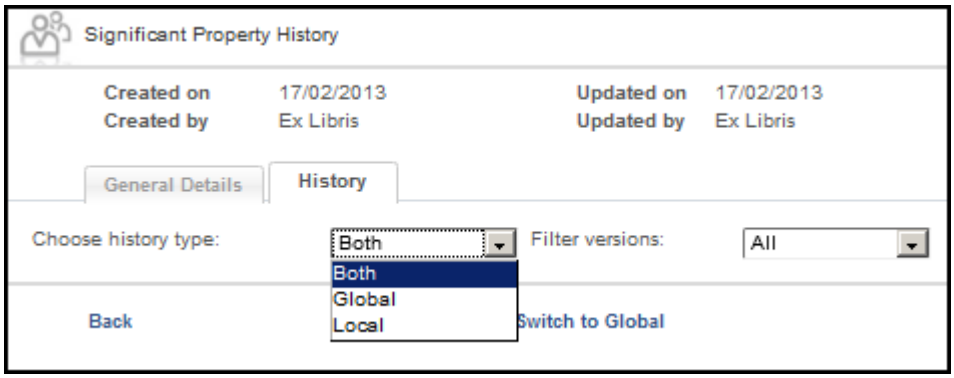


Figure 46: Significant Properties History Page

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.

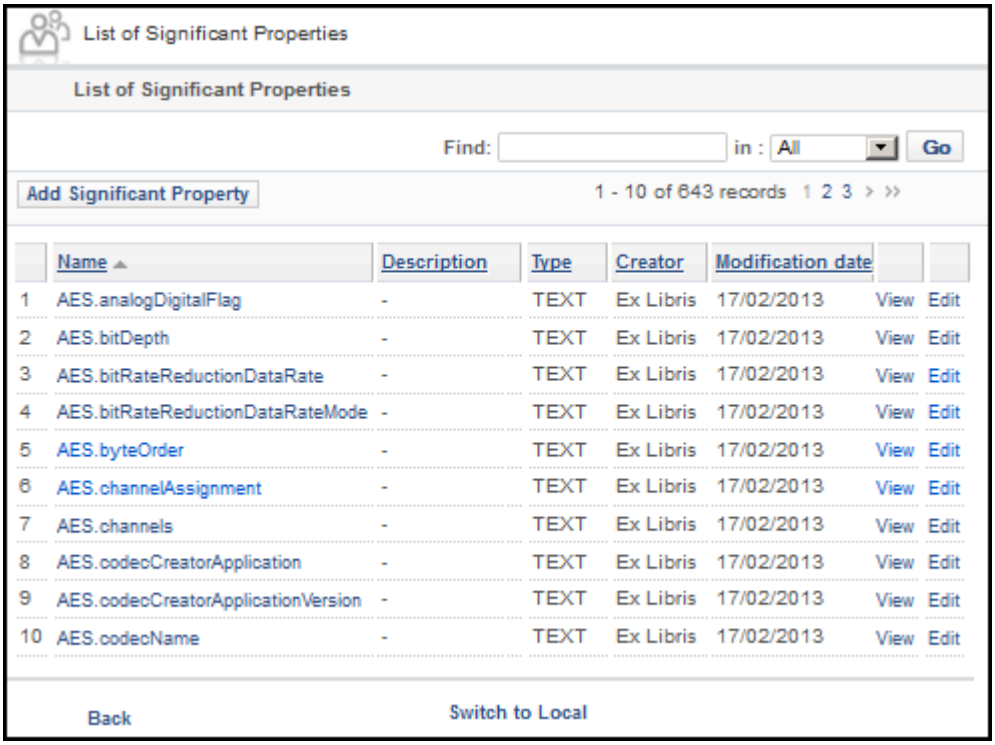


Figure 47: List of Significant Properties - Global

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 **66** 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.

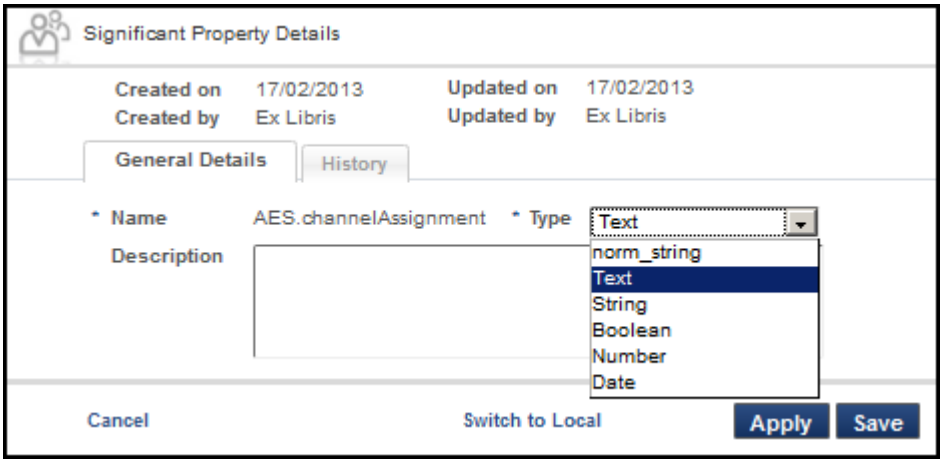


Figure 48: General Details for Editing

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 **69**
- **Global Classification Group Library** on page **74**

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 **25**.

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 **74**.

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

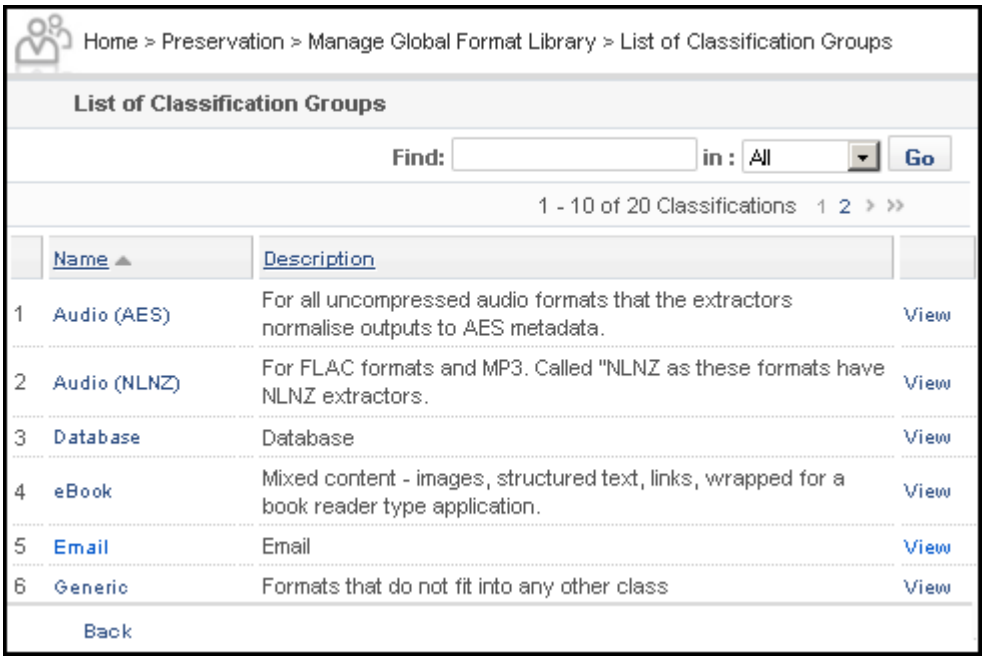


Figure 49: List of Classification Groups

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 50**).

Figure 50: Classification Groups, General Details Default Tab

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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 51**).

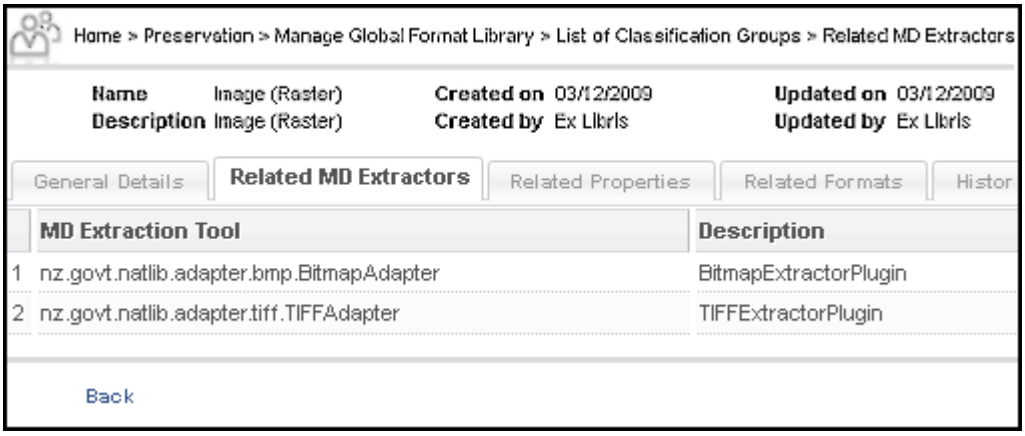


Figure 51: Related MD Extractors

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.

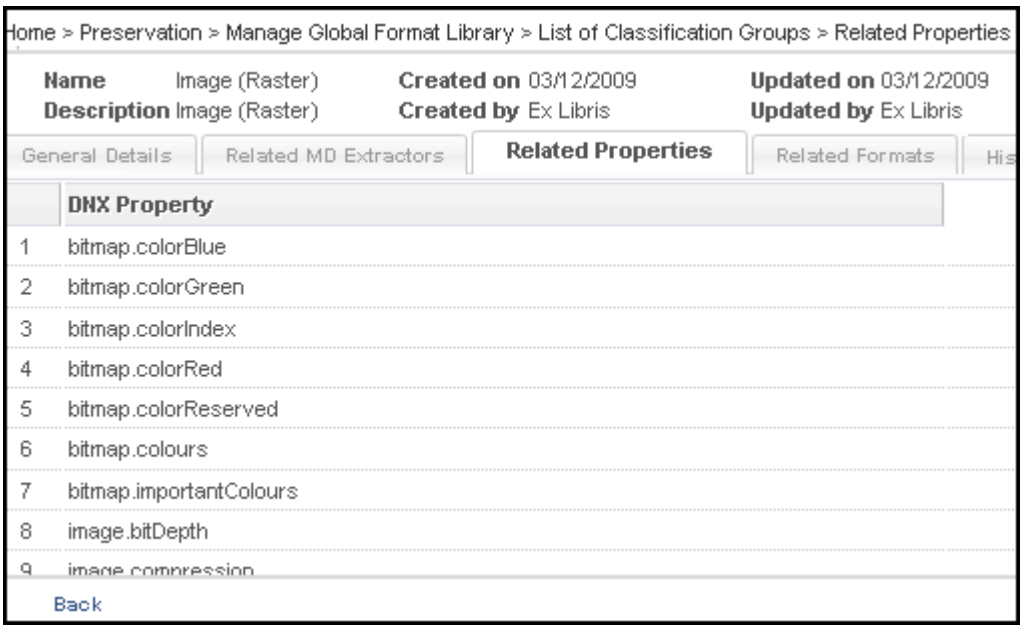


Figure 52: Related Properties

Related Formats

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

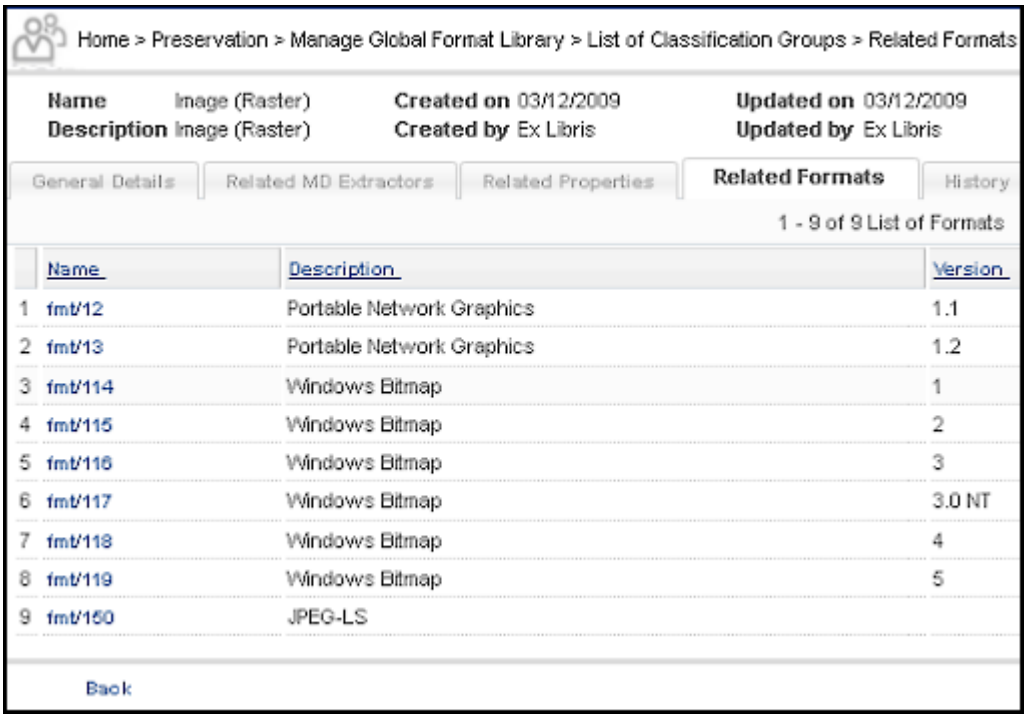


Figure 53: Related Formats

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.

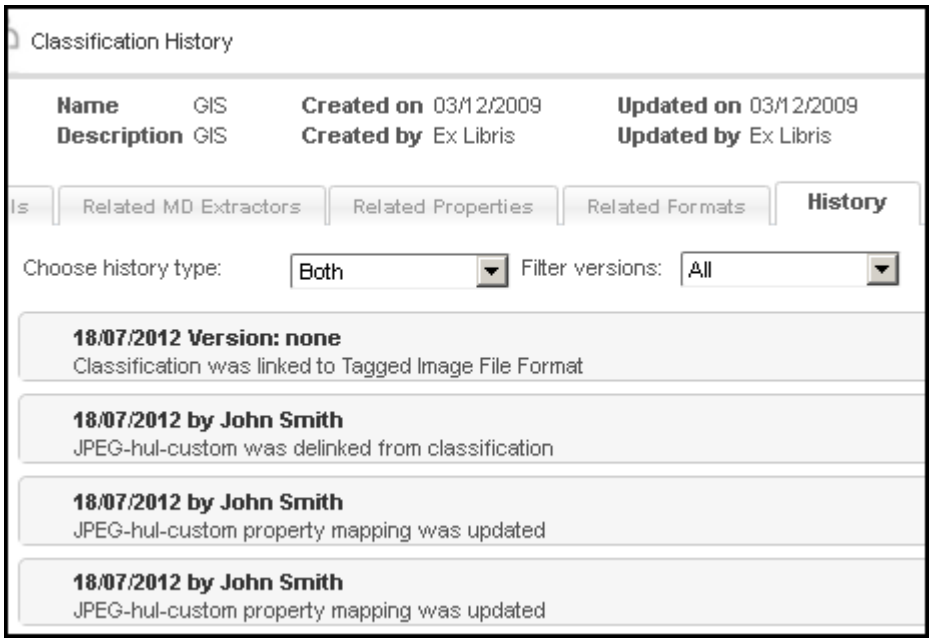


Figure 54: History Tab for Classification Group

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.

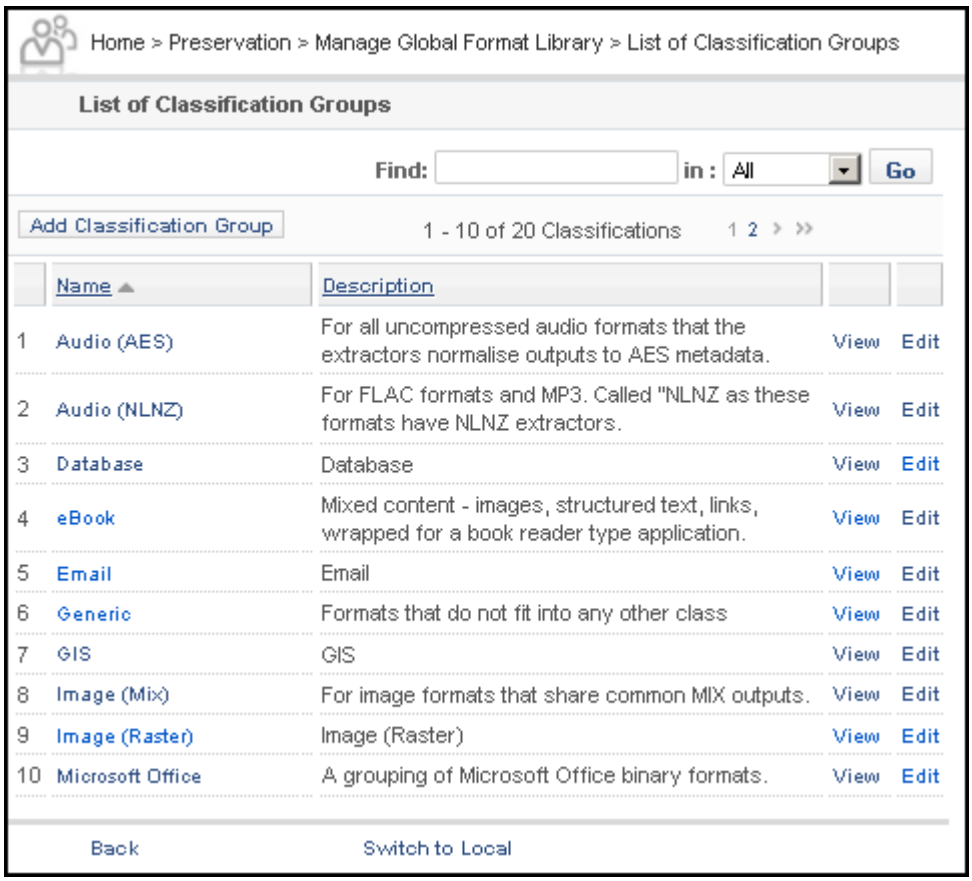


Figure 55: List of Global Classification Groups

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

Table 15. 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.

Figure 56: 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.

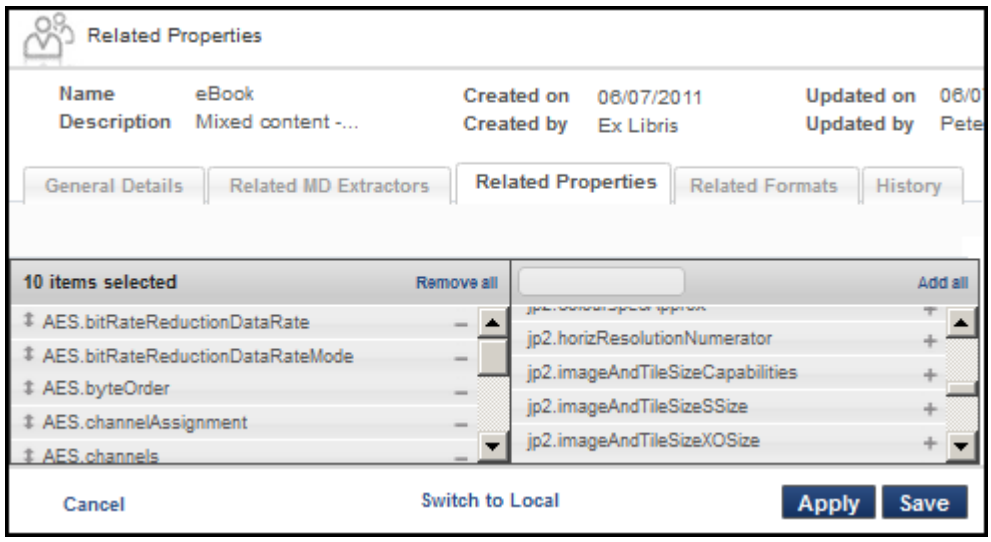


Figure 57: Related Properties

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.

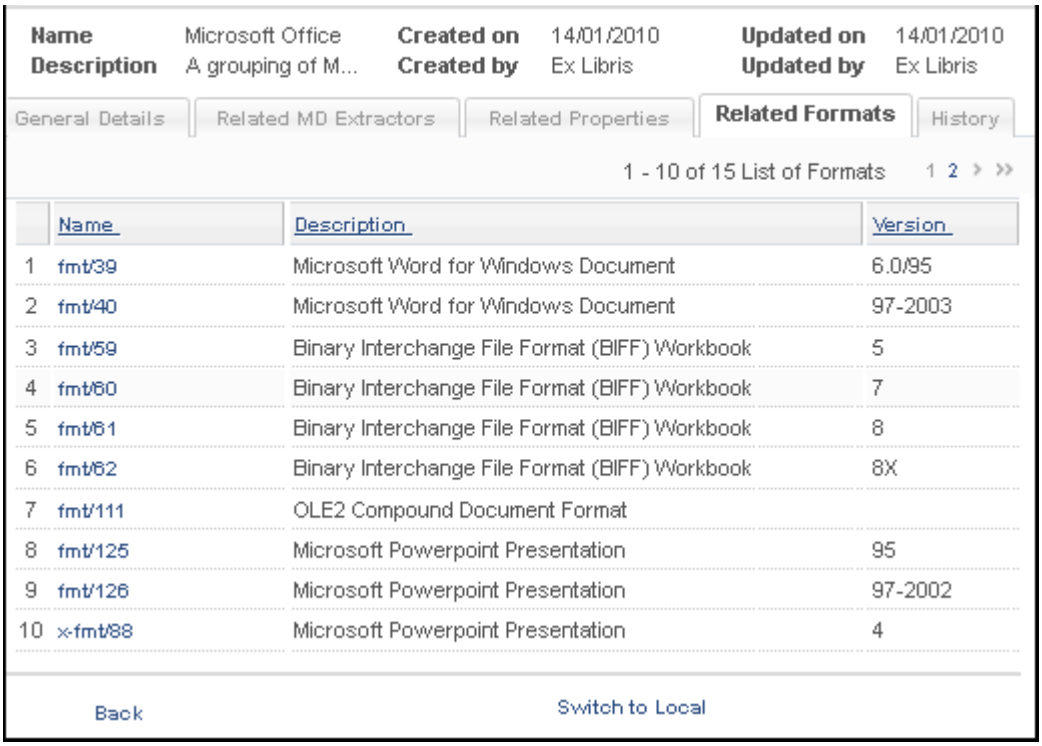
Click **Apply** or **Save**.

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 **32**.
- 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.



Name	Microsoft Office	**Created on**	14/01/2010	**Updated on**	14/01/2010
Description	A grouping of M...	**Created by**	Ex Libris	**Updated by**	Ex Libris

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

1 - 10 of 15 List of Formats 1 2 › »

	Name	Description	Version
1	fmt/39	Microsoft Word for Windows Document	6.0/95
2	fmt/40	Microsoft Word for Windows Document	97-2003
3	fmt/59	Binary Interchange File Format (BIFF) Workbook	5
4	fmt/60	Binary Interchange File Format (BIFF) Workbook	7
5	fmt/61	Binary Interchange File Format (BIFF) Workbook	8
6	fmt/62	Binary Interchange File Format (BIFF) Workbook	8X
7	fmt/111	OLE2 Compound Document Format	
8	fmt/125	Microsoft Powerpoint Presentation	95
9	fmt/126	Microsoft Powerpoint Presentation	97-2002
10	x-fmt/88	Microsoft Powerpoint Presentation	4

Back Switch to Local

Figure 58: 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 **25**.

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 **79**
- **List of Metadata Extractors** on page **79**
- **Managing Custom Metadata Extractors** on page **81**

Introducing the Metadata Extractors Library

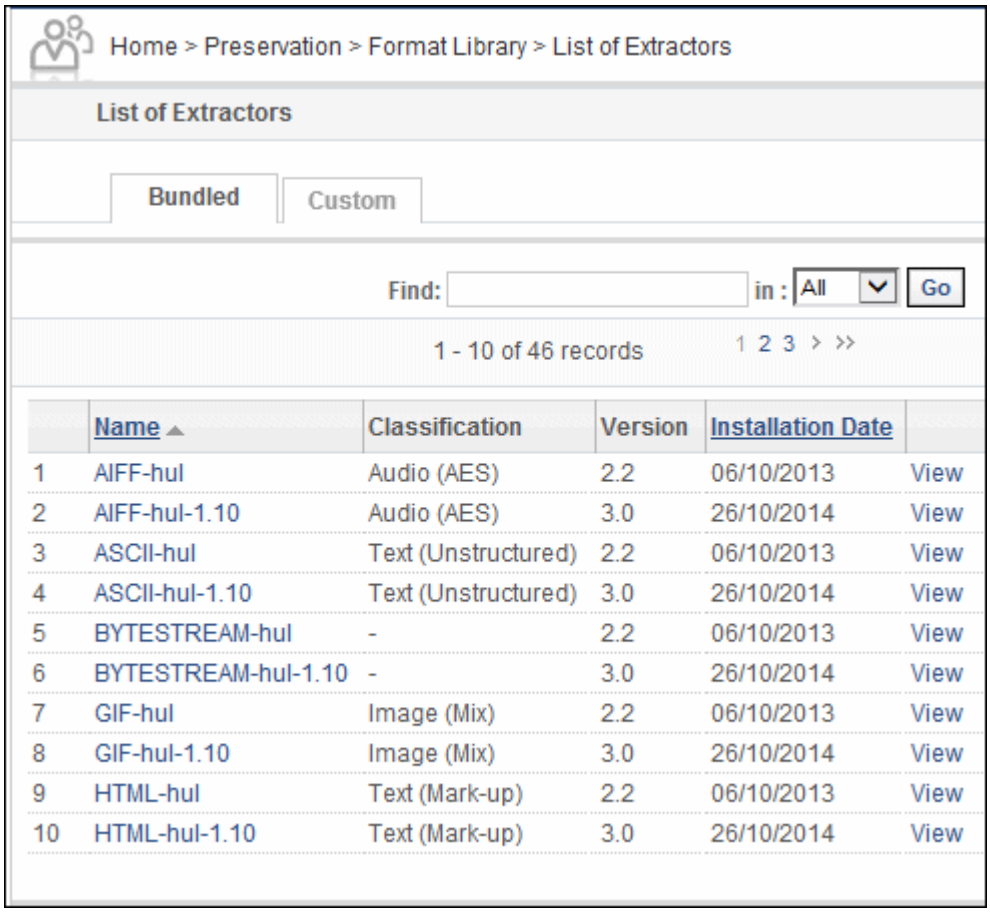
The purpose of the metadata extractor library is to manage the metadata extractor tools and map their output to DNX fields.

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	View
2	AIFF-hul-1.10	Audio (AES)	3.0	26/10/2014	View
3	ASCII-hul	Text (Unstructured)	2.2	06/10/2013	View
4	ASCII-hul-1.10	Text (Unstructured)	3.0	26/10/2014	View
5	BYTESTREAM-hul	-	2.2	06/10/2013	View
6	BYTESTREAM-hul-1.10	-	3.0	26/10/2014	View
7	GIF-hul	Image (Mix)	2.2	06/10/2013	View
8	GIF-hul-1.10	Image (Mix)	3.0	26/10/2014	View
9	HTML-hul	Text (Mark-up)	2.2	06/10/2013	View
10	HTML-hul-1.10	Text (Mark-up)	3.0	26/10/2014	View

Figure 59: 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.

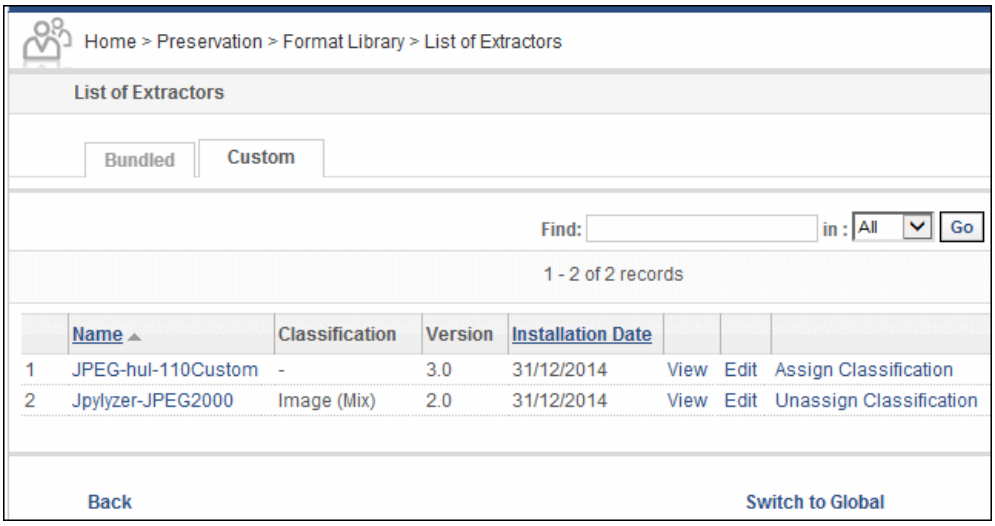


Figure 60: List of Extractors - Custom Tab

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.

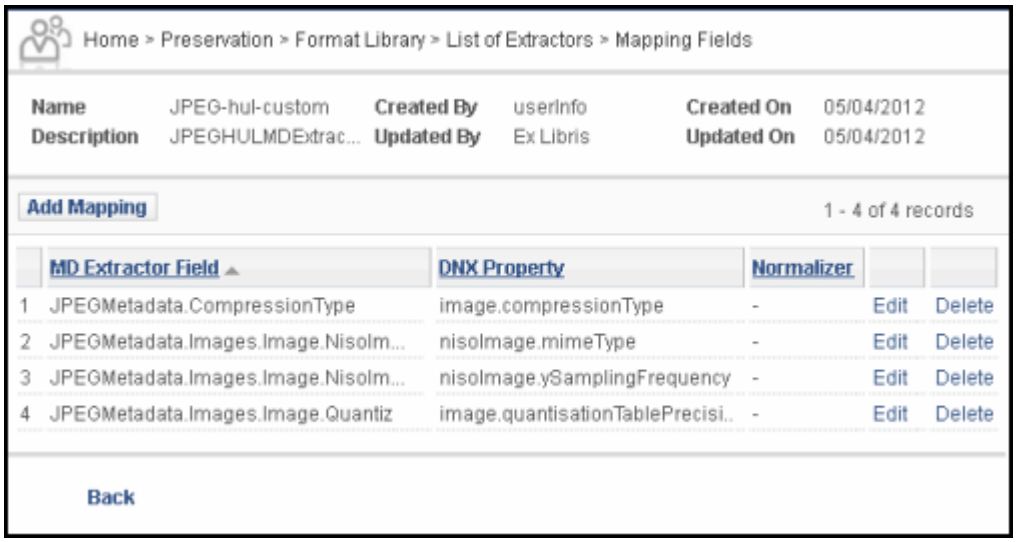


Figure 61: Editing a Custom Extractor

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

:

Table 16. Viewing MD Extractors

Field	Description
MD Extractor Field	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.
DNX Property	The location in the DNX file in which the metadata is stored
Normalizer	The tool used to normalize the metadata for the extractor. For example, with the fields `YSamplingFrequency` and `XSamplingFrequency`, some extractors might have two separate fields, and some might have one field that is written in the format of `(X,Y)`. The normalizer will convert the one field `(X,Y)` to two fields `(X)`, `(Y)`.

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 16**, **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 **85**
- **Chapter 8: Risk Analysis and Reports** on page **89**
- **Chapter 9: Creating Preservation Sets** on page **97**

7

Risk Analysis Overview

This section contains:

- **Risk Analysis and Preservation** on page **85**
- **Types of Risks** on page **85**
- **Identifying Risks** on page **86**
- **Generating Risk Reports** on page **87**
- **Preservation Sets** on page **87**

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.

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.

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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, while reports relying on **Bitstream Properties** require an extra link.

NOTE:
Bitstream functionality is supported in Rosetta version 2.x, but there is no support for creating sets of containers based on their bitstream properties.

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.

Bitstream Properties

In the risk report for each format, Rosetta includes a link to a report based on bitstream properties. This report indicates how many containers, IEs, and representations in the repository contain bitstreams belonging to this format risk.

Rosetta does not currently support creating a set based on these bitstreams nor a preservation plan for these objects.

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).

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8

Risk Analysis and Reports

This section contains:

- **Risk Identification** on page **89**
- **Scheduling Risk Analysis** on page **90**
- **Global Risks** on page **93**

Risk Identification

The definition of risks begins with digital formats in the Format Library. These formats are largely defined by 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 Manage Scheduled Jobs page (**Preservation > Advanced Preservation Activities > Schedule Risk Analysis Process**) allows Preservation Managers and Analysts to schedule the job that runs the Risk Analysis Report.

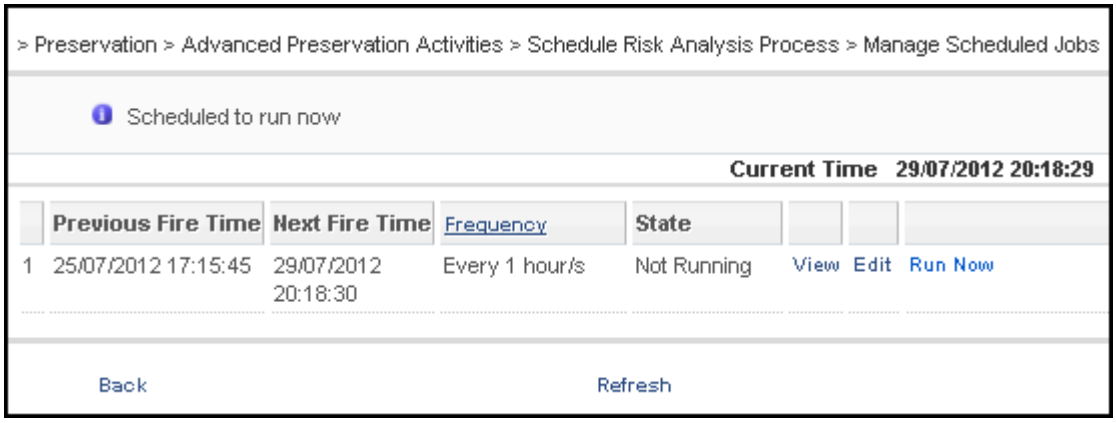


Figure 62: Manage Scheduled Job (Risk Analysis Report)

The Manage Scheduled Jobs 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 **View** link to display the job's details.
- Modify the job – For more information, see **Scheduling the Risk Analysis Report Job** on page **90**.
- 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 **92**.

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 Manage Scheduled Jobs page, click the **Edit** link next to the job.

   The Job Details page displays the status of the job.

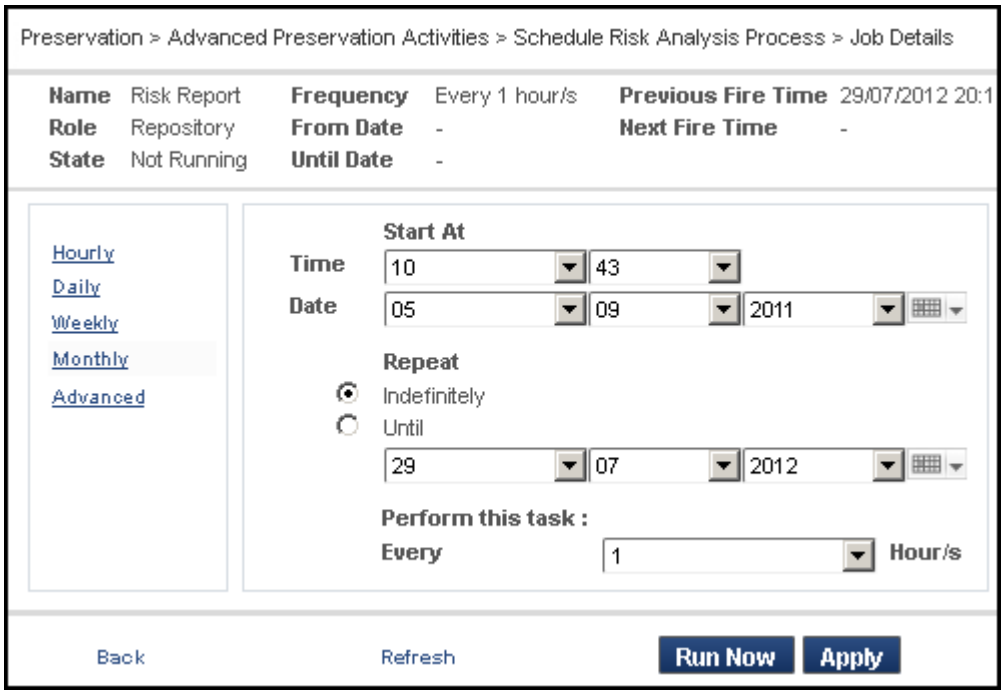


Figure 63: Job Details Page (Risk Analysis Report Job)

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 17. 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. **NOTE:** After this date, the state of the job will change from **Normal** to **Not Running**.

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

Table 18. Interval-Specific Fields

Type of Interval	Perform this task:	Description
Hourly	Every	Select the hourly interval from the **Hours** 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 **252** 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 Manage Scheduled Jobs page, click the **Edit** link next to the Risk Report job.

   The Manage Scheduled Jobs page opens.

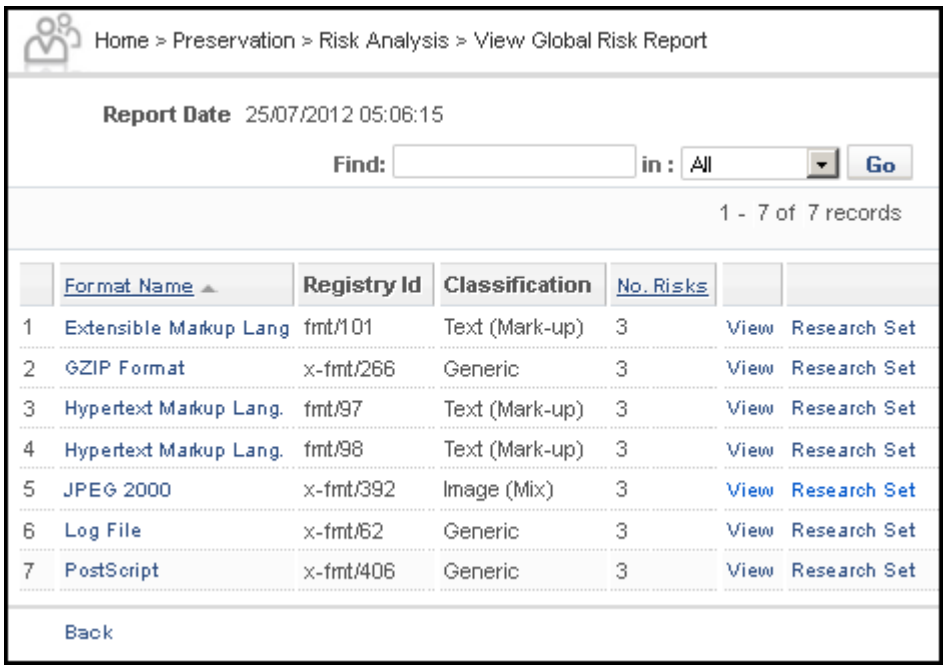
2. Click the **Unschedule** button.

   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 (**View Format Risk Reports** > **View Global Risks Report**). The list of risks opens (see **Figure 64**).



	Format Name	Registry Id	Classification	No. Risks		
1	Extensible Markup Lang	fmt/101	Text (Mark-up)	3	View	Research Set
2	GZIP Format	x-fmt/266	Generic	3	View	Research Set
3	Hypertext Markup Lang.	fmt/97	Text (Mark-up)	3	View	Research Set
4	Hypertext Markup Lang.	fmt/98	Text (Mark-up)	3	View	Research Set
5	JPEG 2000	x-fmt/392	Image (Mix)	3	View	Research Set
6	Log File	x-fmt/62	Generic	3	View	Research Set
7	PostScript	x-fmt/406	Generic	3	View	Research Set

Figure 64: Global Risk Report

The report provides the information described in the following table.

Table 19. Information on the Global Risk Report

Heading	Description
Format Name	The name of the format.
Registry ID	The identification code for the format.
Classification	The type of material or media indicated by the format.
No. of Risks	The number of risks associatedwith the format.

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 Risks per Format page (see figure below) that displays additional information specific to that format.

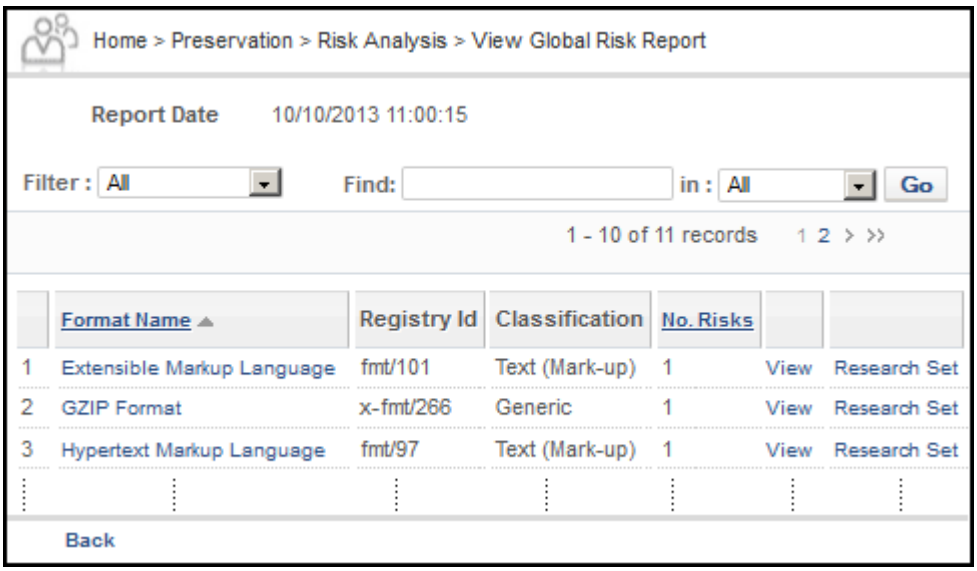


Figure 65: Global Risks Per Format

The information and actions include the following.

Table 20. Information on the Global Risks Per Format

Heading	Description
Risk Code	The code indicating the type of problem with the format.

Table 20. Information on the Global Risks Per Format

Heading	Description
Risk Query	A query used to search the repository for the risk.
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	Opens the set management UI for creating a Preservation set (see **Creating Preservation Sets** on page **97**)
Preservation Plans	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 65**) opens a list of items sorted by PID that fall into this format.

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

Figure 66: Exploratory Set for Global Risk Formats

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 21. Actions from the Research Set Page

Clicking	Does the Following:
View	Opens the file in a secondary window.
Info	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).**

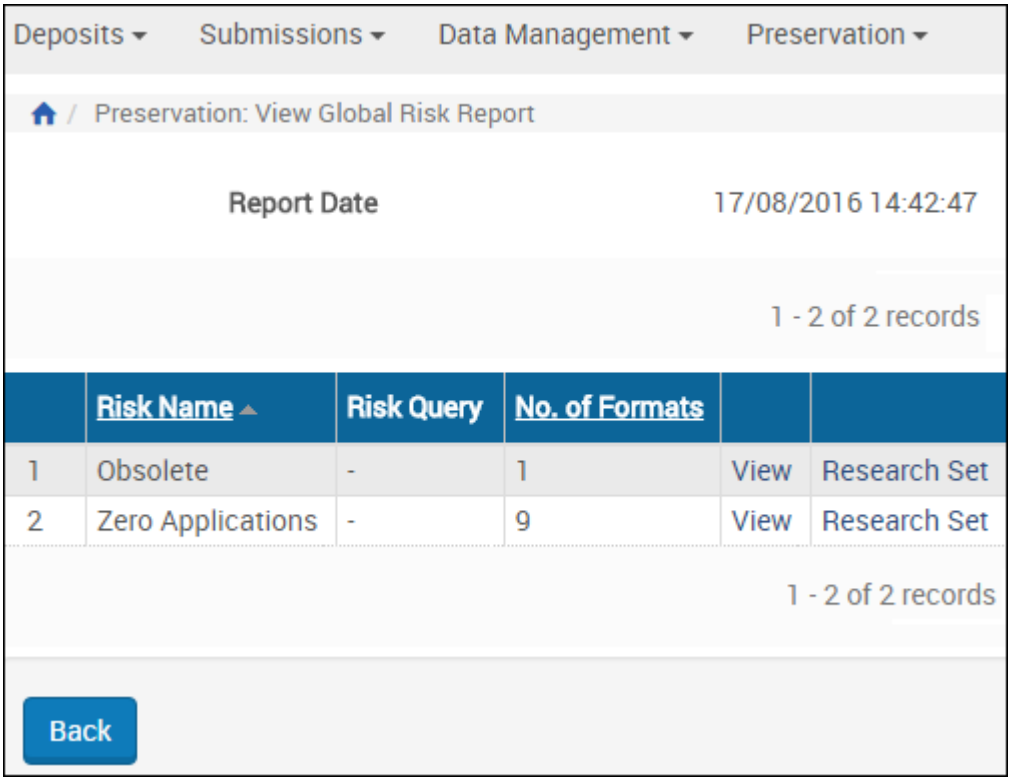
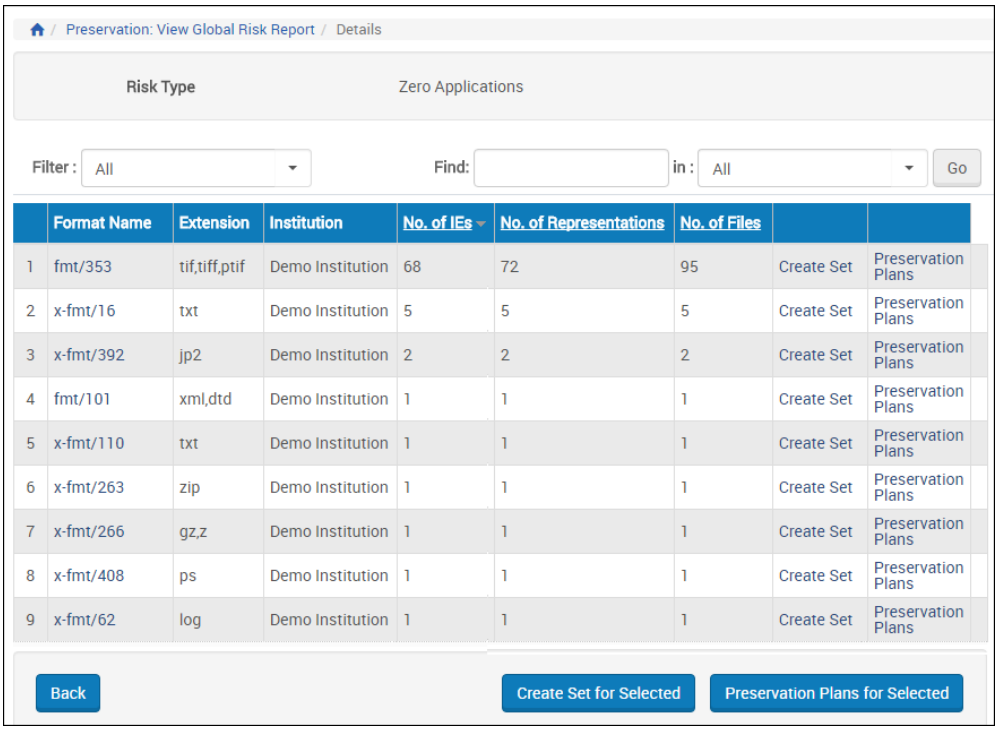


Figure 67: Create Set for View Global Risk Report

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

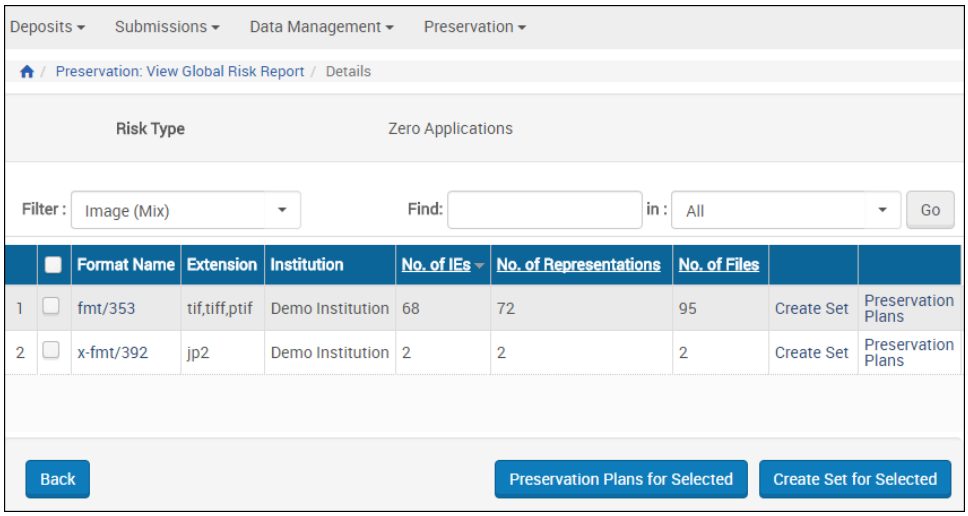


	Format Name	Extension	Institution	No. of IEs	No. of Representations	No. of Files		
1	fmt/353	tif,tiff,ptif	Demo Institution	68	72	95	Create Set	Preservation Plans
2	x-fmt/16	txt	Demo Institution	5	5	5	Create Set	Preservation Plans
3	x-fmt/392	jp2	Demo Institution	2	2	2	Create Set	Preservation Plans
4	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

Figure 68: Risk Formats

3 Select a format and click **Create Set** for the row.

4 If you filter the formats, you can select multiple formats:



		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/392	jp2	Demo Institution	2	2	2	Create Set	Preservation Plans

Figure 69: 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.

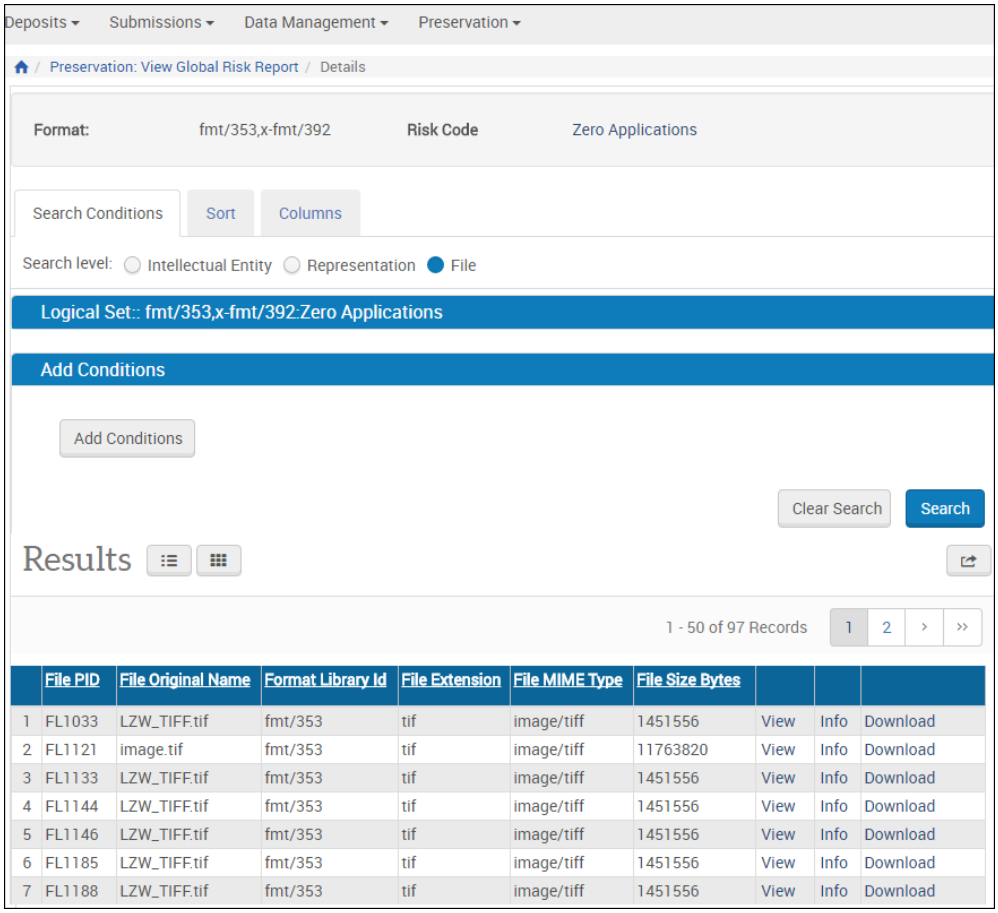


Figure 70: Create Set - Search Conditions Page

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:

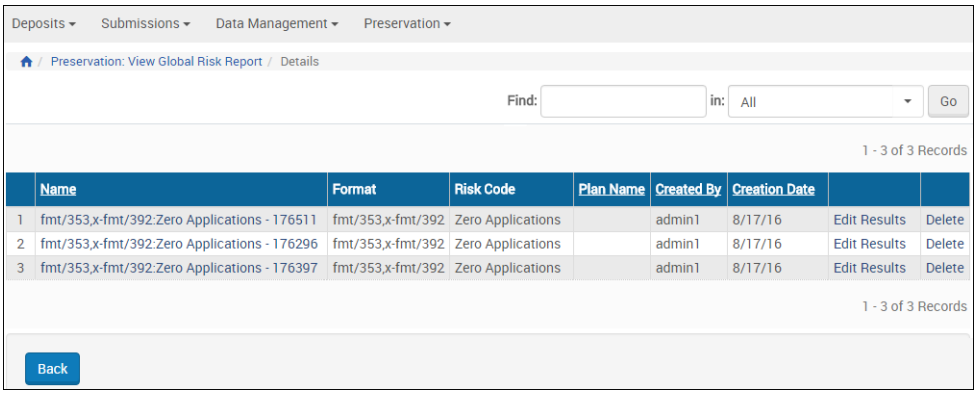


Figure 71: Set List

Part IV

Plan Configuration

This part contains the following:

- **Chapter 10: Plan Configuration Overview** on page **103**
- **Chapter 11: Configuration Procedures** on page **107**

10

Plan Configuration Overview

This section contains:

- **Plan Configuration in Preservation** on page **103**
- **Configuration Stages** on page **103**
- **Preservation Plan Components** on page **104**

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 22. 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	■ Can be deleted only when there are no running tests. ■ Duplication includes copy of documents, copy of logical sets, and copy of alternatives. It does not include test itemized sets and the tests results.
Test in Progress	In Testing	View, Duplicate	
Ready for Sign-off	■ Signed Off ■ In Testing ■ Rejected	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.

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- 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.

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11

Configuration Procedures

This section contains:

- **Preparations for Creating a Plan** on page **107**
- **Building a Preservation Plan** on page **107**
- **Adding Plan Alternatives** on page **117**
- **Editing Alternatives** on page **126**
- **Descriptor File** on page **127**

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 72**), click the **Launch Preservation Plan** button.

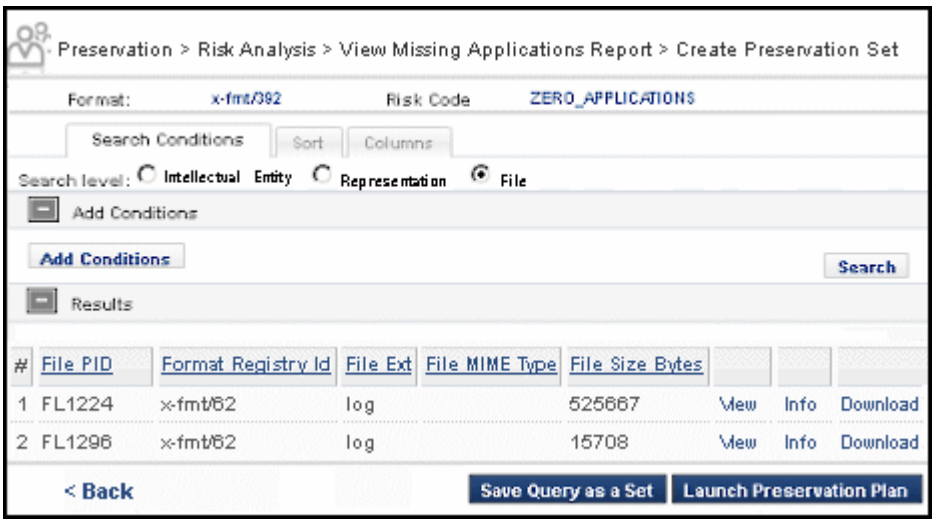

Figure 72: Post-query Search Object page

Rosetta opens the Plan Details - Administrator Information page (see **Figure 73**).

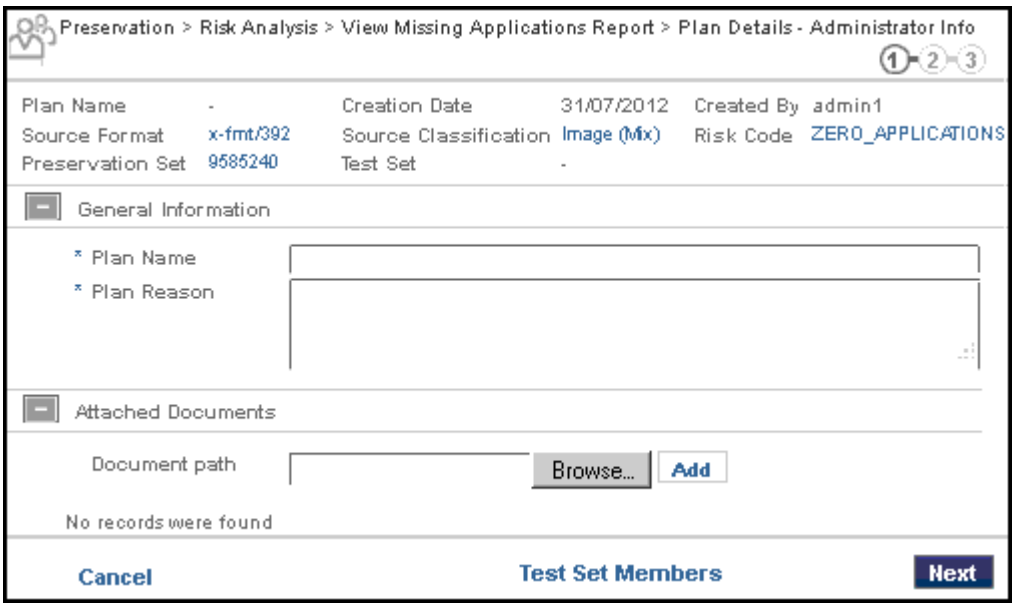

Figure 73: Preservation Plan Creation - Step1

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.

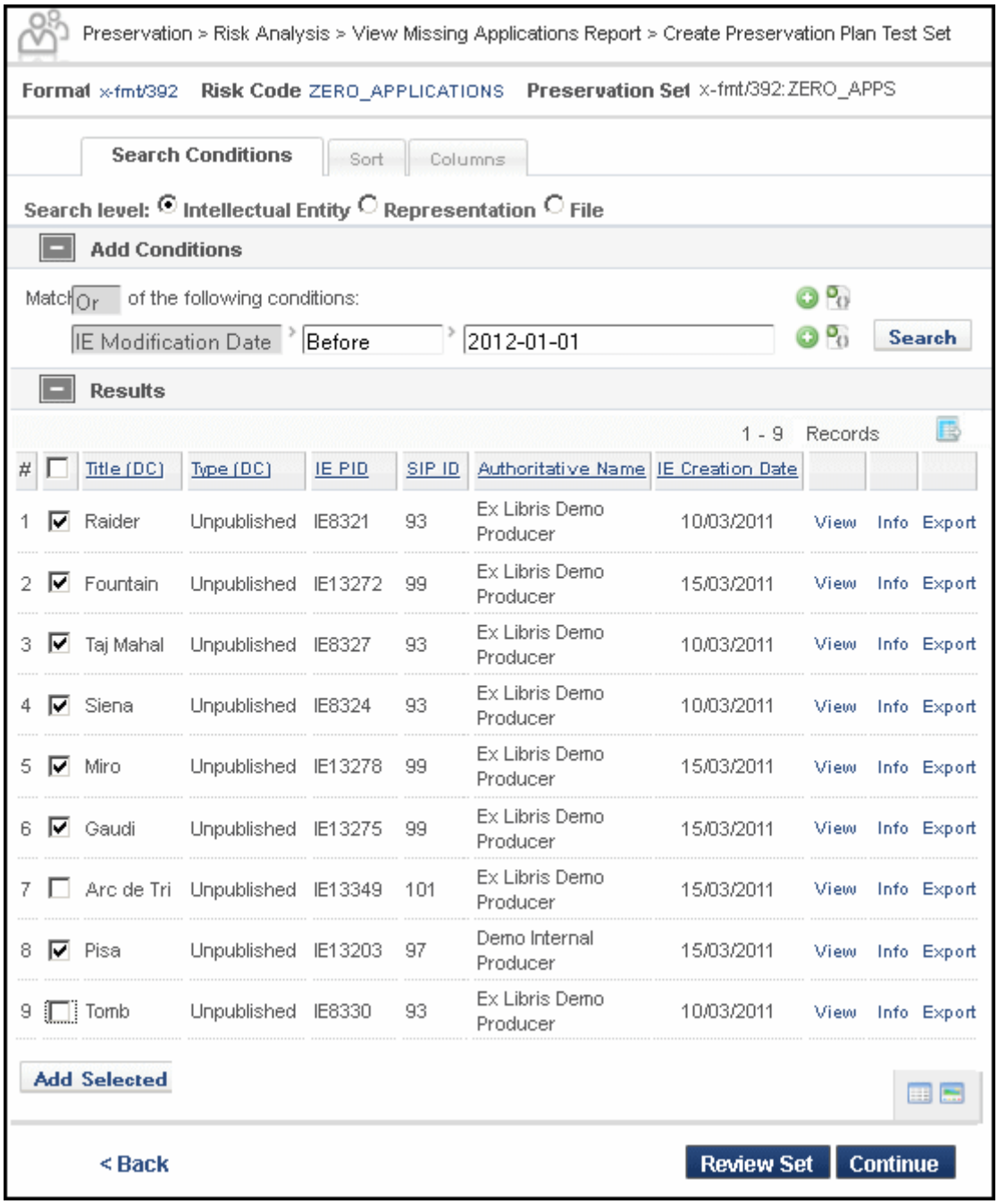

Figure 74: Search Object page from Preservation Plan

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.)

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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.

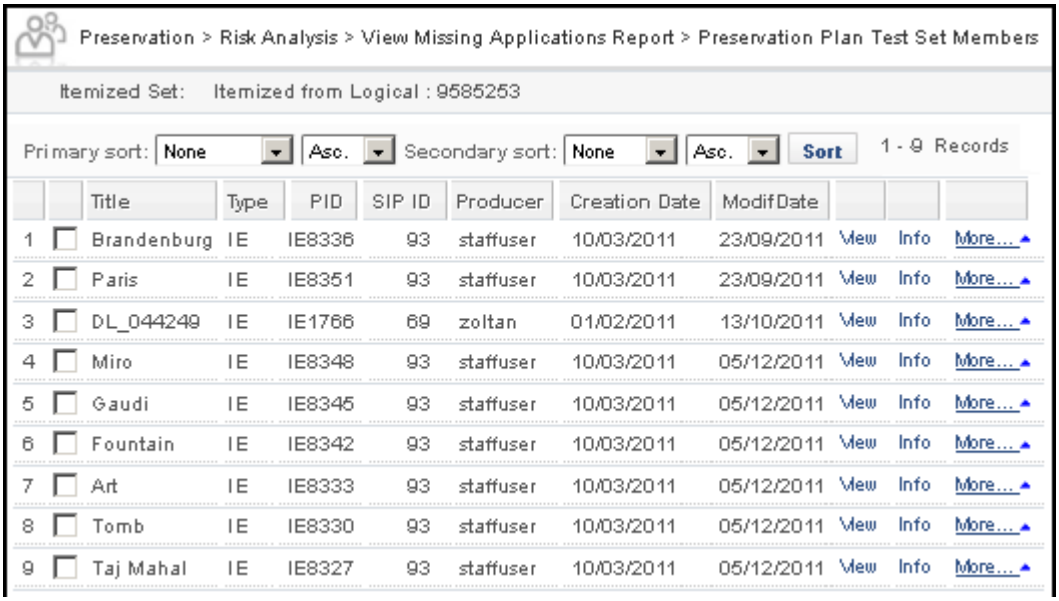

Figure 75: Set Members for Testing

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.

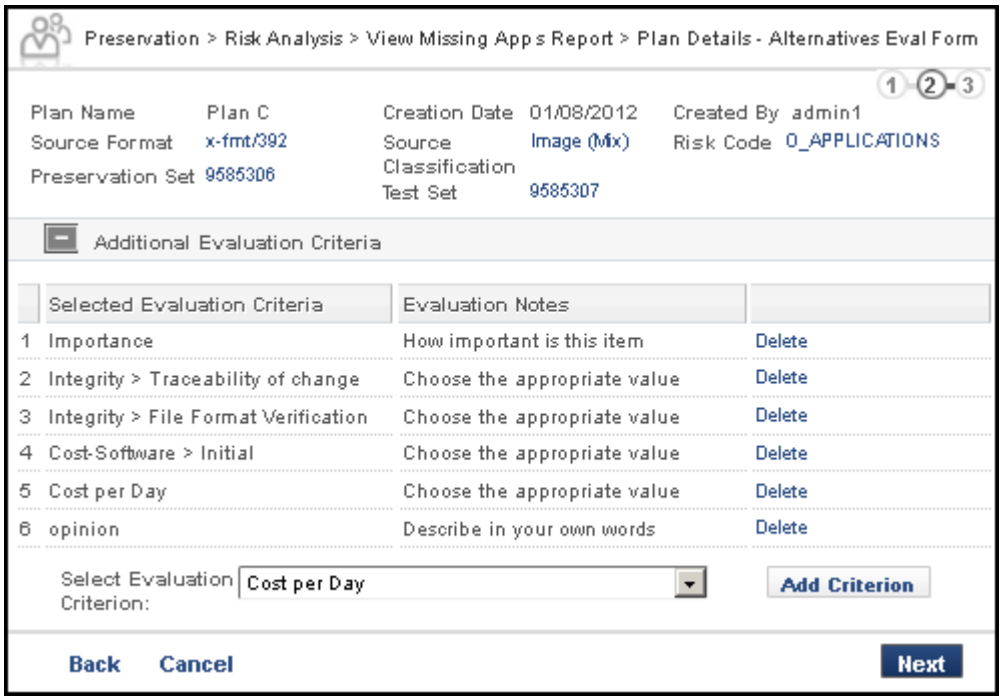

Figure 76: Evaluation Criteria

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.

9 For instructions on how to add new criteria that is not in the table, see **Evaluation Criteria** on page **113**. When you are satisfied with the evaluation criteria for this alternative, click the **Next** button.

The Plan Details - Evaluation Assignment page opens.

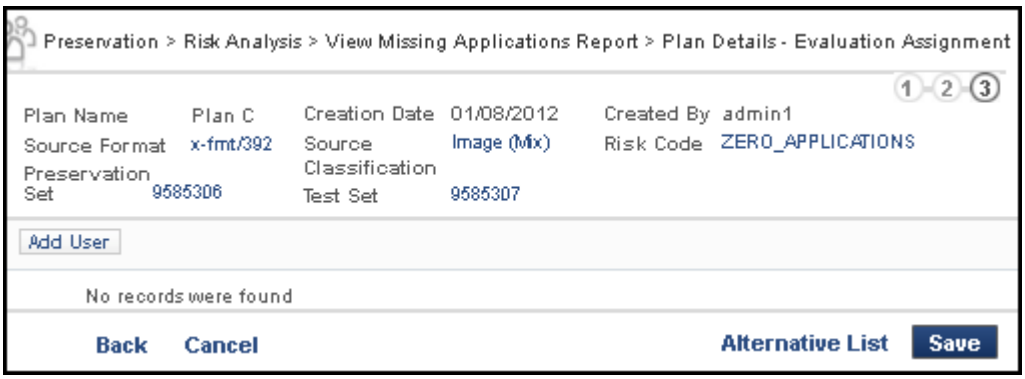

Figure 77: Evaluation Assignment

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..

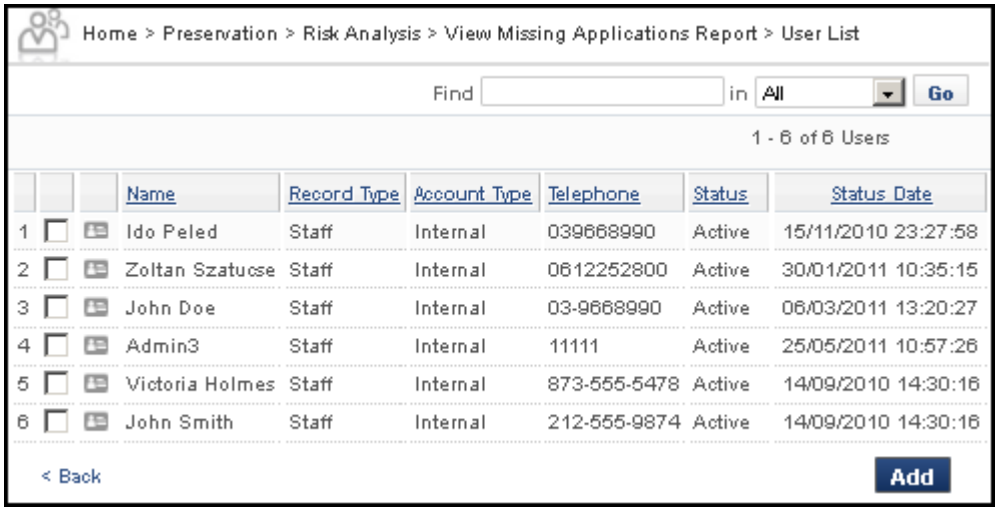

Figure 78: Editors Available for Evaluation Assignment

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:

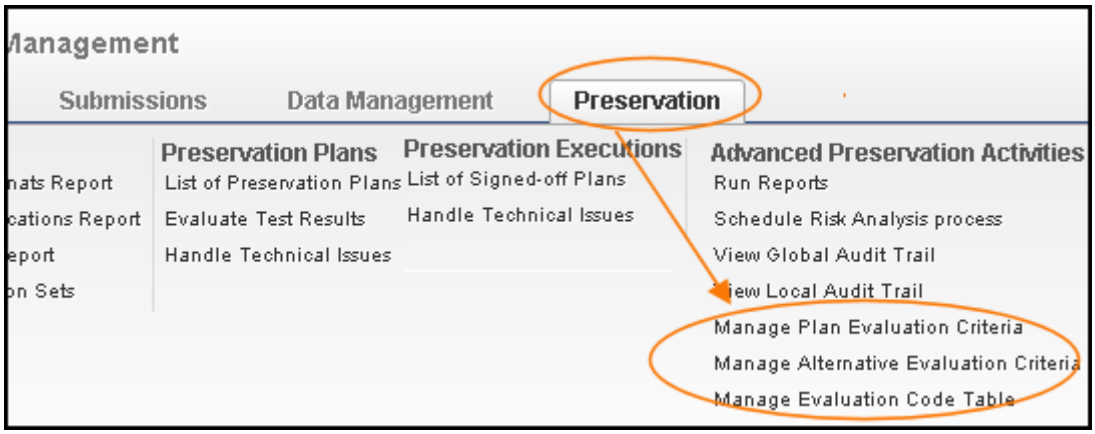

Figure 79: Navigating to Evaluation Criteria Pages

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.

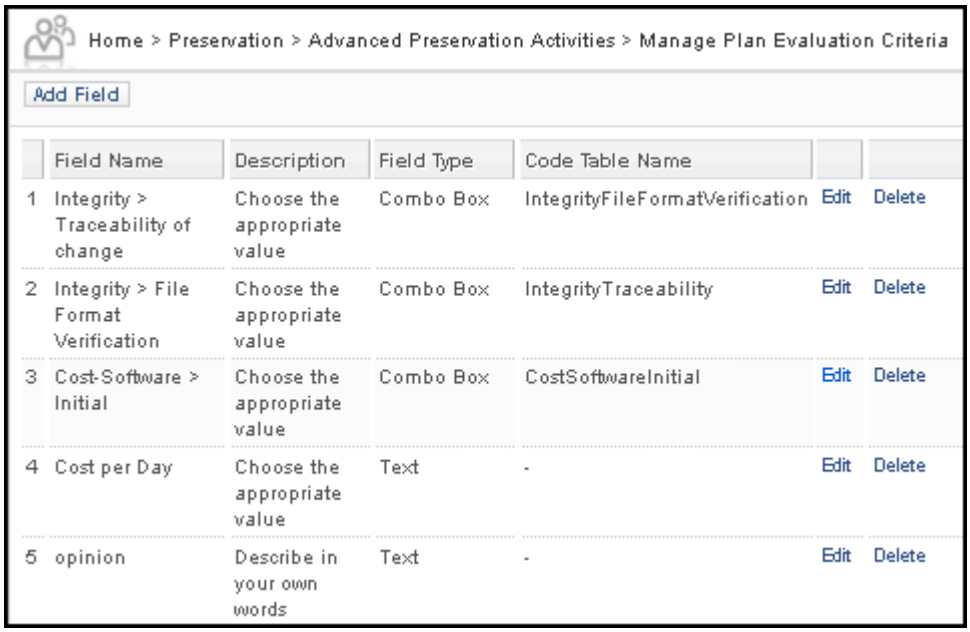

Figure 80: Evaluation Criteria Page

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

Table 23.

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.

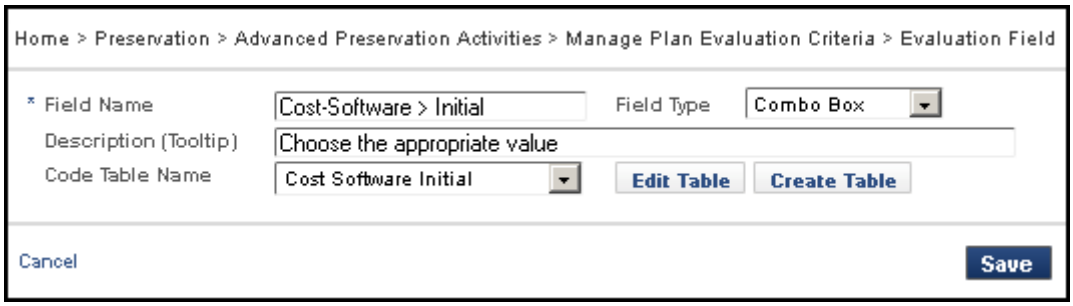

Figure 81: View or Edit Entries for an Evaluation Field

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 **116** 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.

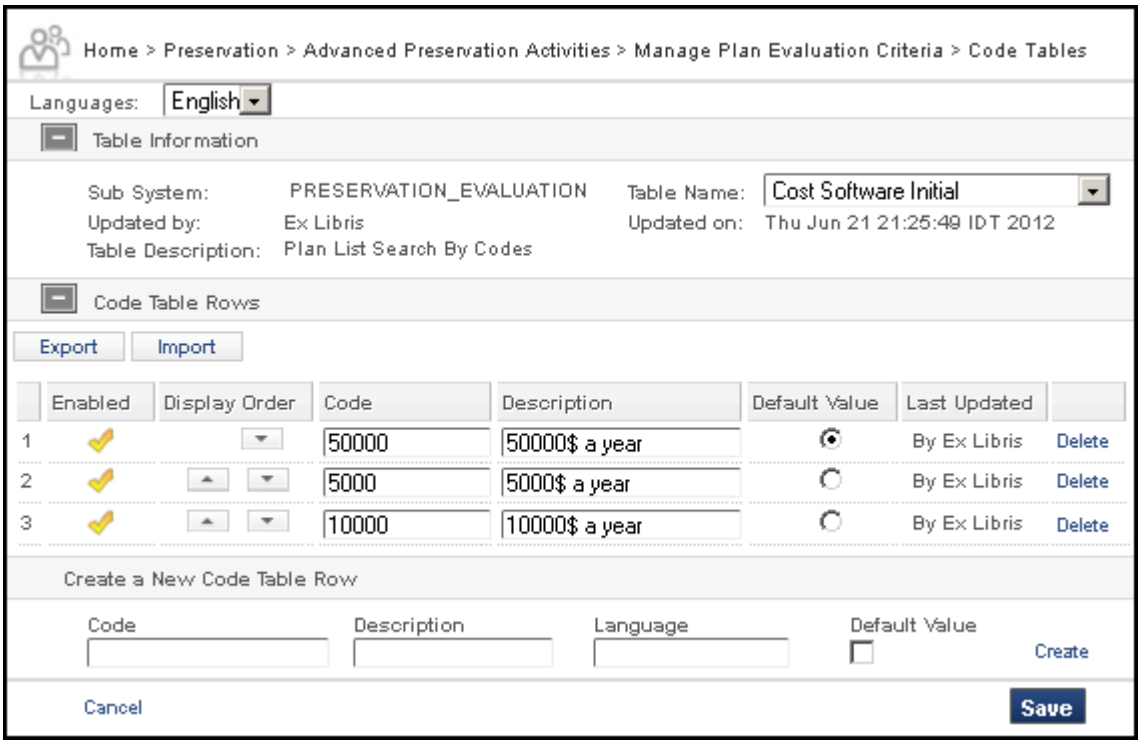

Figure 82: Code Table For Preservation Evaluation Criteria

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.

Figure 83: Alternatives List, Two Existing Entries

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

Table 24. 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 84**). The top pane contains general information like the plan name, the source classification and format, and the creator of the plan.

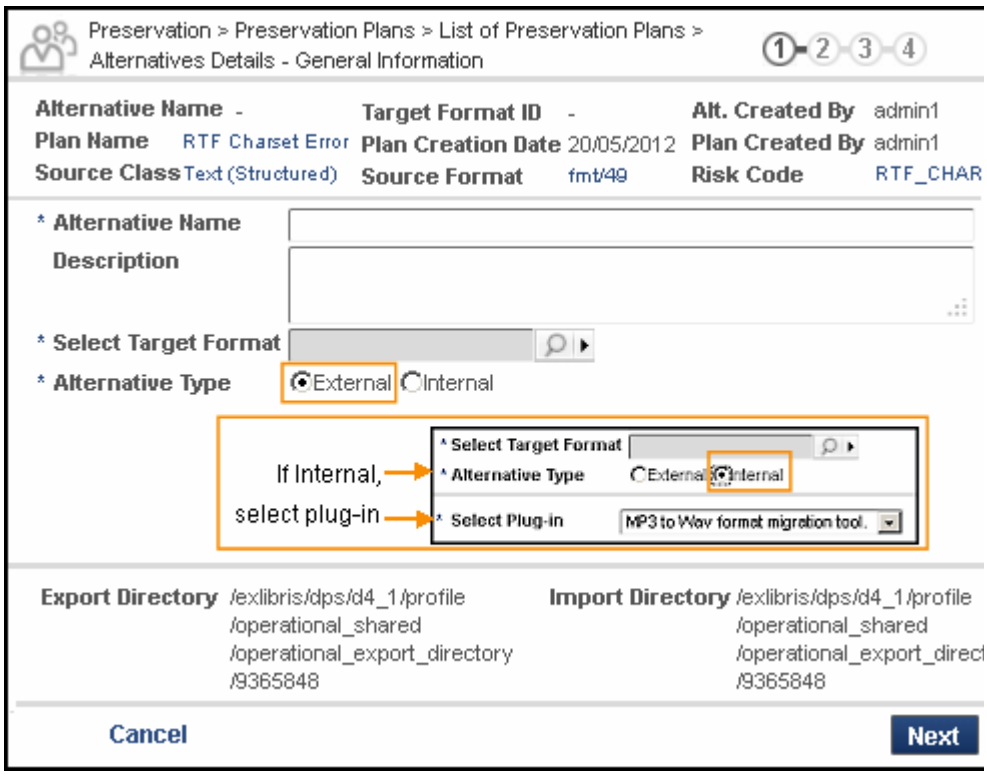

Figure 84: Add Alternative Wizard, Step 1

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

Table 25. 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. **NOTE:** The actual migration target format depends on the selected migration tool.

Table 25. Alternative Wizard Step 1 Fields

Field	Description
Alternative Type	Either internal or external, depending on whether the migrations in the IEs use an internal plug-in tool and are carried out through the Rosetta process automation framework or whether the IEs 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 (**Export Directory**) and returning files (**Import Directory**) display below the Alternative Type field. **NOTE:** The exact mechanism for uploading the new files coming from an external preservation action is described in the of the *Rosetta Staff Guide*.

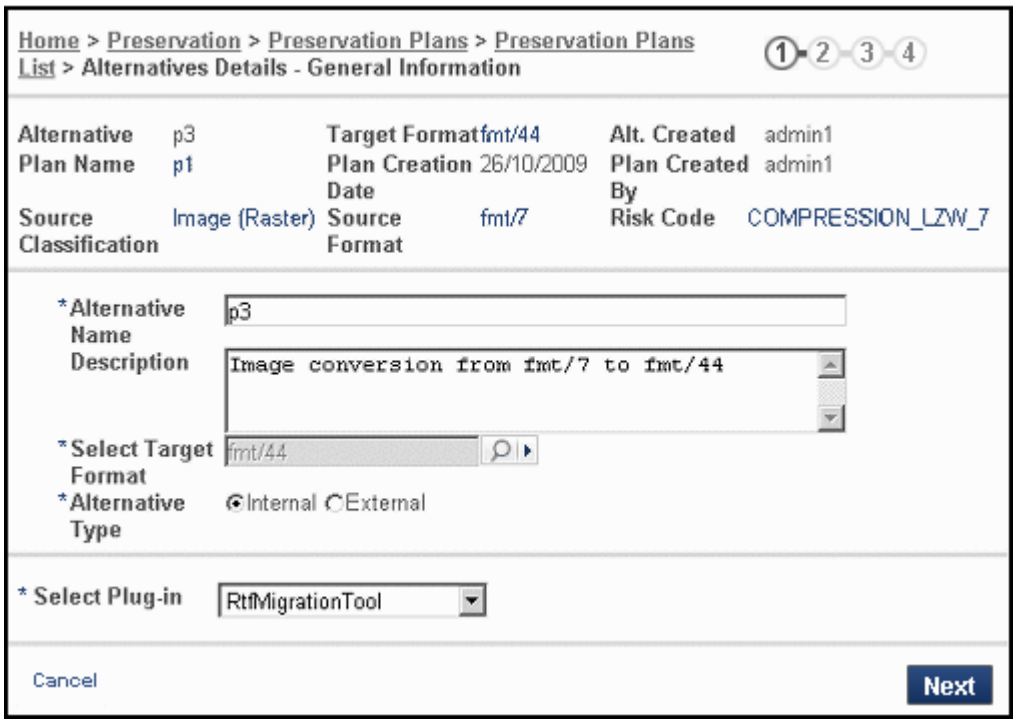

Figure 85: Alternative Wizard Step 1, Filled

4 Click the **Next** button.

The second step of the wizard opens.

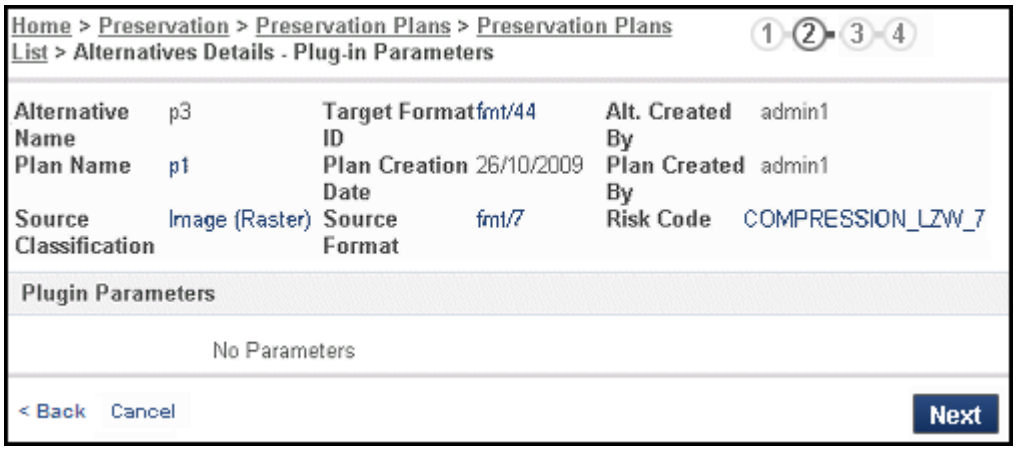

Figure 86: Alternative Wizard Step 2

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.

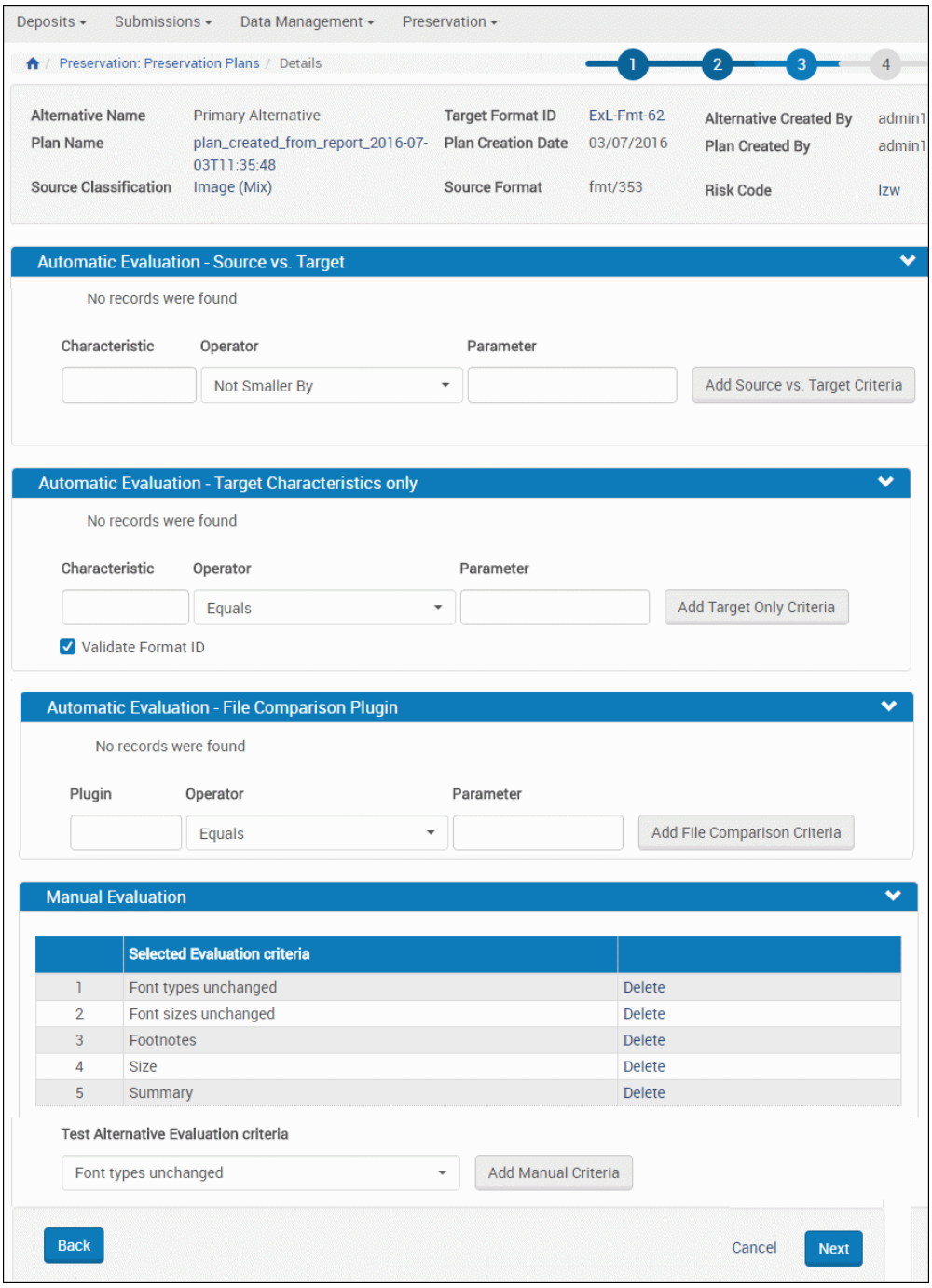

Figure 87: Alternative Wizard, Step 3

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

alternative, display on this page.

Table 26. 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, **File extension must equal file extension**).
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, **File size smaller or equal 3MB**). Select **Validate Format ID** 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.
Manual Evaluation	The user selects the evaluation criteria that are stored in a separate table with their possible values. For example, the criterion **Character -> Font size unchanged** could be **Yes** or **No**. 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 *Rosetta Configuration Guide*, **Working with Mapping Tables** on page **221**.

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.

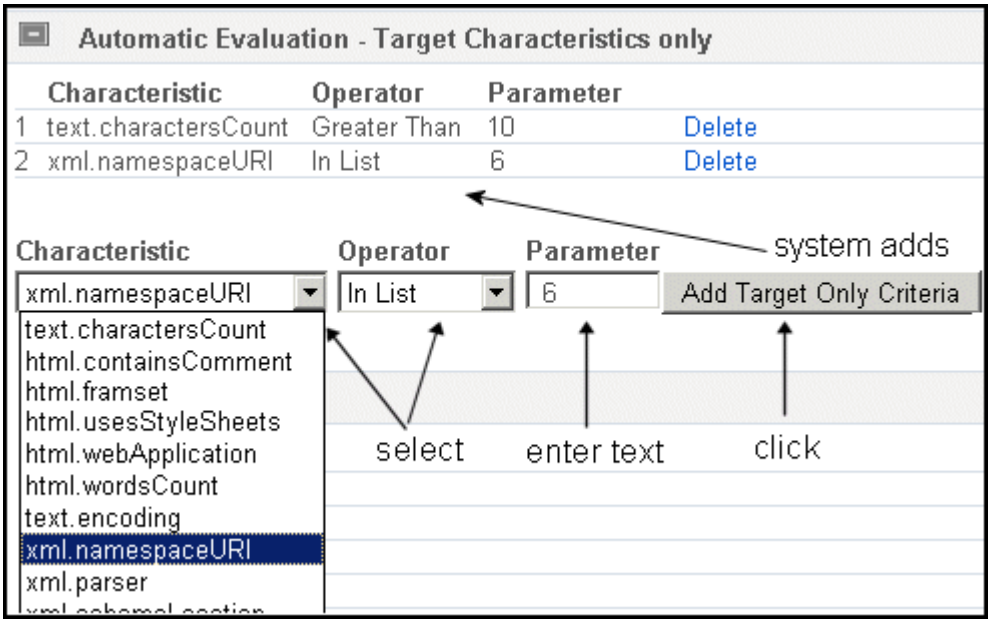

Figure 88: Adding an Automatic Evaluation Criterion

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.

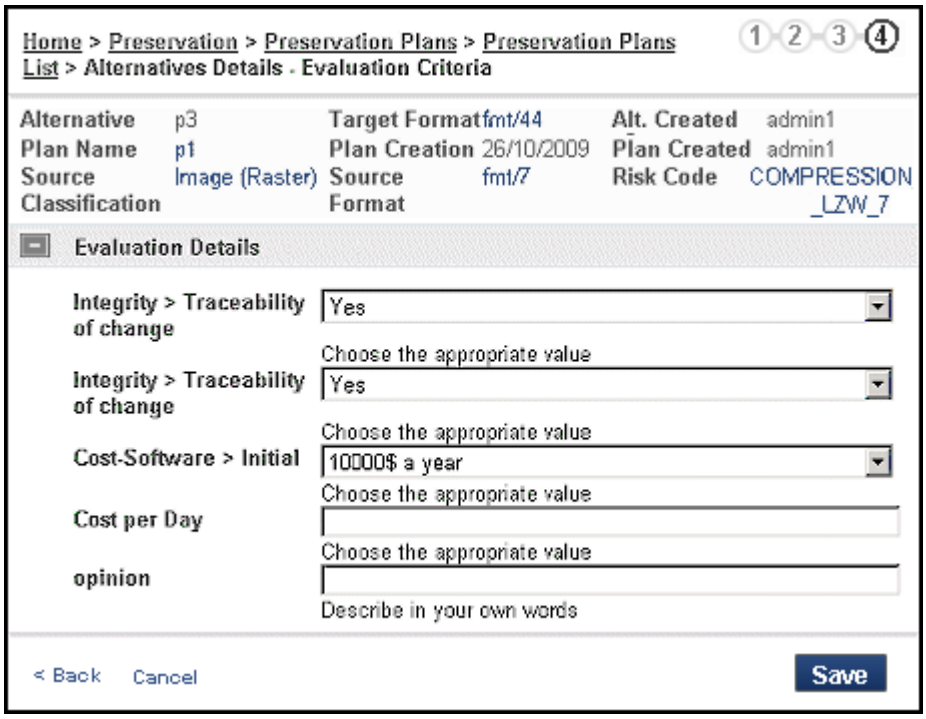

Figure 89: Alternative Wizard, Step 4

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.

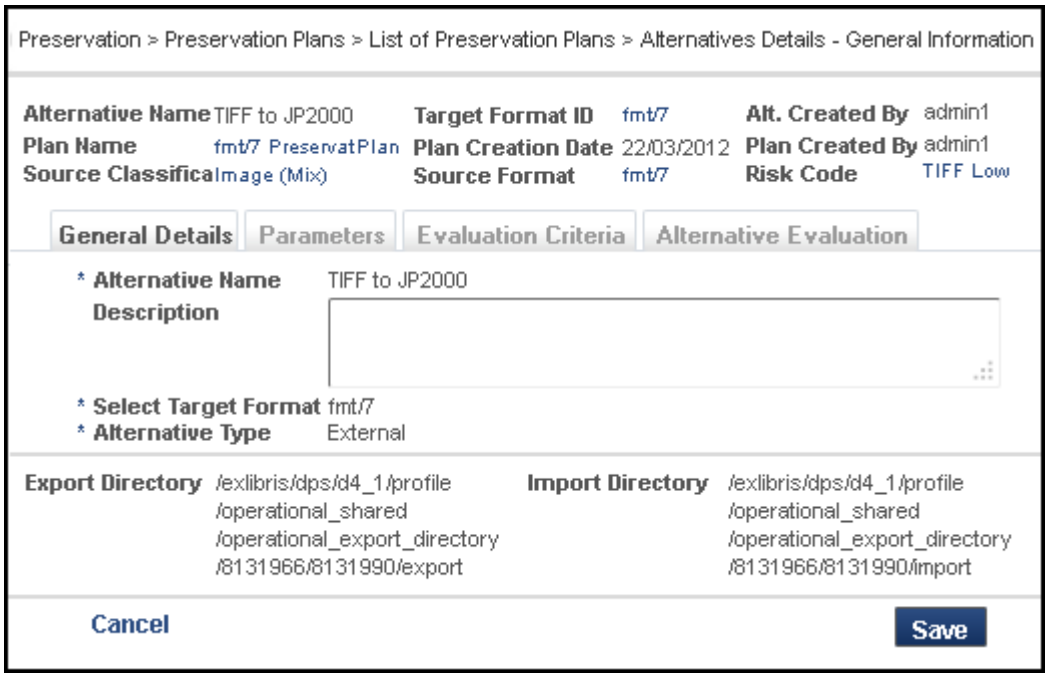

Figure 90: Alternative Details Edit Page

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 **117**.

For information relating to the testing and execution of plans, see **Adding Alternatives** on page **148**.

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 **127**
- **Contents** on page **128**
- **Validation** on page **130**

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 27. 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 DNX.generalRepCharacteristics.preservationType.
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.

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Table 27. 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 DNX.generalRepCharacteristics.usageType.
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.

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Part V

Testing and Execution

This part contains the following:

- **Chapter 12: Preservation Testing** on page **133**
- **Chapter 13: Preservation Plan Execution** on page **165**
- **Chapter 14: Resolving Technical Issues** on page **177**

12

Preservation Testing

This section contains:

- **Preparing Preservation Plans** on page **133**
- **Testing a Preservation Plan** on page **140**

Preparing Preservation Plans

Once the user has identified objects at risk in the repository (see **Risk Analysis and Reports** on page **89**), 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 **133**
- **Viewing Risk Reports** on page **134**
- **Creating a Preservation Set** on page **136**
- **Creating a Preservation Plan** on page **139**

Planning and Testing Process Flow

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

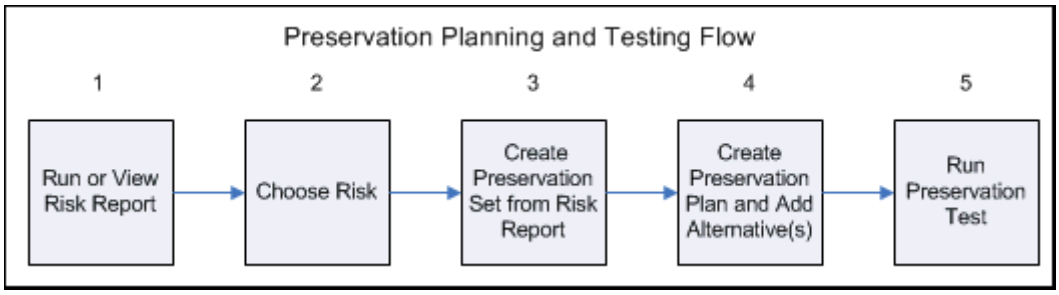


Figure 91: Preservation Planning and Testing Steps

Viewing Risk Reports

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

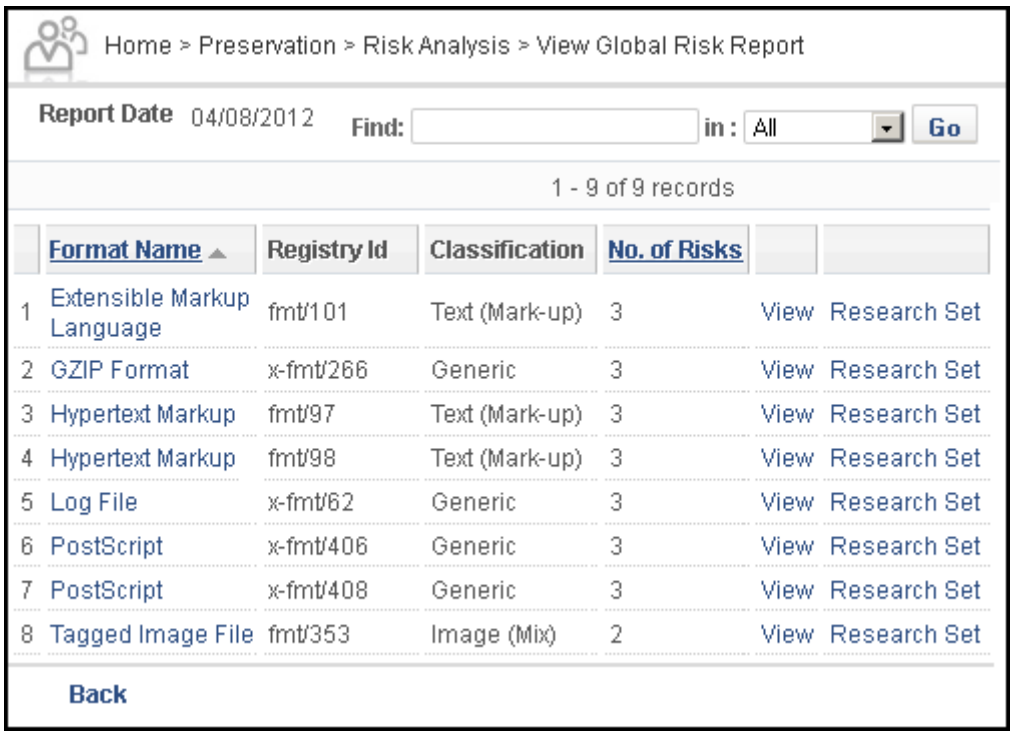
To view Risk Reports:

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 **136**.
   - **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.



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

Figure 92: 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.

	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) = LZW	Demo Institution	2	2	6	Create Set	Preservation Plans
3	Zero Applications	-	Demo Institution	2	2	6	Create Set	Preservation Plans

Figure 93: 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 **136** 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 **136**.

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.

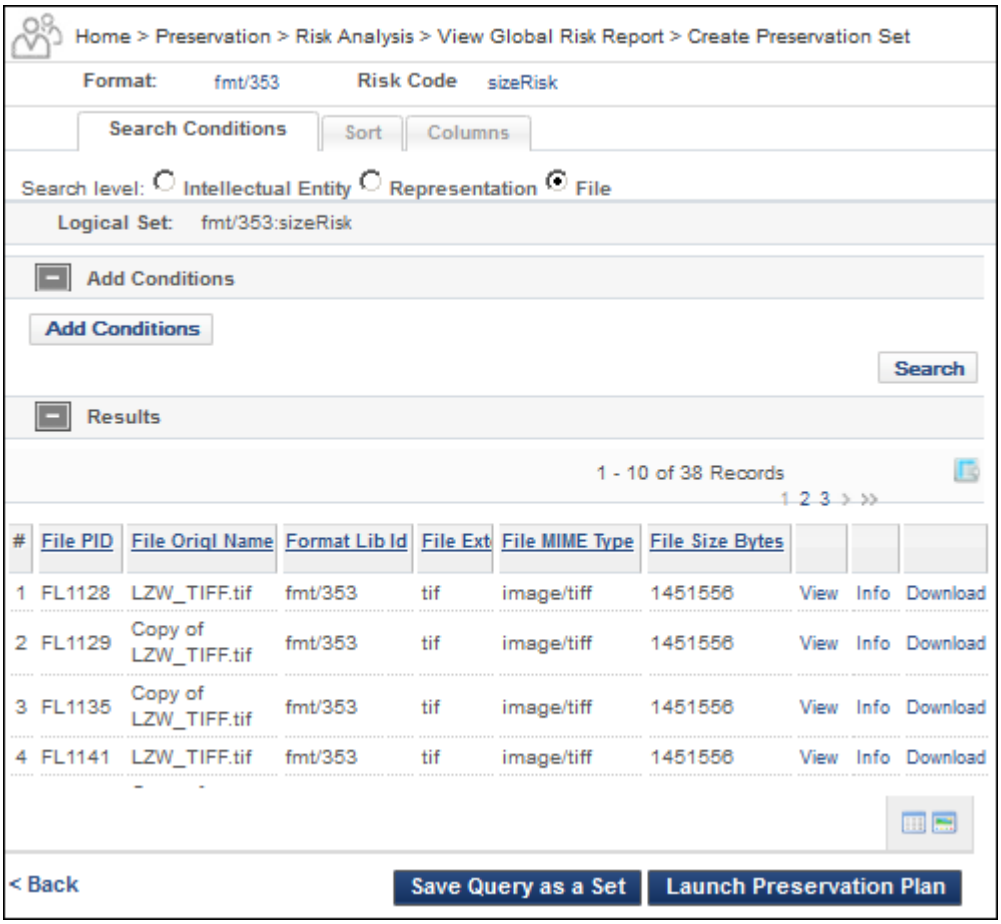


Figure 94: Search Object Page

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 **139**.

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.

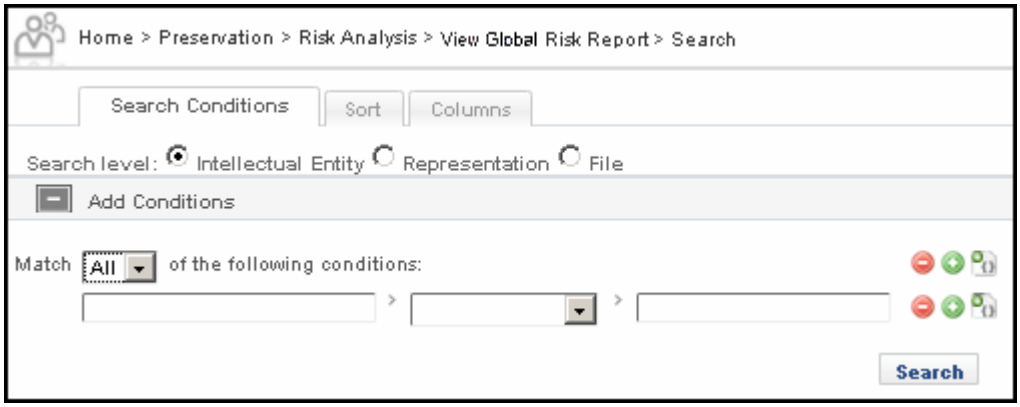


Figure 95: Search Page

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.

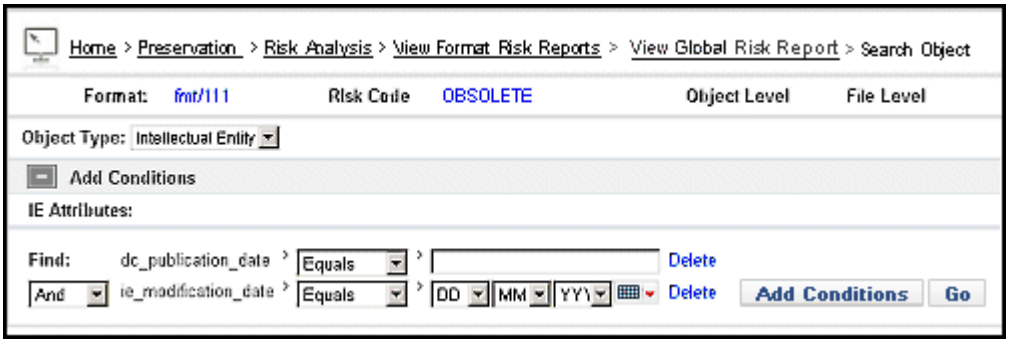


Figure 96: Conditions Added to Search

f Click the **Go** button

Results display in the **Results** section.

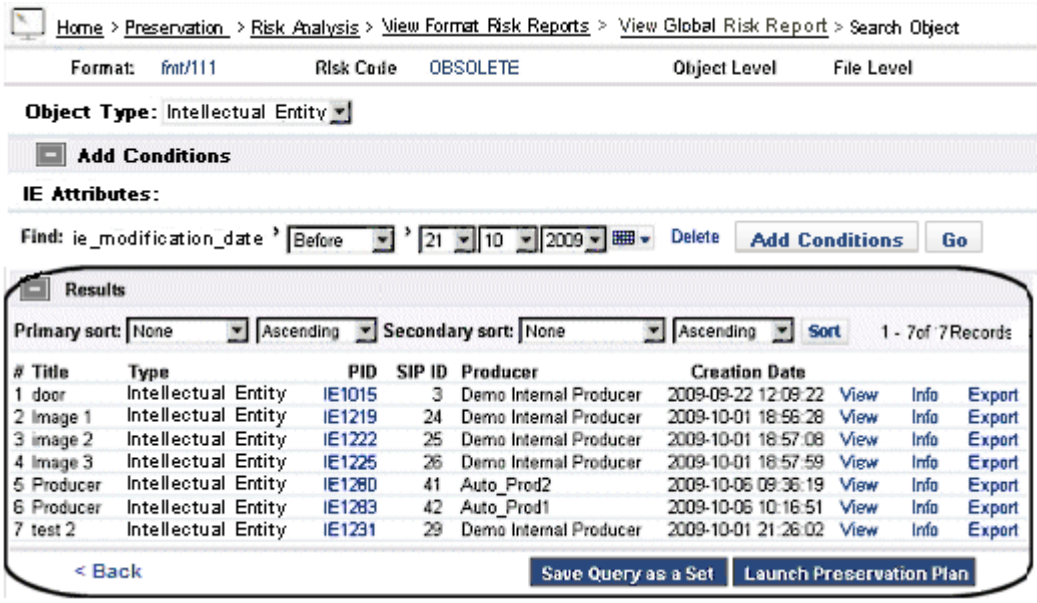


Figure 97: Results from Single Format Search for Objects

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 **139**.

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.

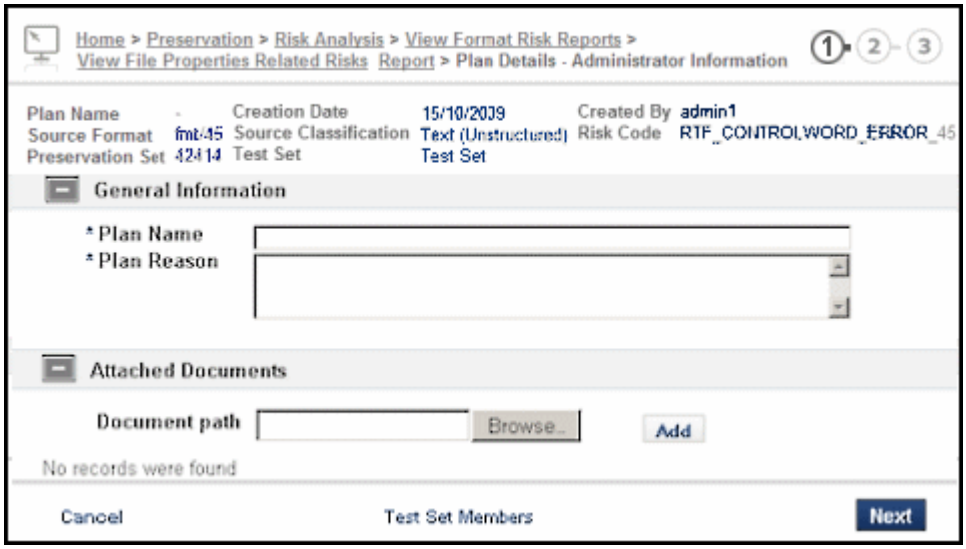


Figure 98: Plan Details - Administrator Information Page

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 **140**.

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**).

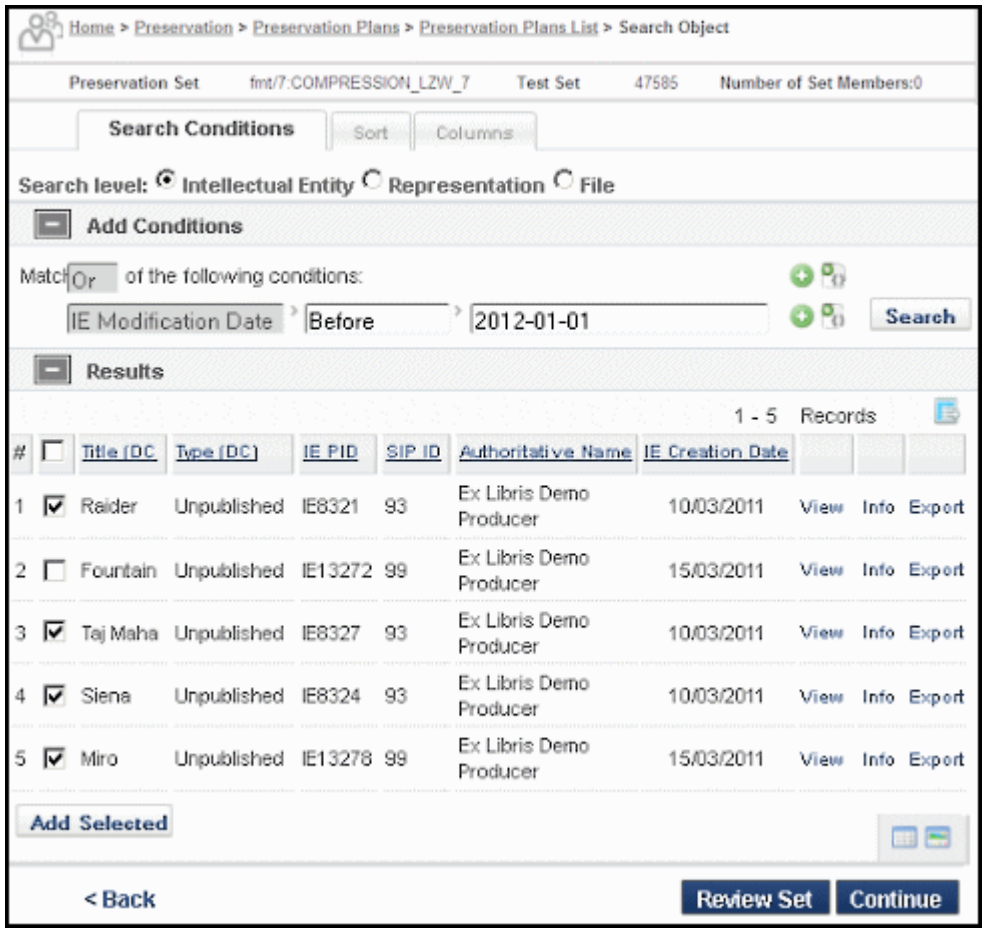


Figure 99: Search Object Page

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.

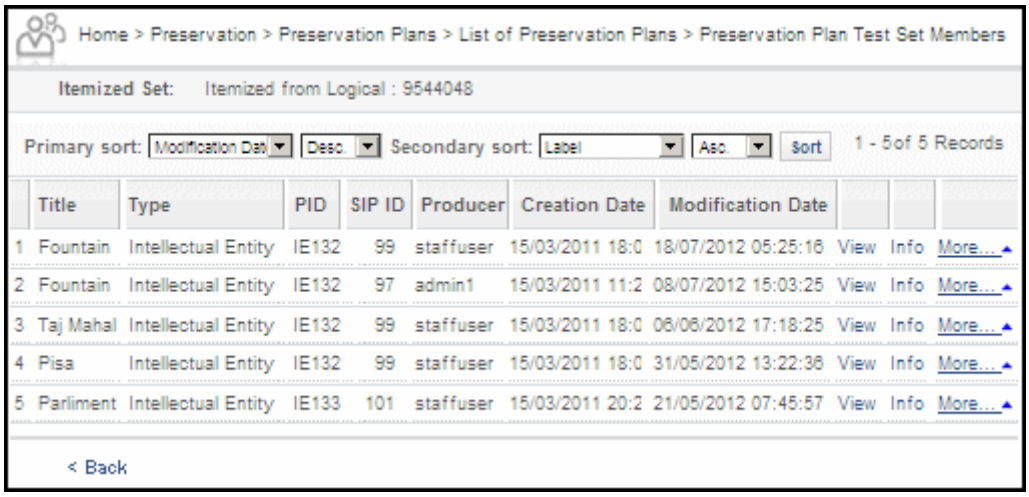


Figure 100: Set Members Page

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.

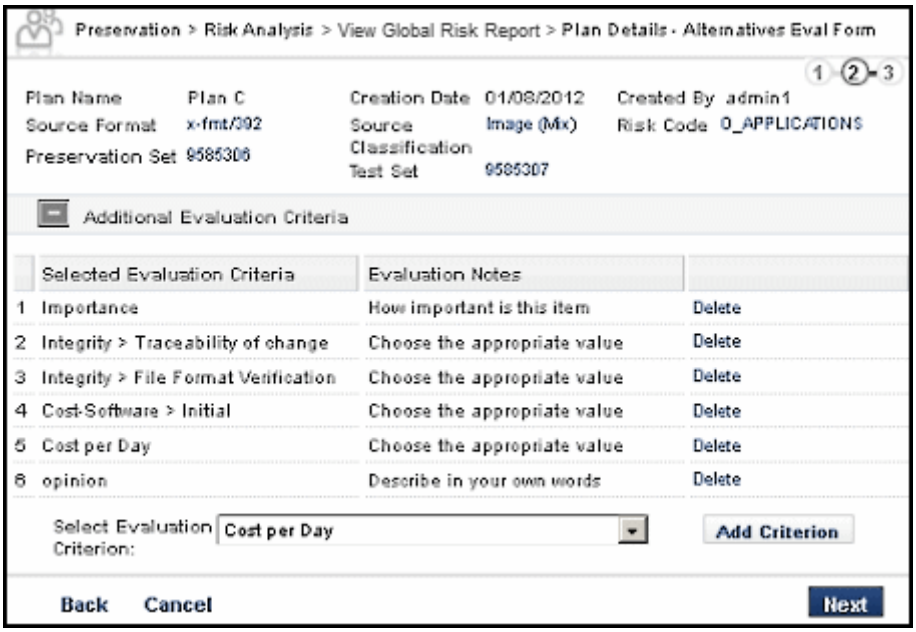


Figure 101: Plan Details - Alternatives Evaluation Form Page

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

6 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.

7 Click **Next**.

The Plan Details - Evaluation Assignment page opens.

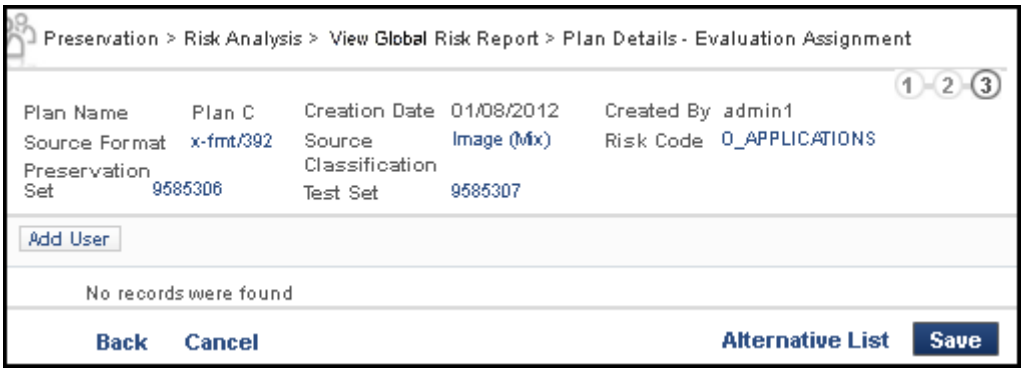


Figure 102: Plan Details - Evaluation Assignment Page

8 Click the **Add User** button.

The User List page opens.

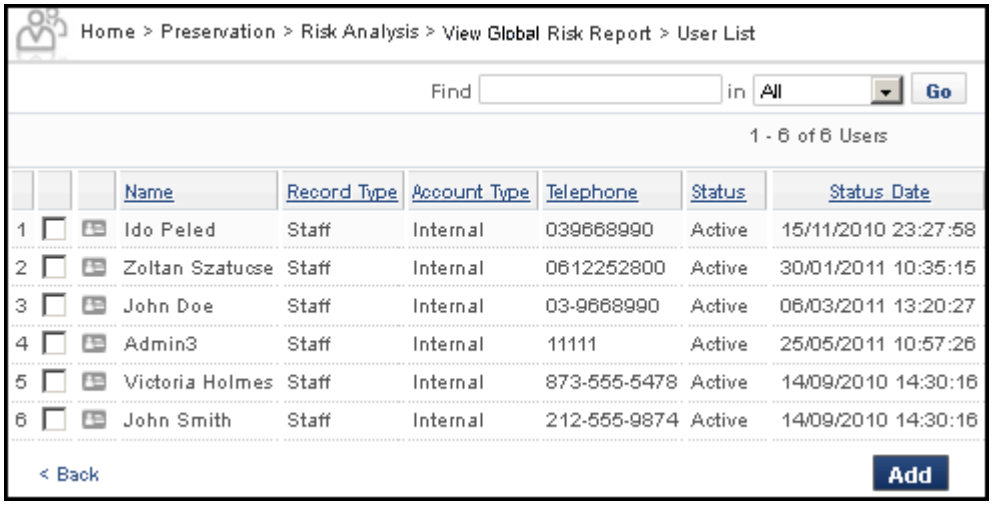


Figure 103: User List Page

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

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

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

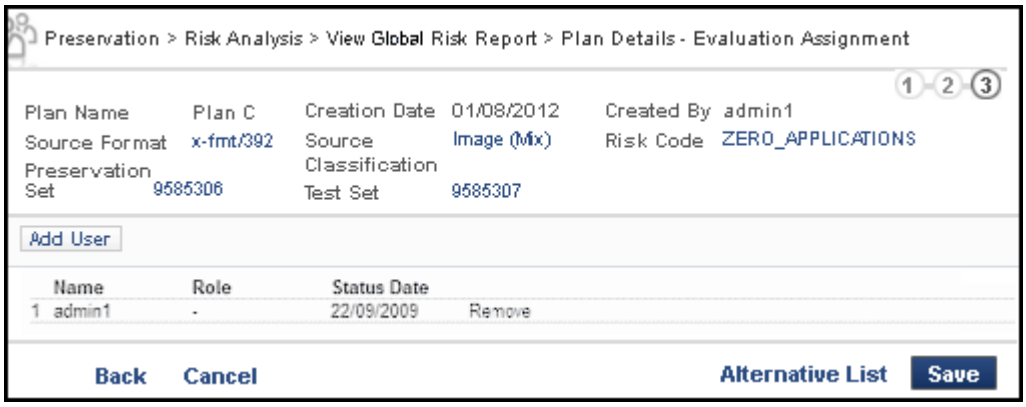


Figure 104: Plan Details - Evaluation Assignment Page - User Added

10 To proceed, see **Adding Alternatives** on page **148**.

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 105**).

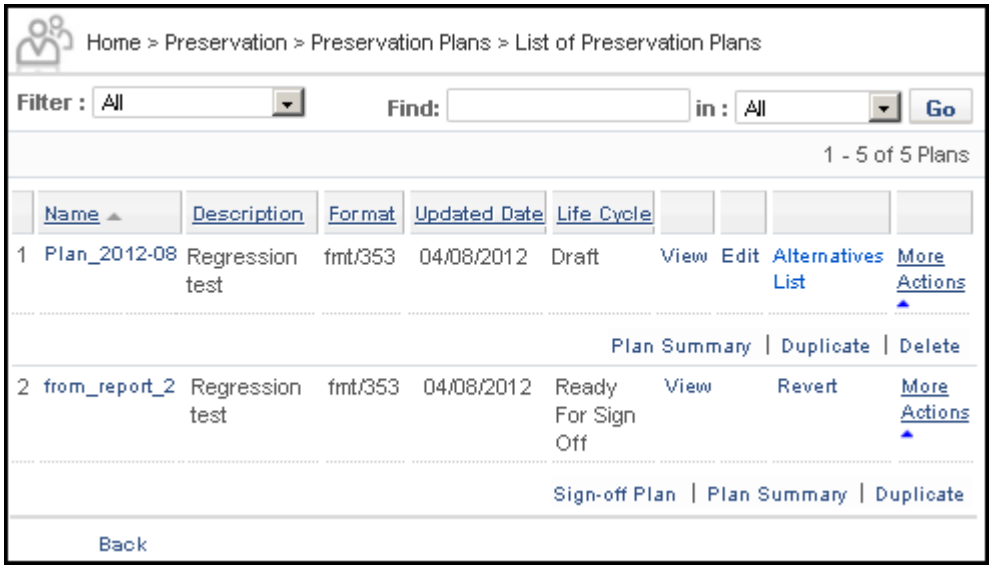


Figure 105: List of Preservation Plans

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.

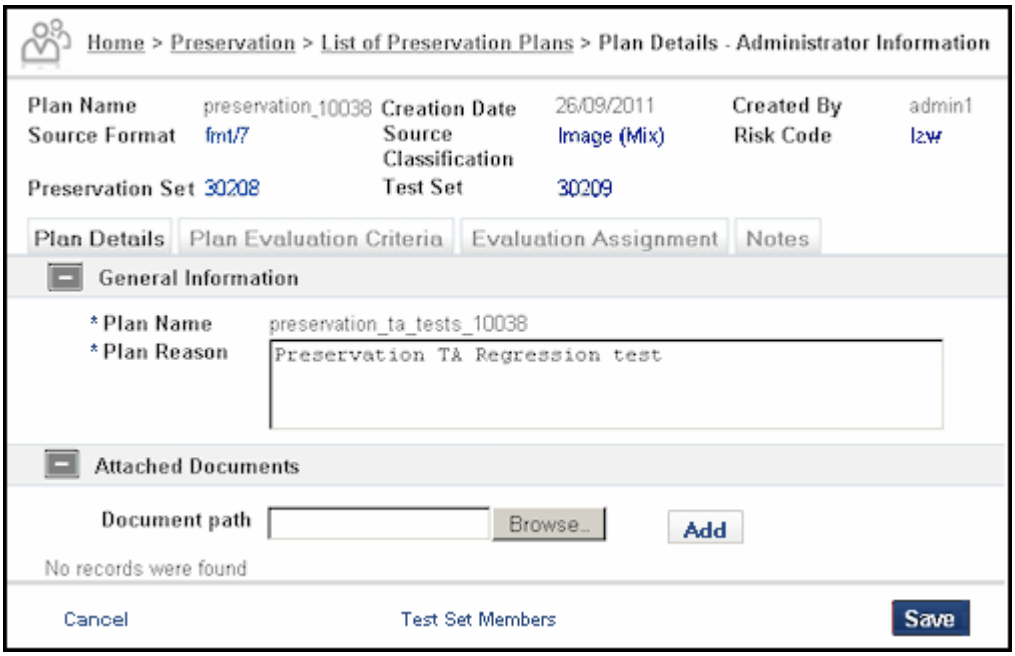


Figure 106: Preservation Plan Details - Administrator Information

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 **139**). 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.

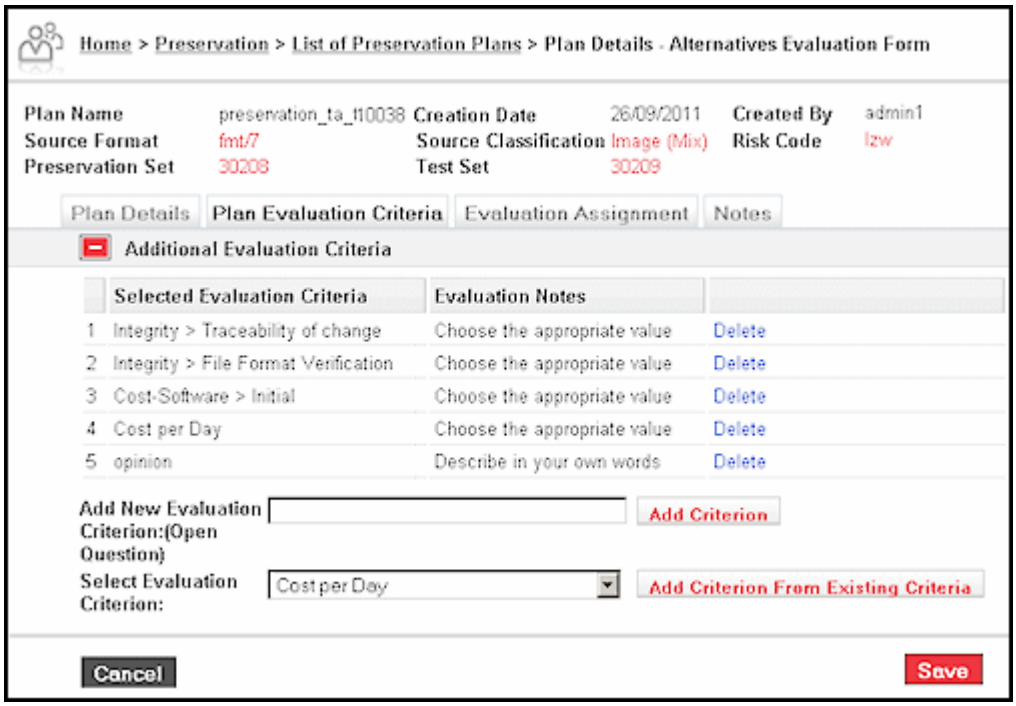


Figure 107: Plan Details - Alternatives Evaluation Form

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.

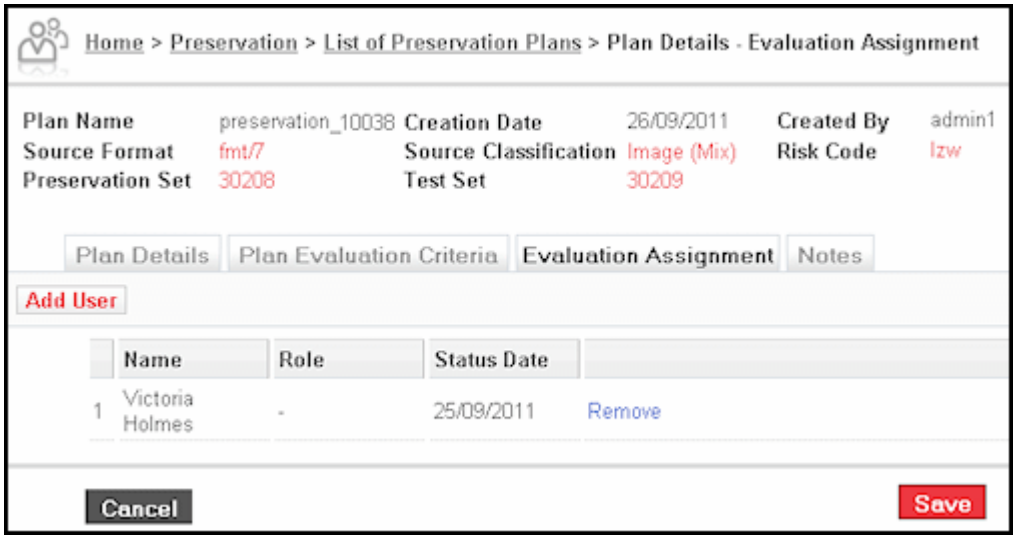


Figure 108: Plan Details - Evaluation Assignment

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.

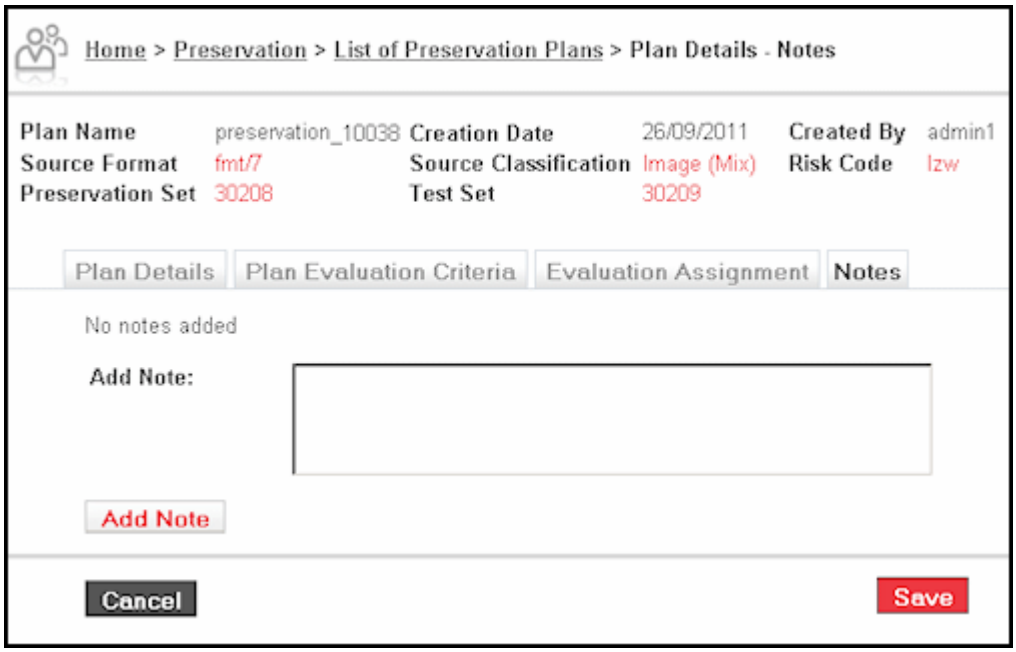


Figure 109: Plan Details - Notes

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.

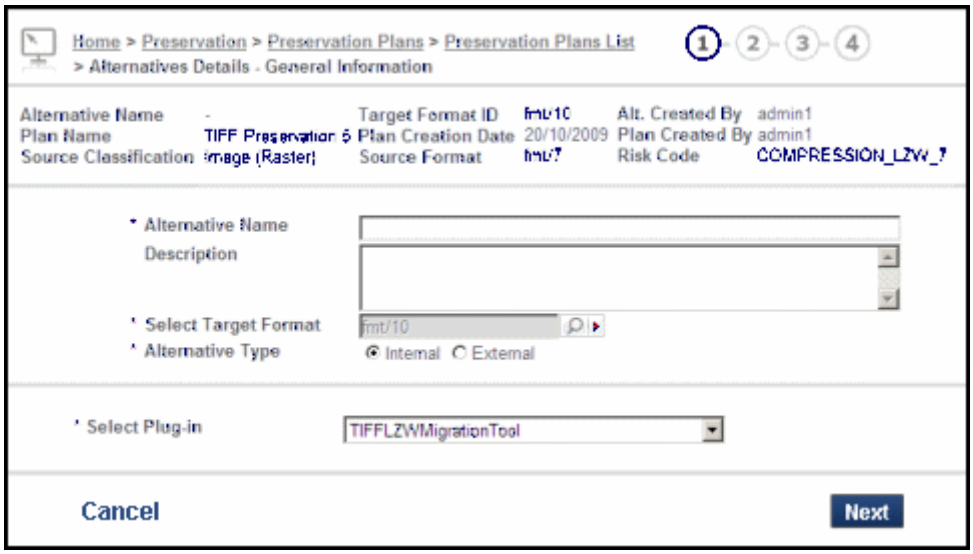


Figure 110: Alternatives Details - General Information Page

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.

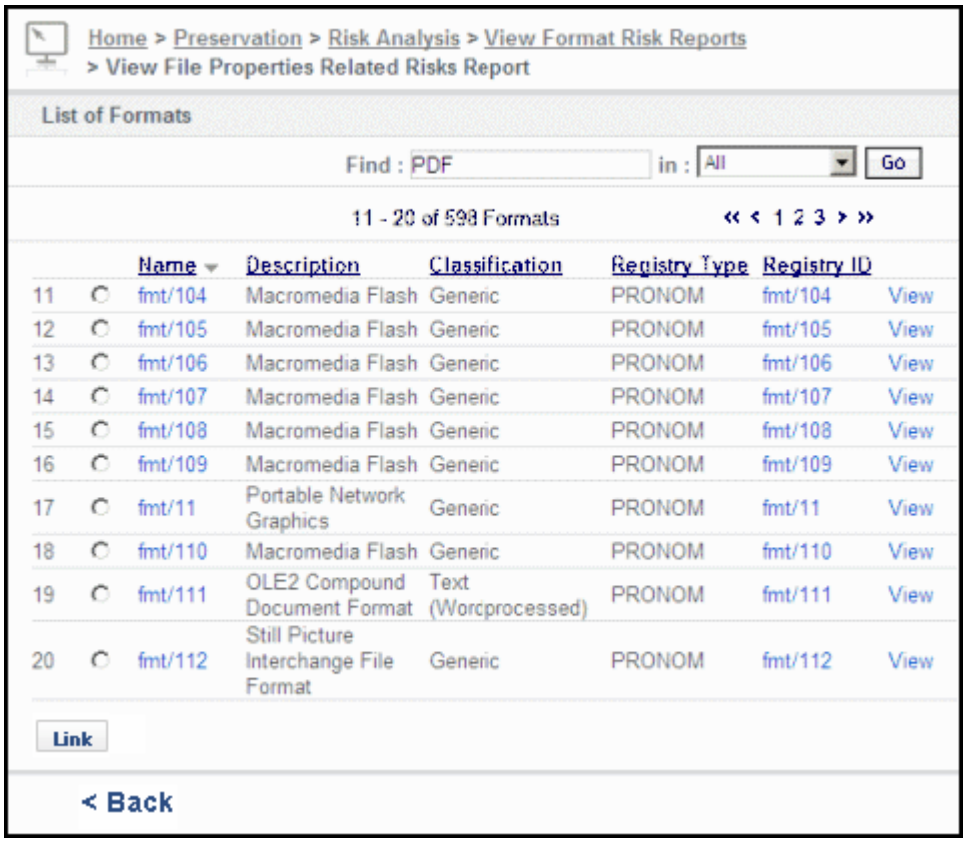


Figure 111: List of Formats Page

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 110**).

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

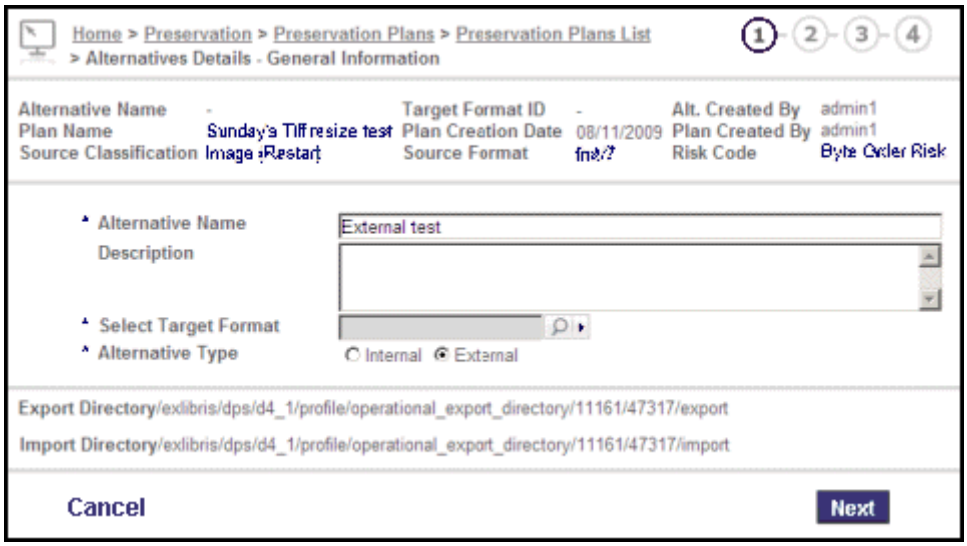


Figure 112: Alternatives Details - External Alternative Type

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 113: 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.

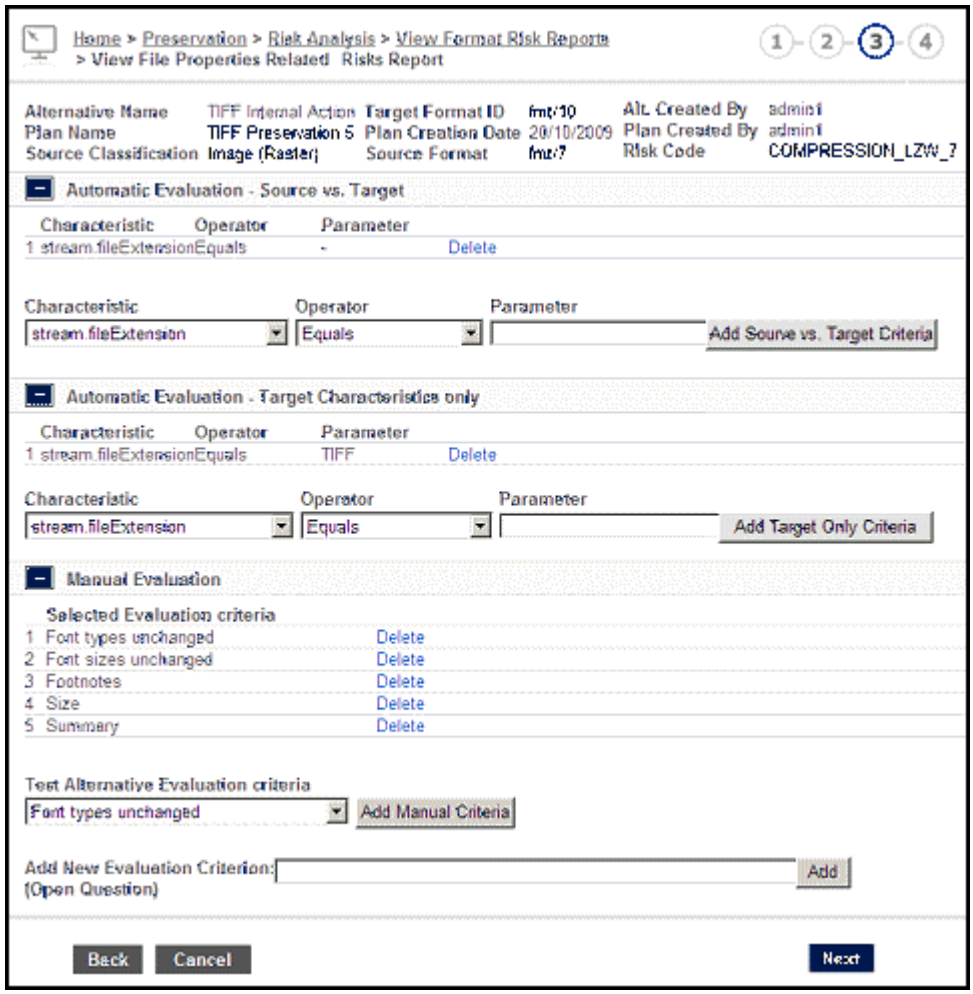


Figure 114: Evaluation Configuration Page

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.

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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.

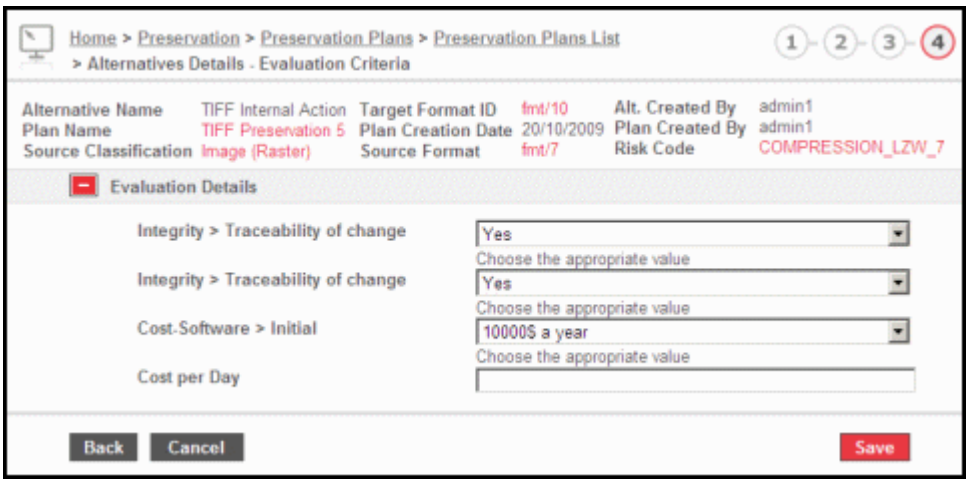

Figure 115: Alternatives Details - Evaluation Criteria Page

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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 **113**.

14 Click **Save**.

The Alternatives List page opens.

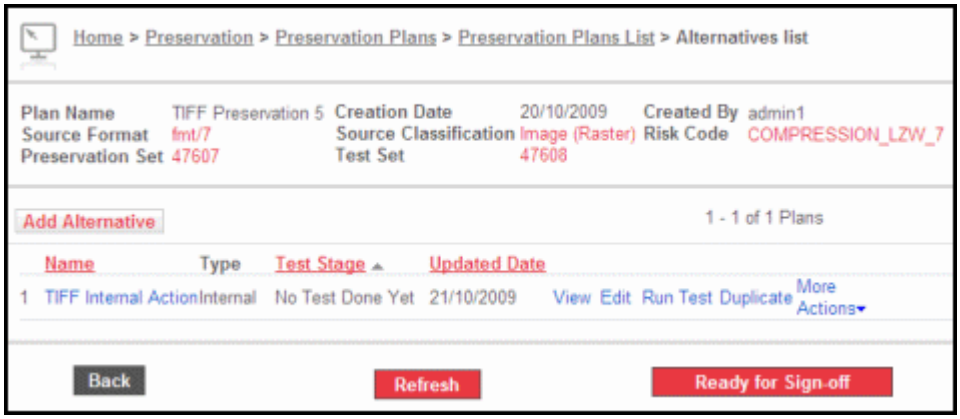

Figure 116: Alternatives List Page

15 To proceed, see **Running a Test** on page **154**.

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 28. 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 28. 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 117: 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 118: Running Test Page - Ready for Evaluation

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

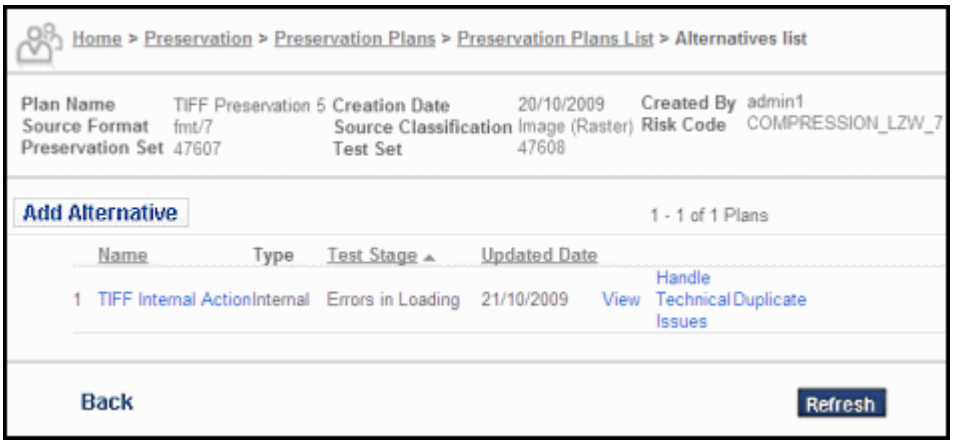

Figure 119: Running Test Page - Errors in Loading

- 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 **157** to proceed.

If the test stage is Errors, see **Resolving Technical Issues** on page **177** 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.

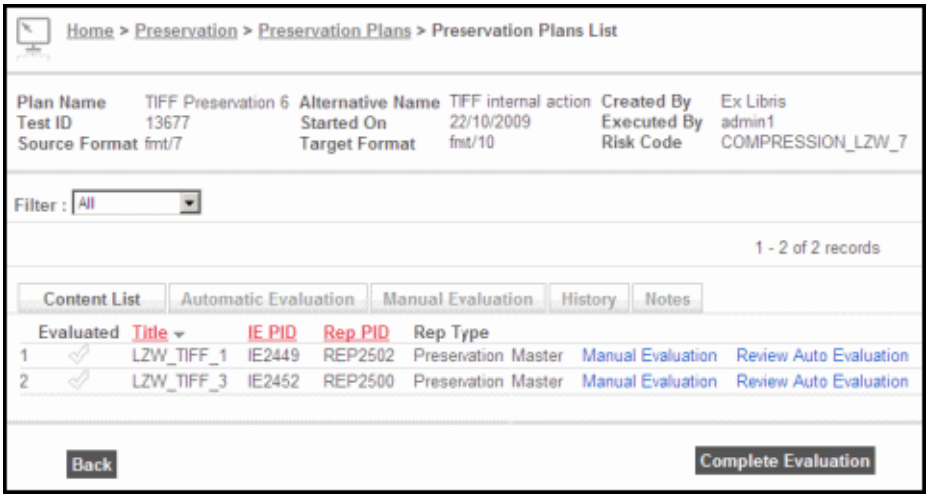

Figure 120: Test Evaluation Content List Page

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.

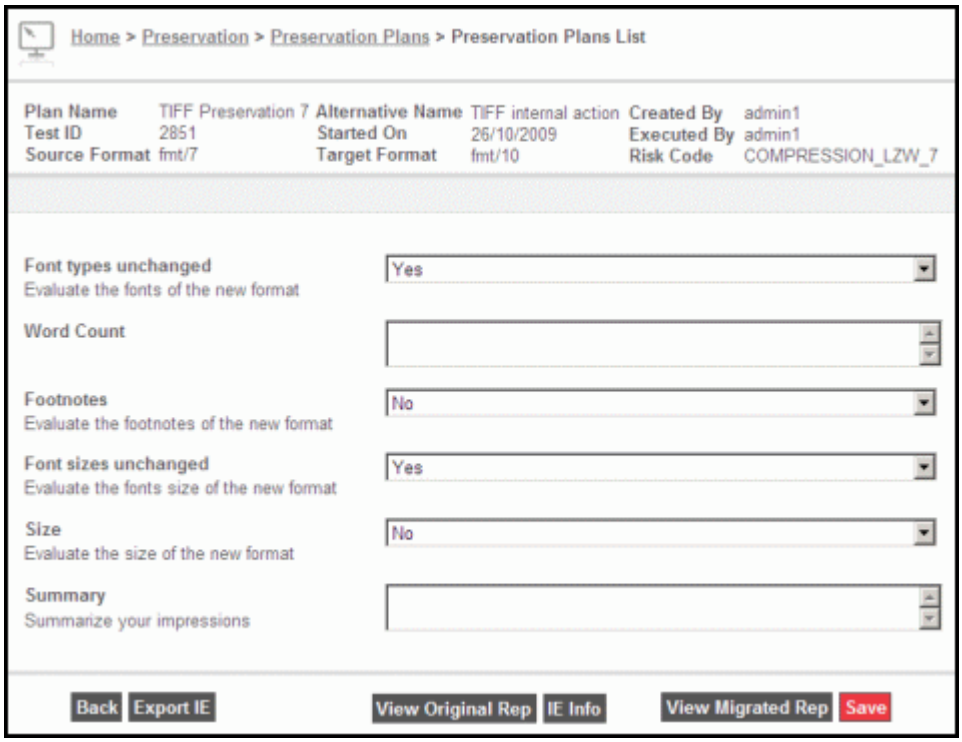

Figure 121: Manual Evaluation Page

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.

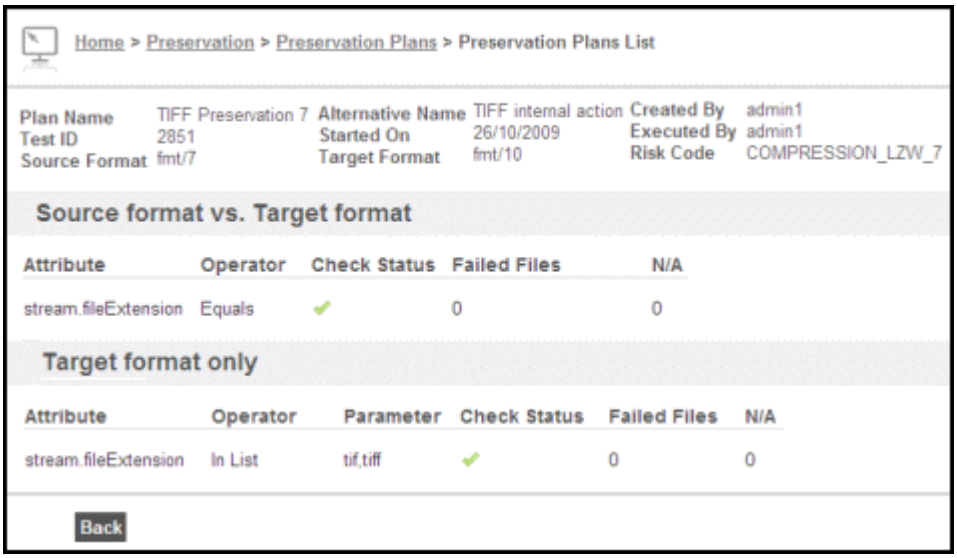

Figure 122: Automatic Evaluation Page

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.

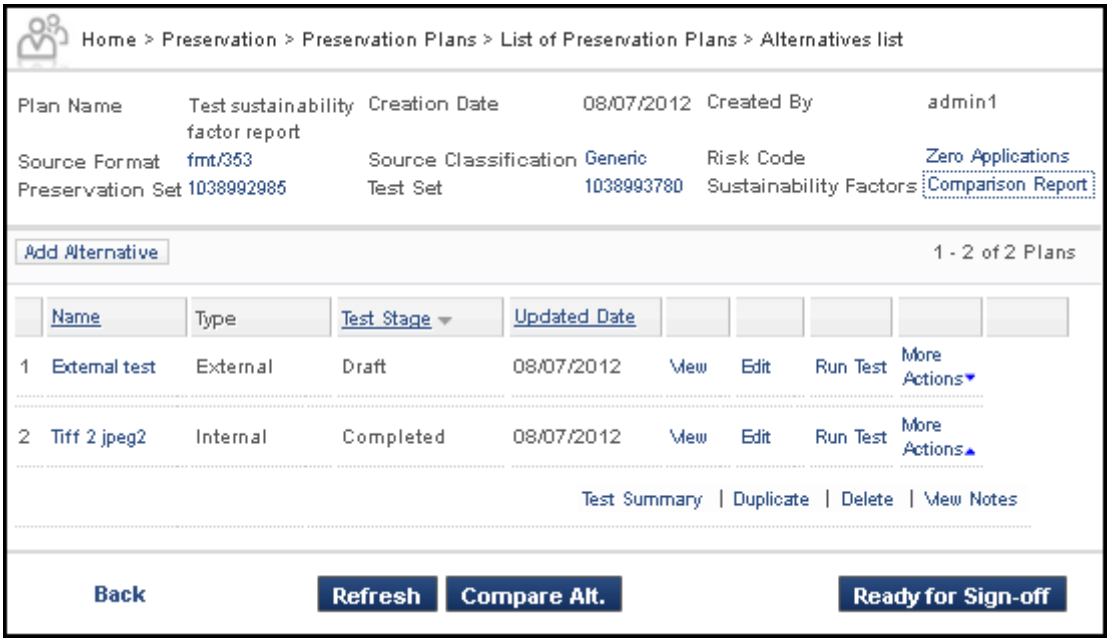

Figure 123: Alternatives List Page - Evaluation Completed

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.

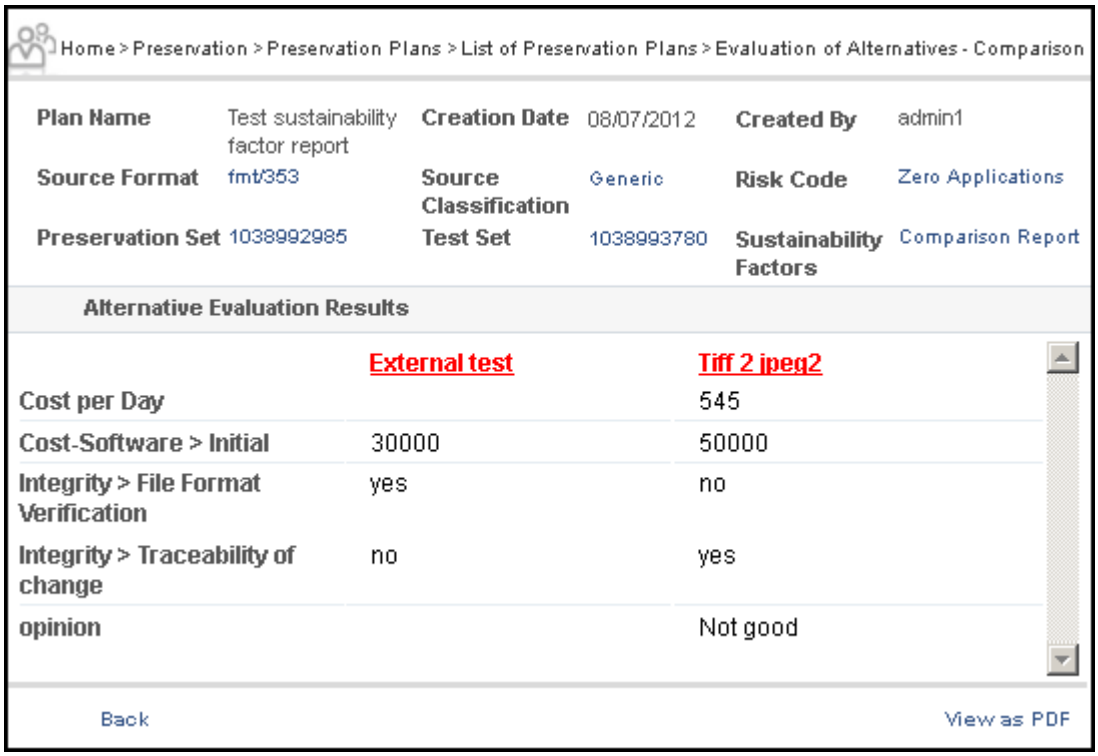

Figure 124: Compare Alternatives Page

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 **161**.

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.

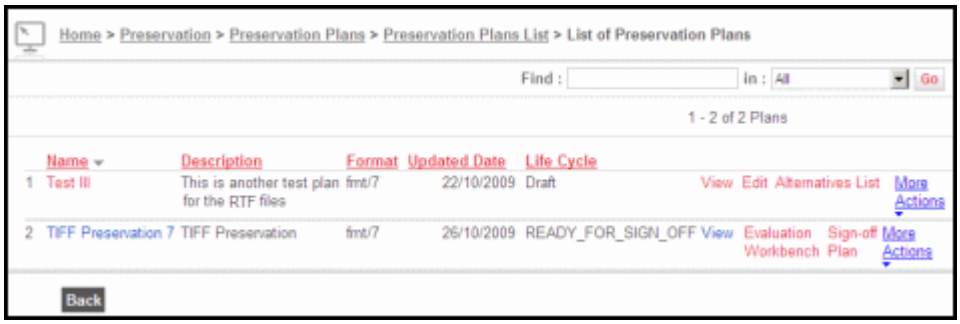

Figure 125: List of Preservation Plans Page

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.

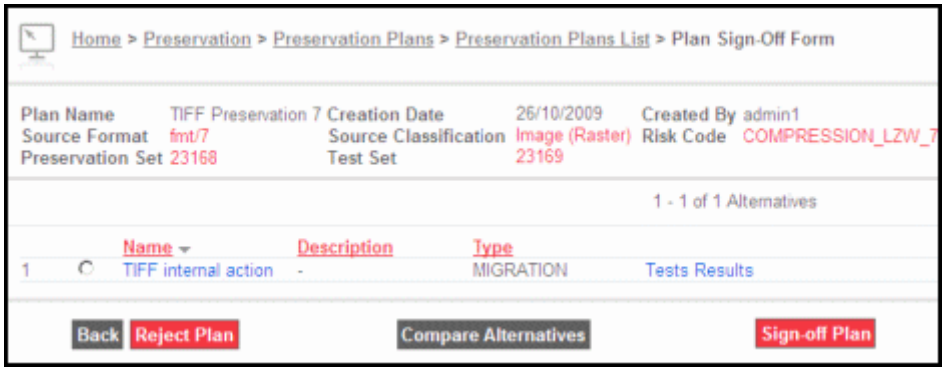

Figure 126: Plan Sign-off Form Page

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.

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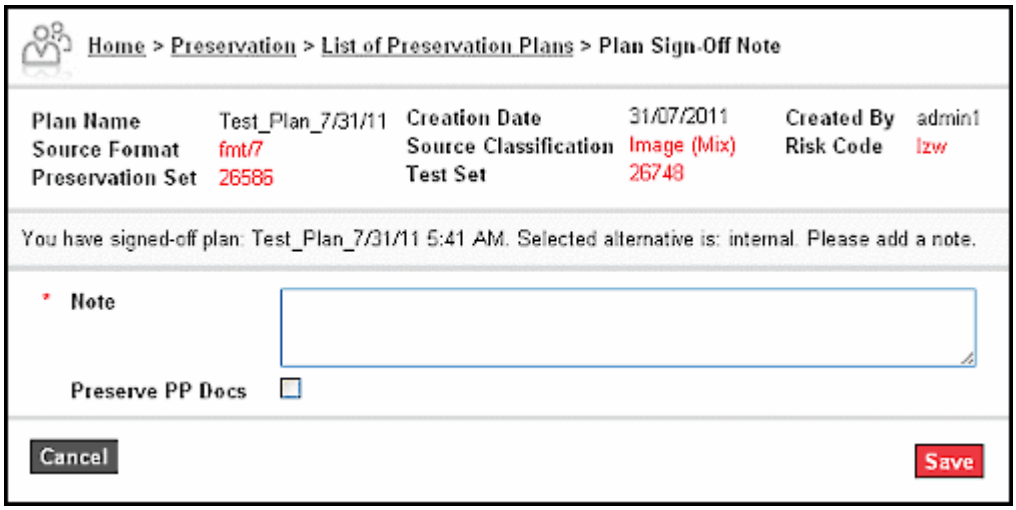

Figure 127: Sign-off Page

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.

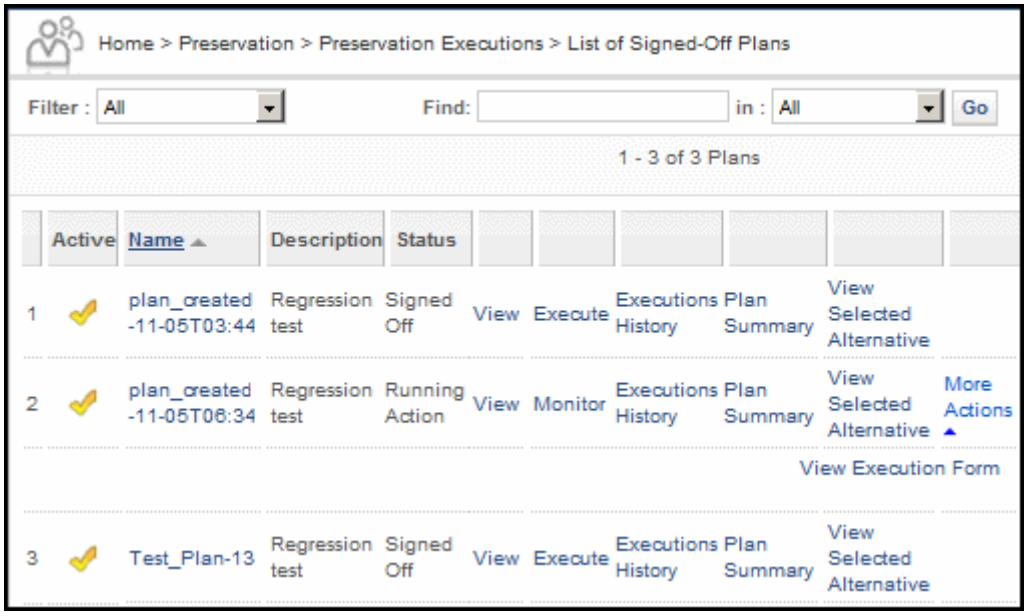

Figure 128: List of Signed-Off Plans Page

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 **165**.

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 **165**
- **Evaluating Execution Results** on page **172**

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.

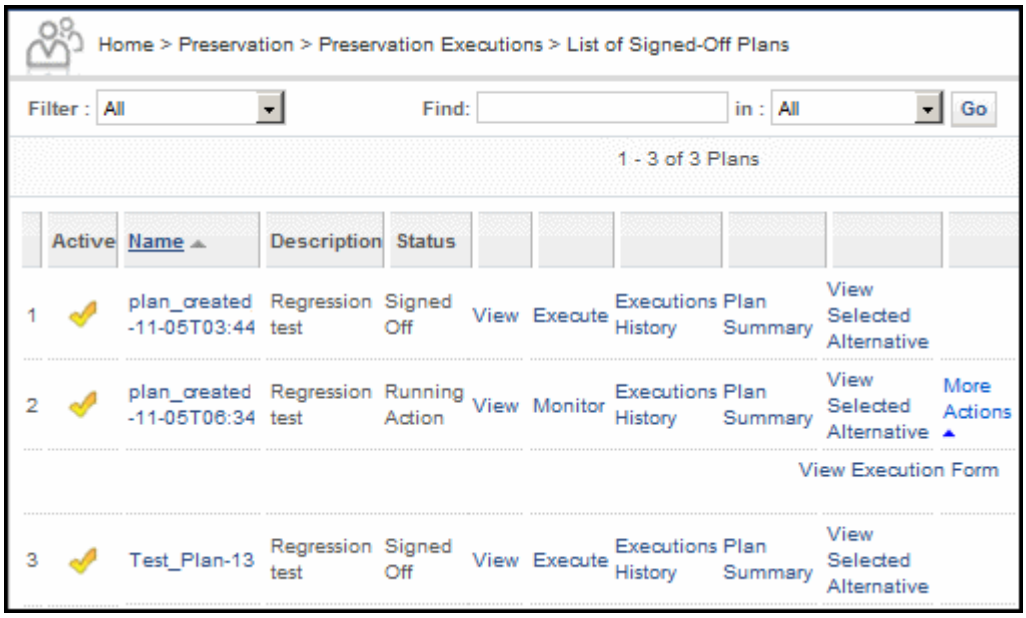

Figure 129: Signed-off Preservation Plans

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).

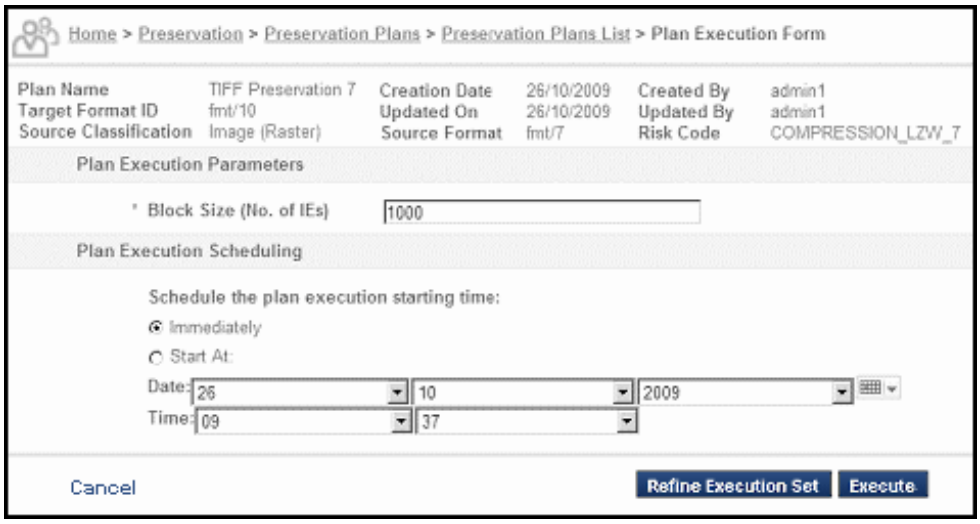

Figure 130: Plan Execution Form Page - Internal Plan

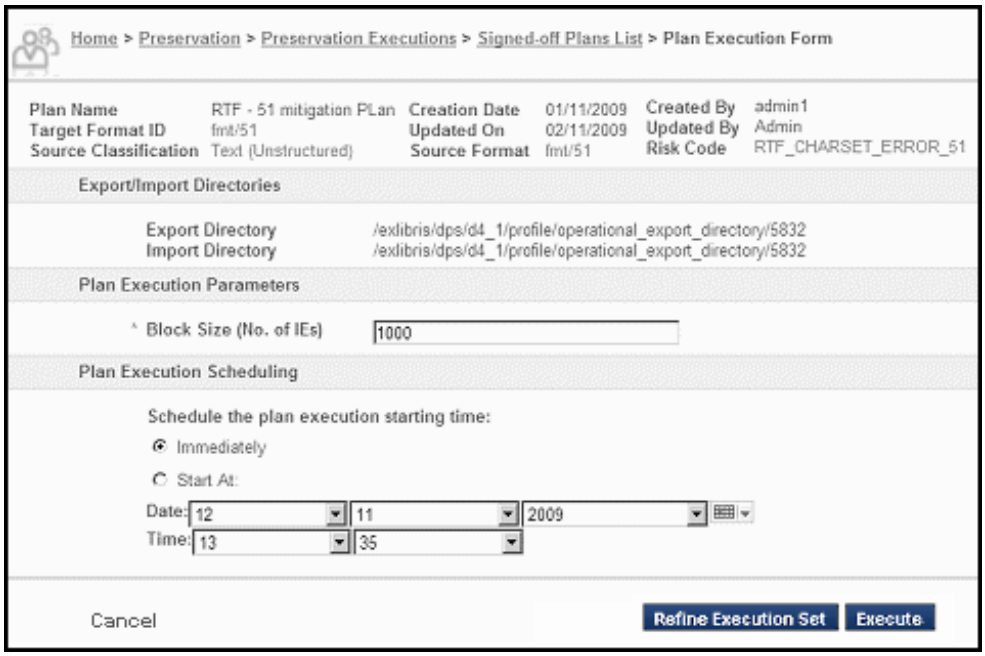

Figure 131: Plan Execution Form Page - External Plan

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.

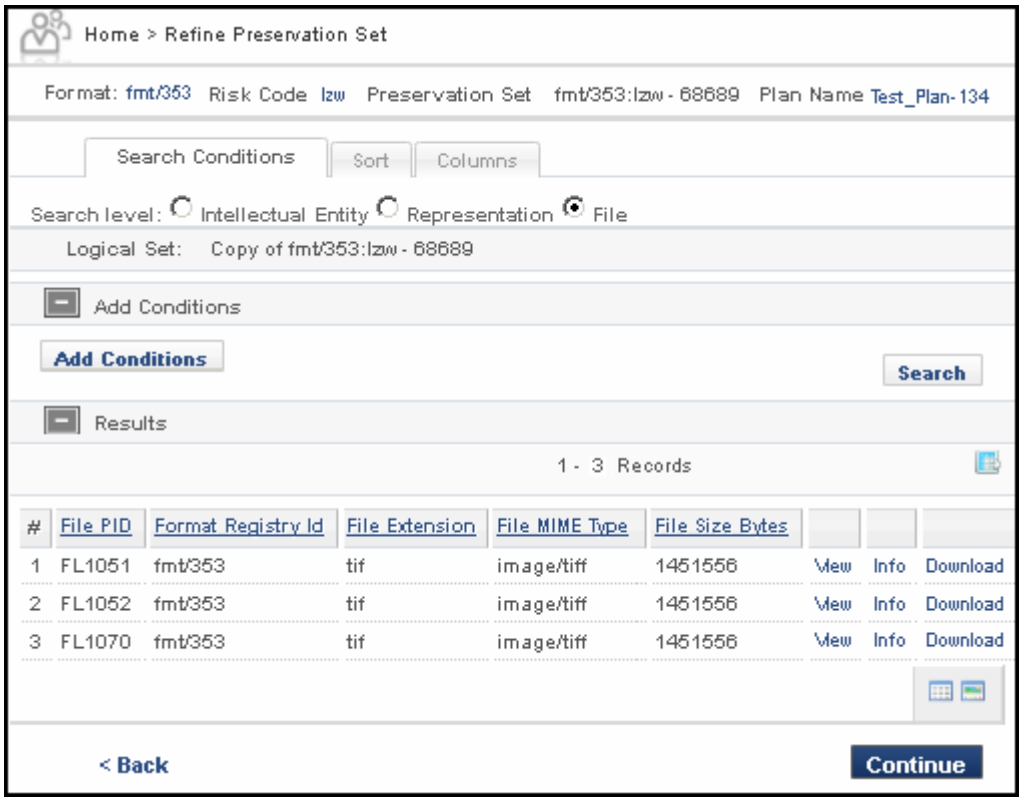

Figure 132: Refine Execution Set Page

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 133: 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.

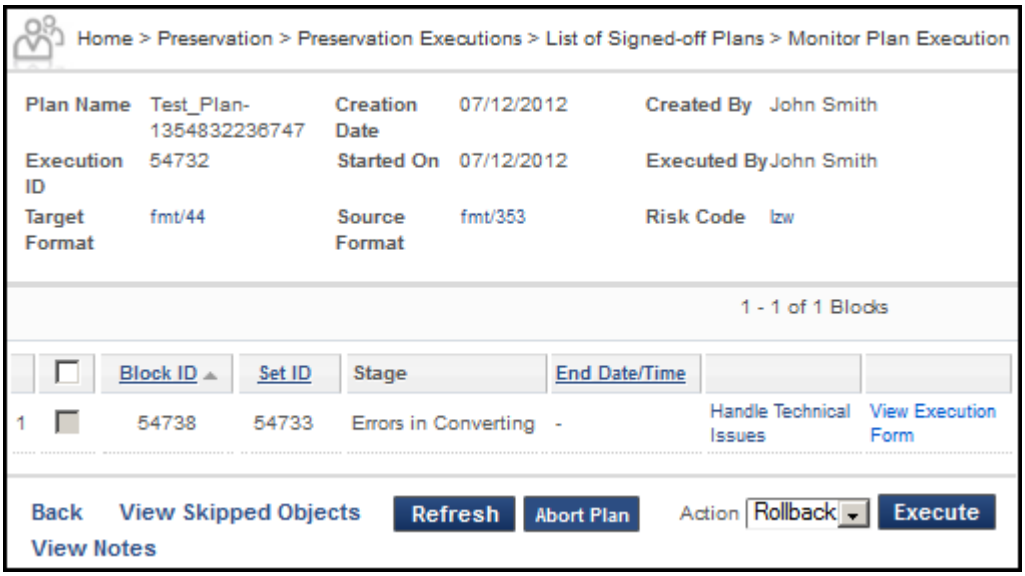

Figure 134: Monitor Plan Execution Page - Internal Plan

This page shows the progress of the plan execution.

8 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.

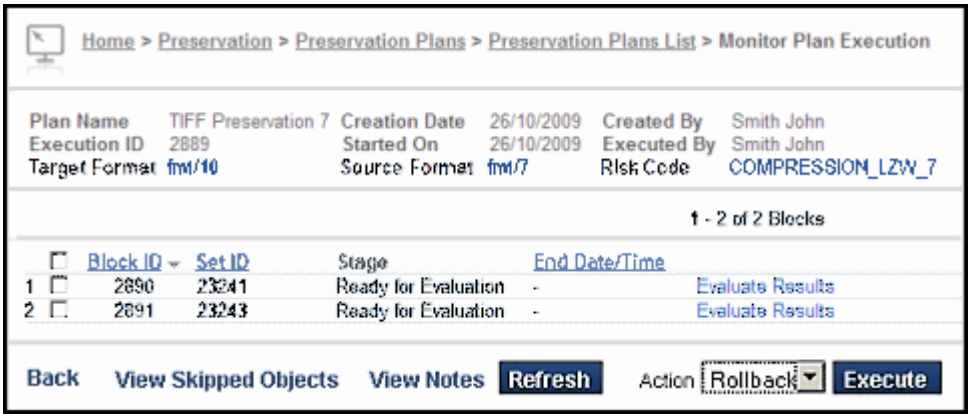

Figure 135: Monitor Plan Execution Page - Ready for Evaluation

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

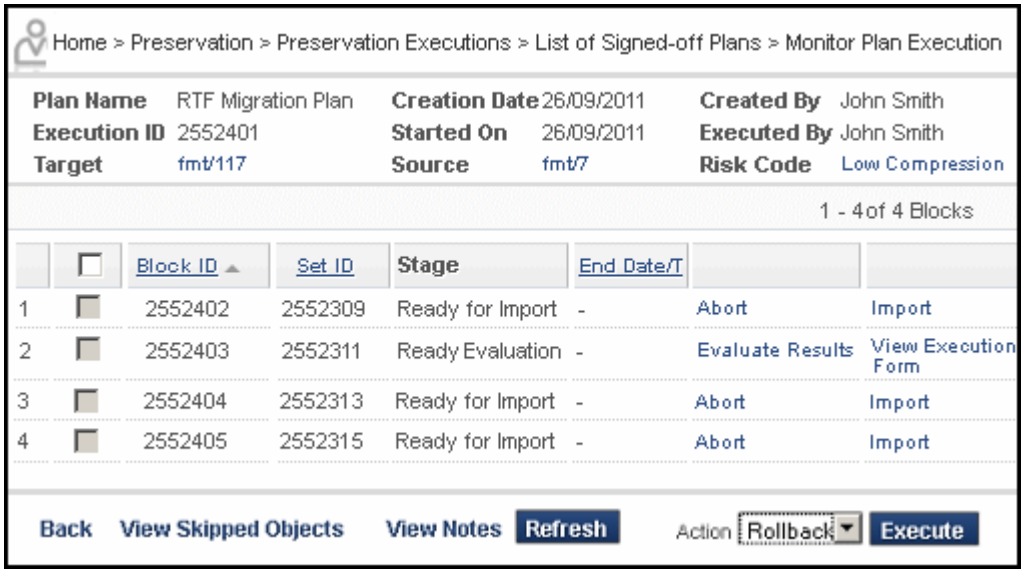

Figure 136: Monitor Plan Execution Page - External Plan

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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.

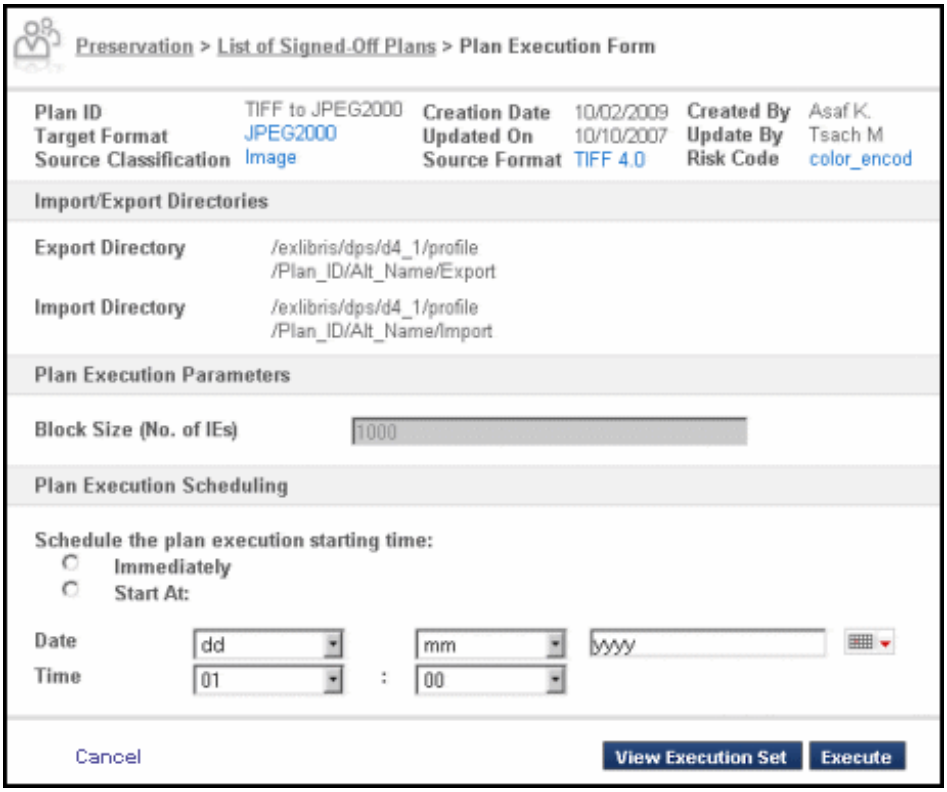

Figure 137: Execution Form Page - Import

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 **172** to proceed.

If the stage of the execution is Errors, see **Resolving Technical Issues** on page **177** 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.

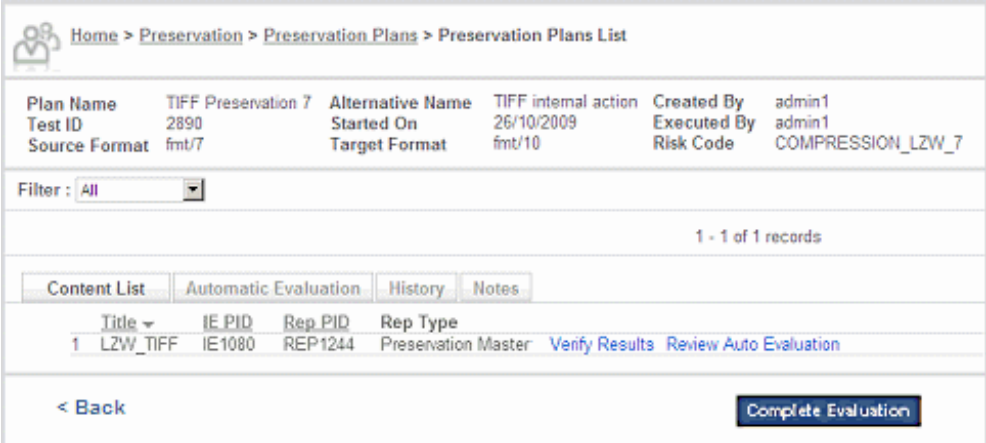

Figure 138: Execution Evaluation Page

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.

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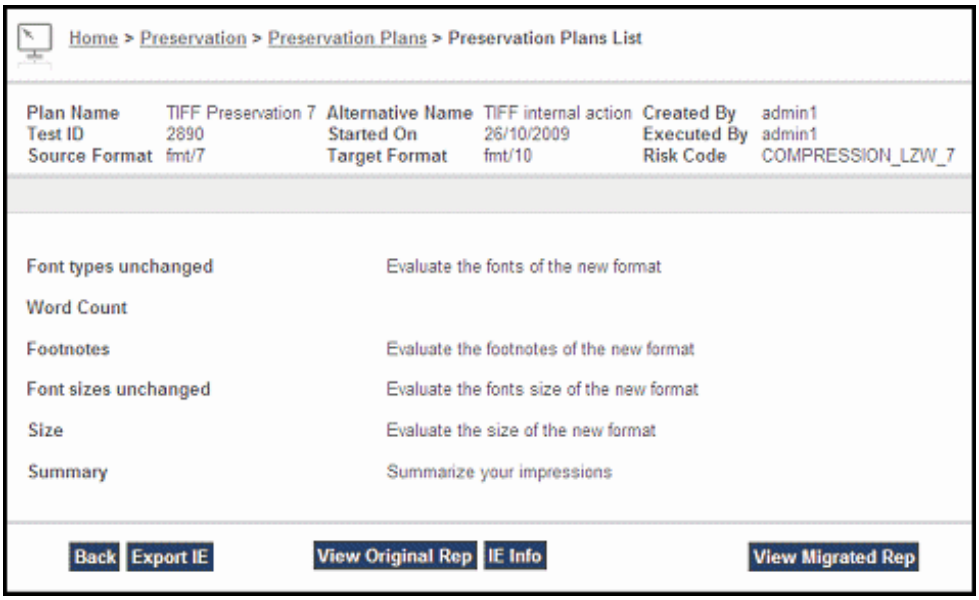

Figure 139: Manual Evaluation Page

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.

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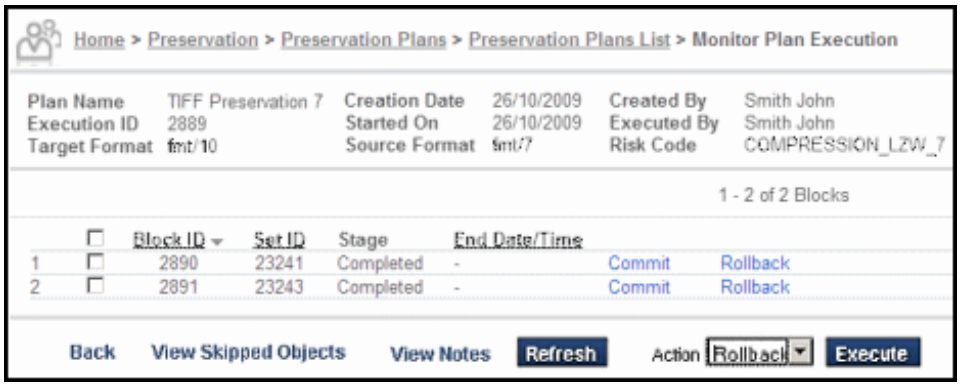

Figure 140: Monitor Plan Execution Page - Evaluation Completed

6 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.

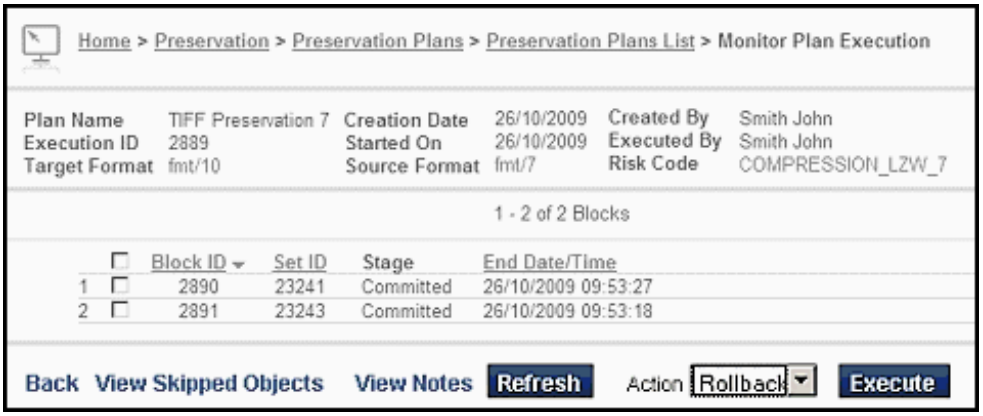

Figure 141: Monitor Plan Execution Page - Committed

The Preservation plan has been executed.

7 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.

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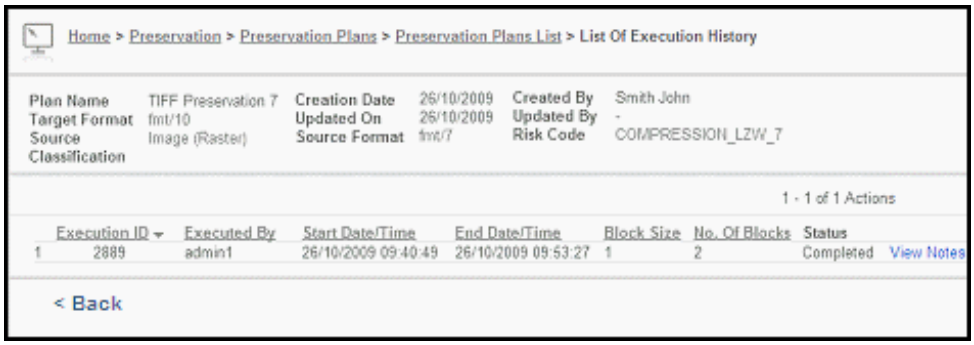

Figure 142: List of Execution History Page

14

Resolving Technical Issues

This section contains:

- **Handling Technical Issues During Testing** on page **177**
- **Handling Technical Issues During Plan Execution** on page **181**

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.

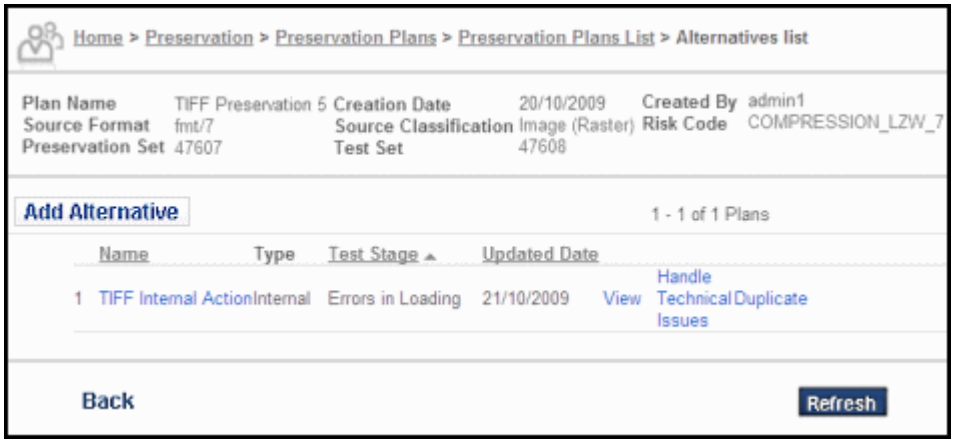

Figure 143: Alternatives List Page - Errors in Loading

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 **178**

If the page that you have opened is Validation, see **Handling Technical Issues at the Validation Stage** on page **179** 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.

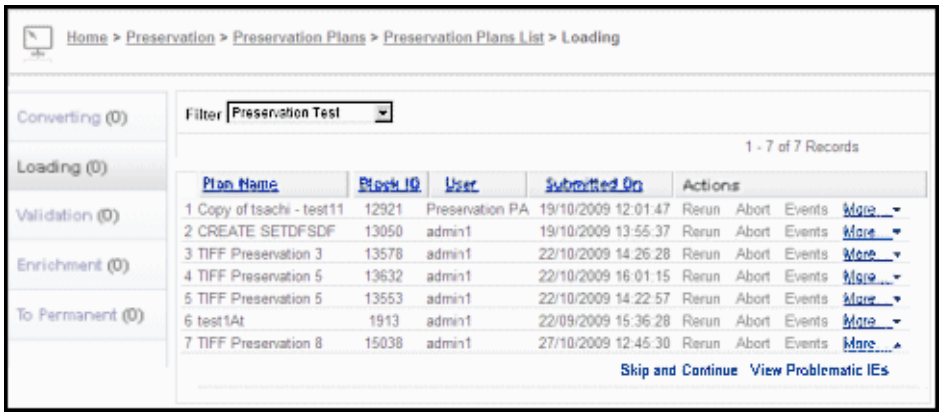

Figure 144: Loading Page

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, the problem is that the files are locked and unavailable for loading.

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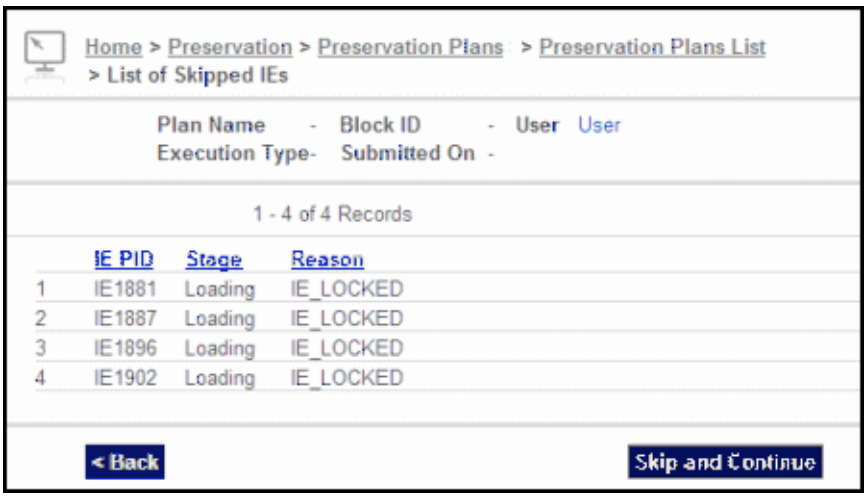


Figure 145: List of Problematic IEs

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.

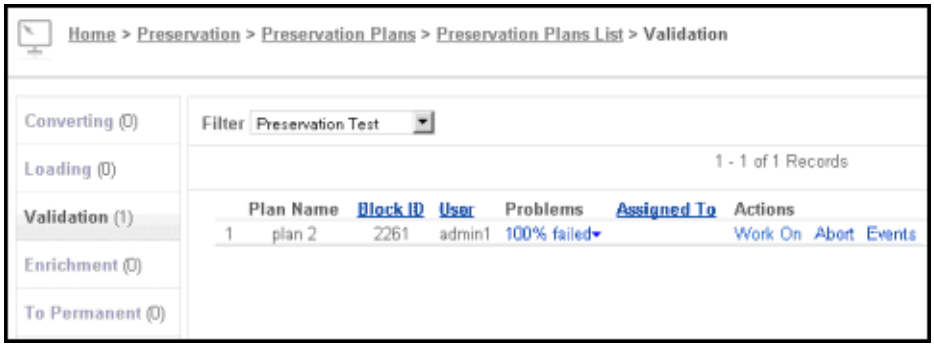


Figure 146: Validation Page

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.

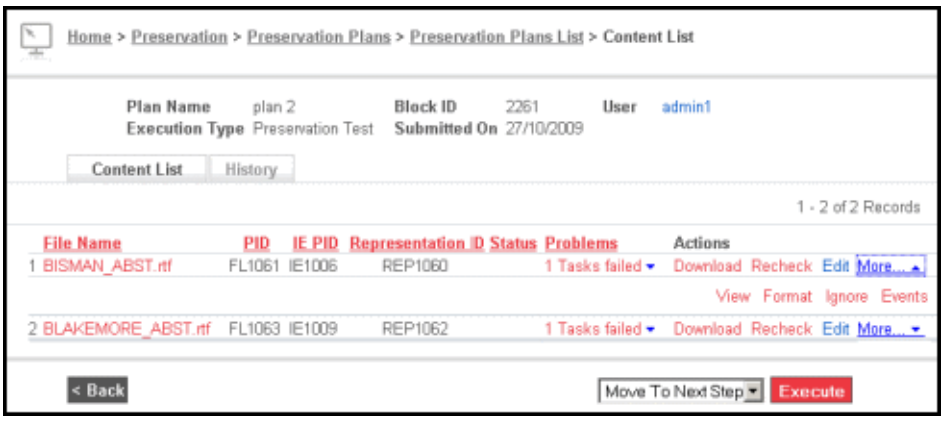


Figure 147: Content List Page

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.

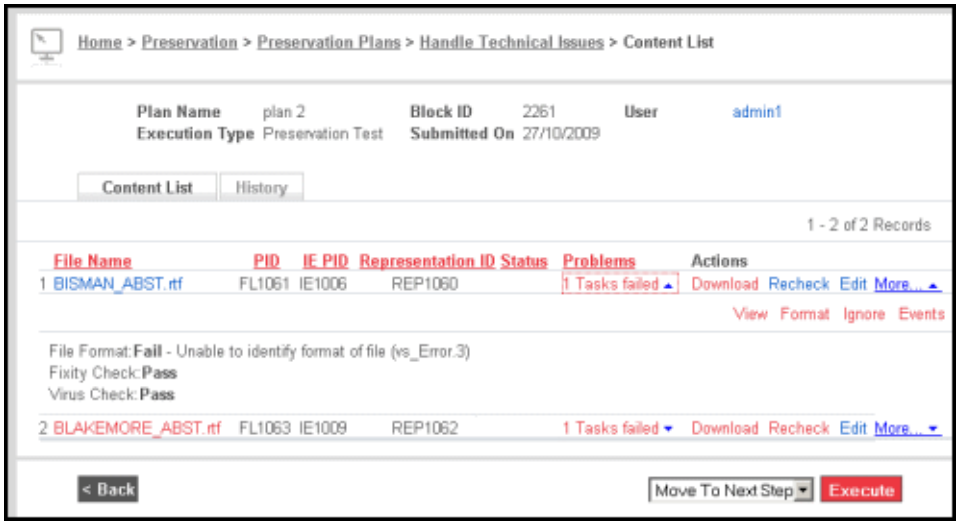


Figure 148: Content List Page - Problem Description

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 **177**, starting from step 3.

Part VI

Storage Migration

This part contains the following:

- **Chapter 15: Storage Migration** on page **185**

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:

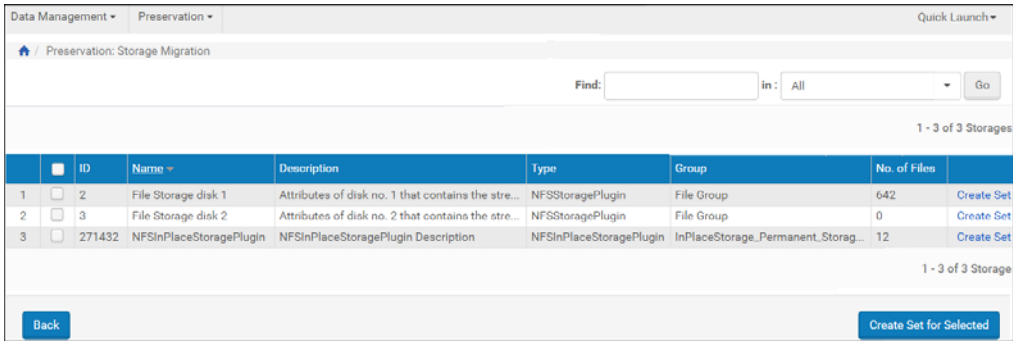


Figure 149: List of File Storages

2 Select the storage that you want to migrate and click **Create Set for Selected**. The following appears:

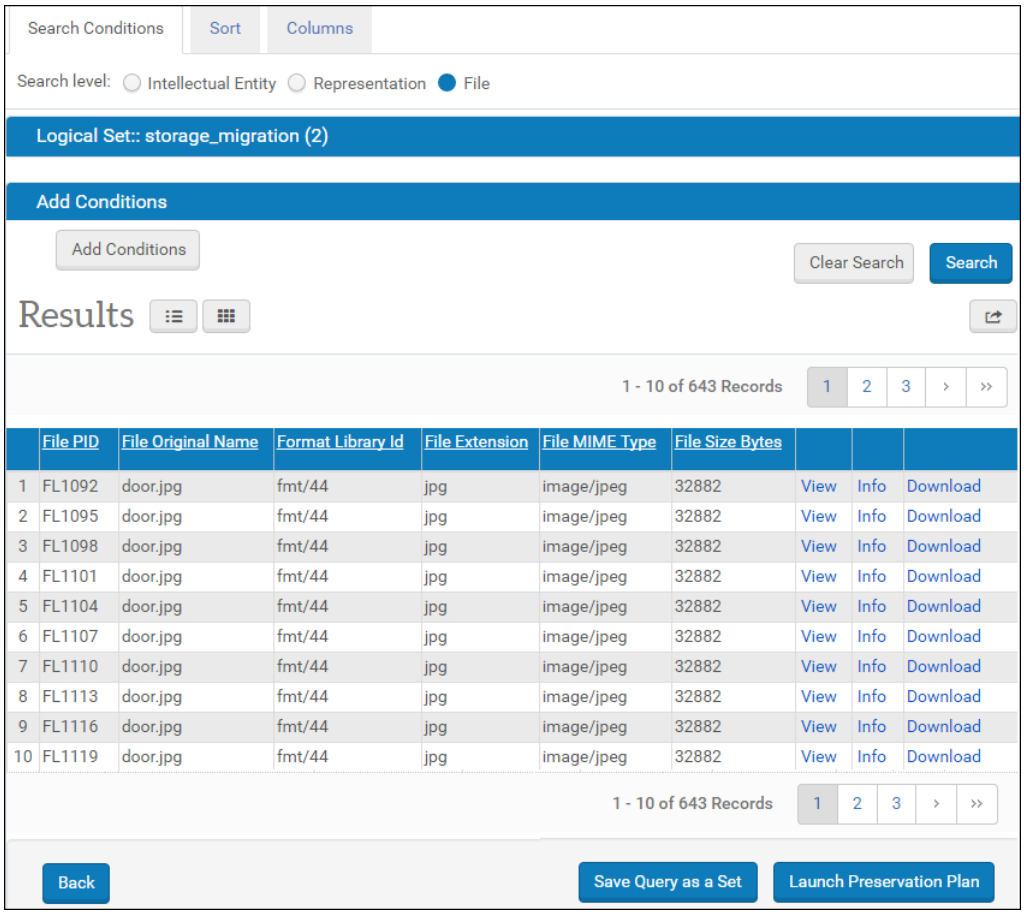


Figure 150: Add Conditions

3 Add conditions to refine your search, and click **Launch Preservation Plan**. The following appears:

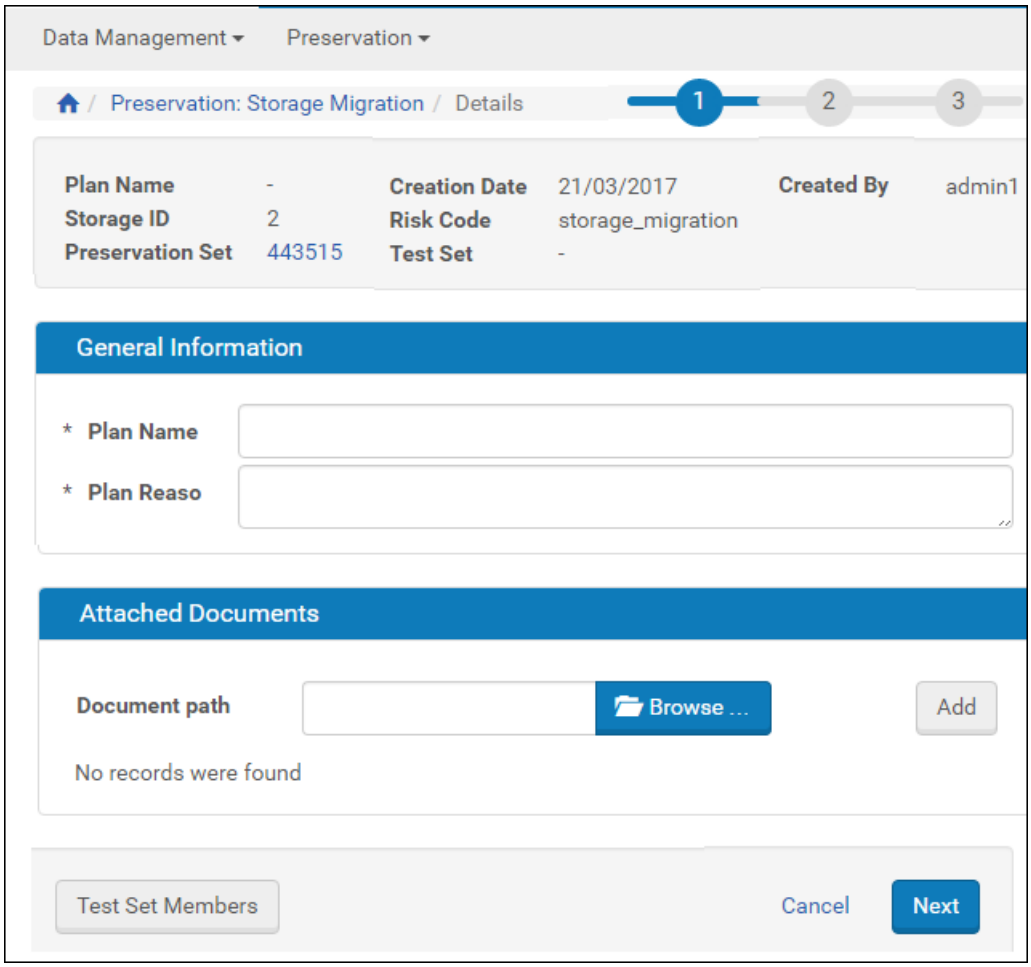


Figure 151: Preservation Plan Details

4 Fill in the preservation plan details and click **Test Set Members**. The test includes all the files in same representation. The following appears:

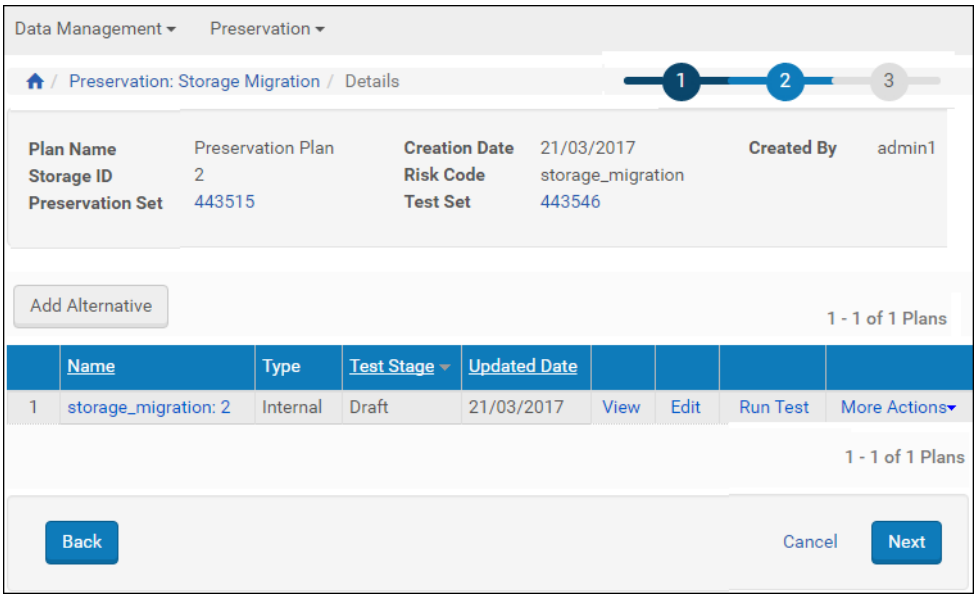


Figure 152: Add Alternatives

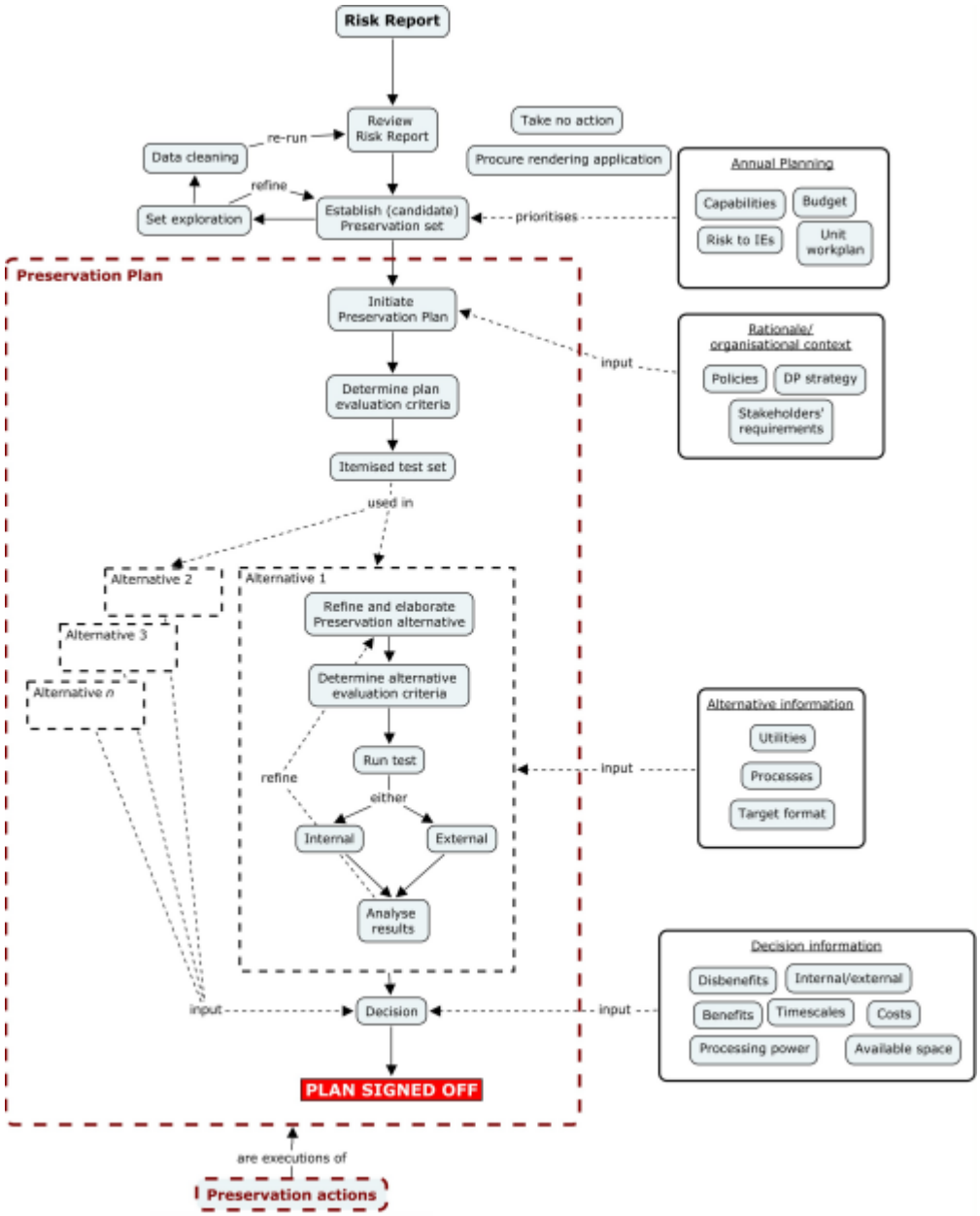
5 An alternative is automatically created containing the fixity criteria. Click **Run Test** to test the alternative.

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 **161** and **Preservation Plan Execution** on page **165**.

A

Preservation Action Flow Diagram



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