



Global Data Change

Voyager 10.2

Ex Libris Confidential

CONFIDENTIAL INFORMATION

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

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

DISCLAIMER

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

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

TRADEMARKS

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

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

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

Oracle is a registered trademark of Oracle Corporation.

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

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

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

Google is a registered trademark of Google, Inc.

Table of Contents

	Updates to This Guide	9
Chapter 1	Overview	11
	What is Global Data Change?	11
	GDC Workflow	12
	Security.....	15
	<i>Encryption</i>	<i>15</i>
	IMPORTANT - Before You Begin	15
	<i>Prerequisite System Considerations</i>	<i>16</i>
	<i>GDC Suggested Best Practices</i>	<i>17</i>
	<i>Other Processing Considerations</i>	<i>18</i>
	Login Information.....	18
	Resources	19
Chapter 2	Record Selection.....	21
	Overview.....	21
	Record Set	21
	<i>Special Record Set Considerations</i>	<i>22</i>
	Search	23
	Saved Searches	26
	Specific Records	27
	Scan.....	27
	Manage Record Sets	28
	<i>View</i>	<i>28</i>
	<i>Edit</i>	<i>28</i>
	<i>Copy</i>	<i>29</i>
	<i>Delete</i>	<i>29</i>
	Export Record Sets (Record IDs)	29
Chapter 3	Rules Generation	31
	Overview.....	31
	Scan Rule Sets.....	33
	<i>Create (New) Scan Rule Sets</i>	<i>34</i>

<i>Edit Scan Rule Sets</i>	37
<i>Delete Scan Rules</i>	38
<i>Share (Export/Import) Scan Rules</i>	40
<i>Copy Scan Rule Sets</i>	43
Scan Rule Set Groups	45
<i>Create (New) Scan Rule Set Groups</i>	45
<i>Edit Scan Rule Set Groups</i>	47
<i>Delete Scan Rule Set Groups</i>	48
<i>Copy Scan Rule Set Groups</i>	48
Data Change Rule Sets.....	50
<i>Create (New) Data Change Rules</i>	50
<i>Edit Data Change Rules</i>	55
<i>Delete Data Change Rules</i>	56
<i>Share (Export/Import) Data Change Rules</i>	58
<i>Copy Data Change Rule Sets</i>	62
Data Change Rule Set Groups	64
<i>Create (New) Data Change Rule Set Groups</i>	65
<i>Edit Data Change Rule Set Groups</i>	67
<i>Delete Data Change Rule Set Groups</i>	68
<i>Copy Data Change Rule Set Groups</i>	69
Conditions	70
<i>Special Condition Considerations</i>	77
<i>Linking Conditions</i>	78
Consequences.....	80
<i>Special Consequence Considerations</i>	89
<i>Link to Condition Field</i>	89
<i>Special Record Disposition Usage</i>	90
<i>Using Consequences to Suppress, Unsuppress, and Delete Records</i>	90
<i>Rule Results - Delete All</i>	91
<i>Rule Results - Suppress/Unsuppress</i>	92
GDC Scan Logic	93
<i>OR - Multiple Scan Rules in a Scan Rule Set</i>	93
<i>OR - Multiple Scan Rule Sets in a Scan Rule Group</i>	95
<i>AND - Run Multiple Scan Jobs</i>	96
<i>NOT - Use Exclude Consequence</i>	97
Rule Considerations	98

Chapter 4	Preview.....	99
	Overview.....	99
	Preview Display and Options.....	100
	Do Not Update Database Preview	103
Chapter 5	GDC Execution/Job Management.....	105
	Overview.....	105
	Submit a Scan Job.....	106
	Submit a Data Change Job.....	109
	Submit an Index Records Job	114
	Submit a Match Job Using External MARC Binary Files (*.bib or *.aut) 117	
	Submit Authority Loading Match Job	119
	Submit Authority Loading Merge Job	126
	<i>Files Generated from the Auth Load Merge Job</i>	<i>129</i>
	View the Job Queue.....	130
	View the Running/Completed Jobs	132
	<i>View Log</i>	<i>137</i>
	<i>Get Result Files</i>	<i>139</i>
	<i>Job Result Files - Export</i>	<i>141</i>
	<i>Job Result Files - View</i>	<i>141</i>
	<i>Kill Job</i>	<i>142</i>
Chapter 6	Authority Loading	143
	Overview.....	143
	Load Match Configuration.....	144
	Load Merge Configuration.....	150
Chapter 7	Session Defaults and Preferences.....	159
	Overview.....	159
	Workflow	159
	Folders and Files	161
	Colors and Fonts	163
Chapter 8	Technical Options/Considerations.....	167
	Command Line Processing	167
	<i>Add a Rule Document to the Database</i>	<i>167</i>
	<i>Retrieve a Rule Document from the Database</i>	<i>168</i>

	Performance	168
	<i>Keyword Regen</i>	168
	<i>Large Data Sets</i>	169
	Disk Space (Server).....	169
	GDC Dæmon Processes	169
	Record Set Data (Server).....	170
	Data Change Job Processing (Server)	170
Chapter 9	Troubleshooting.....	173
	Error Handling/Prevention.....	173
	<i>Avoidance</i>	173
	<i>Roll Back</i>	173
	<i>List of Record IDs</i>	174
	<i>Search Timeout</i>	174
Appendix A	Usage Example 1	175
	Overview	175
	<i>Plan</i>	175
	<i>Workflow</i>	176
	Create a Set of Records to Change	176
	Define the Data Change Rules to Update the Records	182
	Preview the Data Change Rules Using the Record Set You Created	186
	Execute the Data Change Job	189
	Review Your Results	190
Appendix B	Usage Example 2	193
	Overview	193
	<i>Plan</i>	193
	<i>Workflow</i>	193
	Create a Set of Records to Change	194
	Define the Data Change Rules to Update the Records	197
	Preview the Data Change Rules Using the Record Set You Created	202
	Execute the Data Change Job	205
	Review Your Results	206
Appendix C	Usage Example 3	209
	Overview	209
	<i>Plan</i>	209

	<i>Workflow</i>	210
	Create a Set of Records to Change	210
	Define the Data Change Rules to Update the Records	216
	Preview the Data Change Rules Using the Record Set You Created	221
	Execute the Data Change Job	222
	Review Your Results	224
Appendix D	Usage Example 4 – MARC Field Exists And Does Not Have	227
	Overview	227
	Create the Rule Conditions and Consequences to Address the Requirements of Example 4	227
Appendix E	Usage Example 5 – Scan to Exclude	235
	Overview	235
	Create the Rule Conditions and Consequences to Address the Requirements of Example 5	236
Glossary		243
Index		245

Updates to This Guide

This guide incorporates the following changes:

- Updated the section **Workflow** on page **159** with information regarding the new **Display warning on module close** preference option (**Options > Session Preferences**).
- Enhanced the **Update Location** description in **Table 7, Submit Data Change Job - Job Parameters**, on page **111**.
- Enhanced the explanation in step 1 of the procedure **To submit a data change job**: on page **109**
- Enhanced the explanation for the **Delete a bibliographic record ...** bullet in the section **Using Consequences to Suppress, Unsuppress, and Delete Records** on page **90**

1

Overview

This section includes:

- **What is Global Data Change?** on page 11
- **GDC Workflow** on page 12
- **Security** on page 15
- **IMPORTANT - Before You Begin** on page 15
- **Login Information** on page 18
- **Resources** on page 19

What is Global Data Change?

Global Data Change (GDC) provides an integrated solution for making mass data changes to bibliographic, holdings, and authority records within the Voyager database handled through batch processing.

The main components of GDC functionality include:

- Record selection
- Rules creation
- Preview
- Execution
- Queue management

The user interface for GDC functionality is provided through a Voyager client that runs on your PC along with the other Voyager clients such as Cataloging, Acquisitions, Circulation, and so forth. The purpose of GDC functionality is to improve efficiencies and enable better workflows using a safe and secure methodology for making mass data changes to your MARC 21 records that can be implemented without the intervention of a systems administrator.

GDC Workflow

Key to understanding the GDC workflow is that changes to your MARC 21 database happen through a batch/queued process. As a result, the workflow described below identifies the components you need to create in preparation for this batch process. This workflow also incorporates references to work verification, planning, and best practices that are important to completing error-free changes to your database.

In general, the workflow (see [Figure 1](#)) for making a global data change to your MARC 21 database is:

1 Record selection (see [Record Selection](#) on page 21)

Identify the set of records, a record set, against which changes should be made.

NOTE:

A record set only contains record IDs. These record IDs identify the records to be scanned or changed.

There are several options for creating a record set. See:

■ [Search](#) on page 23

The search option in GDC is similar to the Search dialog box found in other Voyager clients like Cataloging and Acquisitions, but contains enhancements specific to GDC.

Search can be used to build a record set (record IDs only) of bibliographic records.

This method uses existing Voyager indexes.

■ [Specific Records](#) on page 27

This option allows you to add one record at a time to the record set.

This option may be useful when catalogers know of specific records that require changing.

■ [Scan](#) on page 27

Scanning uses rules that can examine any field, subfield, or control field of a MARC record.

Scanning can be used to build a record set (record IDs only) of bibliographic records or authority records or MFHD records.

This method searches the entire database (indexes are not used). It is more comprehensive but, generally, requires longer processing time.

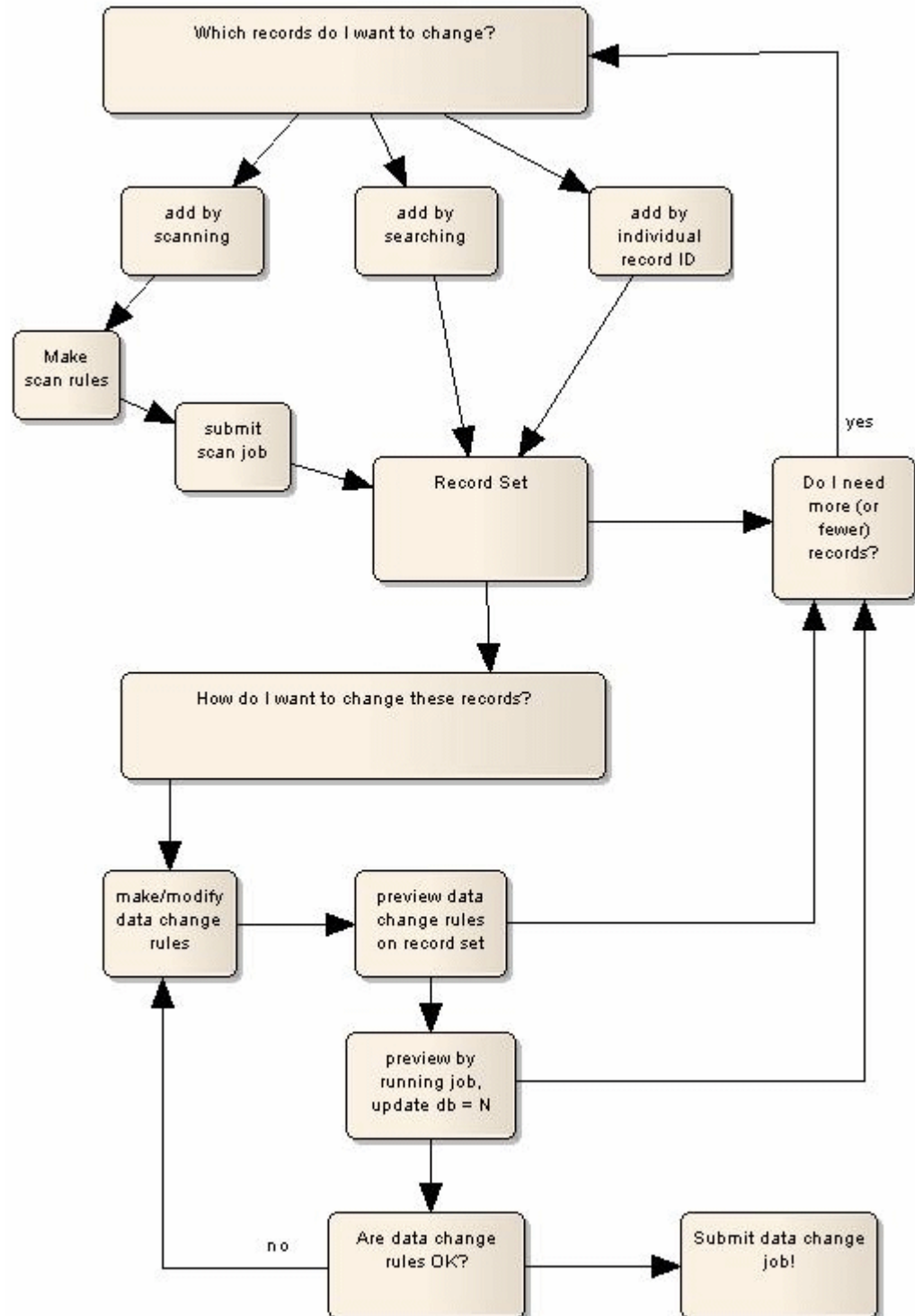


Figure 1: GDC Workflow

2 Data change rules specification (see [Rules Generation](#) on page 31)

GDC provides a menu-interface that allows you to create rules (rule sets/ rule set groups) that determine how GDC is to process the record sets (add, delete, copy, and so forth).

A rule consists of a condition and consequence that you specify.

Rules are used for both the scanning and data change GDC processes.

3 Preview

Using the rules that you have saved, view the database modifications these rules would make. To preview, you can:

- Review records one at a time via the GDC menu interface (see [Preview](#) on page 99)
- Review the record file(s) targeted for change from the Job Results Files list (see [Submit a Data Change Job](#) on page 109/[Table 8](#) on page 113 and [Get Result Files](#) on page 139) after running a data change job without updating the database

NOTE:

The record file(s) targeted for change are referred to in this manner because the records in these files have not yet been committed as a permanent change to your MARC 21 database.

This step provides you the opportunity to determine if the rules you created can generate the results you intend for your MARC 21 database. If necessary, you can repeat this process several times to insure that the permanent changes you make to your database are correct.

IMPORTANT:

Preview is the only GDC method for viewing the contents of your record sets. Use preview to determine if you need to create a different record set to achieve the results you intend.

4 Execution (see [GDC Execution/Job Management](#) on page 105)

Run a job to execute changes defined in your data change rules against a set of identified records.

IMPORTANT:

Insure that you have a current backup of your database before making permanent changes with GDC.

Before making unwanted changes permanent to your MARC 21 database, be sure that you review [IMPORTANT - Before You Begin](#) on page 15 and use the planning and best practice suggestions.

5 Verification

Confirm that the database changes completed as you intended.

See [Get Result Files](#) on page 139 for one option to use for checking your results.

Check your log files (see [Data Change Job Processing \(Server\)](#) on page 170).

The sooner that you catch any of your errors, the easier it is to recover from them.

Alternatively, you may start the GDC workflow by creating the rule set(s)/rule set group of data change rules.

Security

Using the Voyager System Administration client, you can define what functions an operator may perform in the GDC client. Refer to the *Global Data Change Profiles* section of the *Voyager System Administration User's Guide* for information regarding GDC security profiles that control what functions an operator may perform.

Encryption

Encryption in the Voyager .ini must always be set to N (see below).

```
[GlobalLog]
SingleLogin=Y
Encrypt=N
ServerSortList=Y
ASCIISortList=Y
ASCIISortColumn=Y
```

Refer to the *Voyager Technical User's Guide* for more information.

IMPORTANT - Before You Begin

GDC provides incredible flexibility and power for making bulk changes to your database. As a result, it is key that you:

- Develop a plan for the changes you intend to make (including the smallest details)

- Follow standard data processing practices (see [Prerequisite System Considerations](#) on page 16)
- Implement the suggested best practices for making changes with GDC (see [GDC Suggested Best Practices](#) on page 17)
- Include [Other Processing Considerations](#) on page 18 in your planning

Prerequisite System Considerations

Before processing global data changes, standard data processing practices need to be followed. Confirm your:

- **Backup**

Do you have a current backup of your database?

Refer to the *Voyager Technical User's Guide*, Server Activities in the Voyager System chapter for more details regarding the backup procedure.

If you are not certain that you have a good backup, check with:

- Your library's IT department
- The Ex Libris Hosting Team or submit a Support case via the Salesforce Support Portal if you are hosted at Ex Libris

- **Storage**

Do you have enough server disk storage to process the database change?

You need space for the changed records in addition to the original records during the global data change process. See [Disk Space \(Server\)](#) on page 169 regarding estimating space. Other resources to check regarding your server disk space include:

- Your specific operating system (OS) server manual such as your Solaris guide
- Your library's IT department
- Open a Support case via the Salesforce Support Portal

- **Schedule**

It is best to run GDC during nonpeak periods such as when system usage is low.

You may also choose to run a large job in scheduled increments (especially to avoid any conflicts with system backups).

Coordinate changes with other library staff to insure that your saved record sets targeted for use in a GDC change do not become out-of-date due to interim, manual changes to the Voyager MARC 21 database by catalogers and other staff.

You should also avoid scheduling other cataloging jobs such as bulk import, MARC export, or any catjobs to run at the same time as GDC.

GDC Suggested Best Practices

The following suggested practices are provided for your consideration to enable a smooth and successful experience with making changes to your MARC 21 database:

- **Start small**

Refine your record set as much as possible. You can scan record sets to make smaller and more targeted record sets. The more you refine, the more you lower your risk of accidentally changing a record you didn't intend to change.

- **Keep it simple**

You can create very complex rules in GDC, but keeping rules simple helps you:

- Keep track of the changes your rule set group is making
- Make it easier to fix mistakes without losing valid changes

If you create a rule that makes three or four changes to the records in the set and after executing the change job you realize in checking that one change is wrong, you must back out all of the changes to fix the error and start again.

- **Review before you commit**

GDC has two ways to preview your change. Take advantage of this functionality. Previewing your changes and reviewing the change carefully allows you to check for and identify any potential problems before they're committed to the database.

- **Practice before production**

Use non-production resources such as your Voyager system traindb or your Preview Server, if you have that option, to test the rules/changes that you develop without risk to your production database. Especially if you are working with a complex rule or with a larger record set, consider testing your change in one of these environments before putting it into production.

- **Review immediately after you commit**

Once you have made your change, review it in the database. It is much easier to roll back a change immediately after it is made than it is to do several days or weeks later when additional edits that may have been made to the records could be lost in the rollback.

- **Retain your records**

A data change job creates a number of files on your server including two copies of your record set, one original and one changed. Do not remove these files until you are sure your change was successful and does not need to be rolled back. If you have space to archive these files for a period of time, your institution may want to consider a local retention policy for these files.

- Only allow staff members with the appropriate skill set to make changes

Other Processing Considerations

When you process database changes, be aware that:

- GDC does not reference cataloging standards

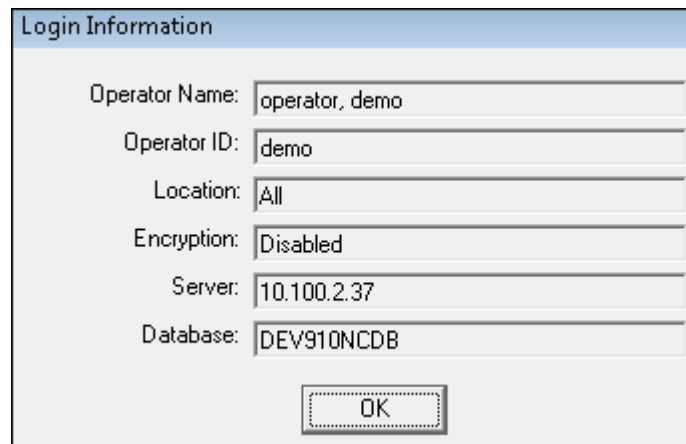
If you want to delete all of the 245 fields in your database, GDC lets you do that. If GDC can parse the logic of the rules you give it, it executes those regardless of whether the change is a good cataloging decision. Like bulk import, GDC does not reference the tag tables in implementing the rules you create.
- GDC does not lock your records

If a record is in a record set to be changed and a cataloger is also making changes to the record, the last one to save the record determines what the final version is that is stored in the database. If a data change job finishes before the cataloger finishes editing a record and, subsequently, the cataloger saves the record to the database, the cataloger's version of the record is the one that becomes available in the database.

Login Information

From the GDC client, you can access the following login information by clicking **File > Login Information**:

- Operator name
- Operator ID
- Location
- Encryption (enabled/disabled)
- Server (as defined in the Server= parameter in the `voyager.ini` file)
- Database



A screenshot of a 'Login Information' dialog box. The dialog has a title bar with the text 'Login Information'. Inside, there are six labeled text input fields: 'Operator Name' with the value 'operator, demo', 'Operator ID' with the value 'demo', 'Location' with the value 'All', 'Encryption' with the value 'Disabled', 'Server' with the value '10.100.2.37', and 'Database' with the value 'DEV910NCDB'. At the bottom center of the dialog is an 'OK' button.

Figure 2: Login Information

Resources

In addition to this guide, utilize all the Ex Libris GDC resources available including:

- Salesforce Support Portal Knowledge Base
- EL Commons
- Support

Open a case via the Salesforce Support Portal to initiate Support's assistance with your GDC questions.

Refer to the *GDC Support Policy* guide located in the Ex Libris Documentation Center.

2

Record Selection

This section includes:

- [Overview](#) on page 21
- [Record Set](#) on page 21
- [Search](#) on page 23
- [Saved Searches](#) on page 26
- [Specific Records](#) on page 27
- [Scan](#) on page 27
- [Manage Record Sets](#) on page 28
- [Export Record Sets \(Record IDs\)](#) on page 29

Overview

The purpose of record selection in GDC is to create a record set. The record set is a separate entity that is specified during the GDC execution step (see [GDC Execution/Job Management](#) on page 105) that identifies the records (by record ID number) that are to change.

See the appendixes for GDC usage examples that include record selection.

Record Set

When records are added to a set, the set is stored as a group of record IDs in the database. A record set can be created using the following methods:

- Search existing indexes (composite, headings/left anchored, or keyword) and add all records (ID numbers only) from the resulting list of titles to a record set (see [Search](#) on page 23)

- Scan the entire database (or an existing record set) where all records retrieved (ID numbers only) are automatically added to a specified record set (see [Scan](#) on page 27)

IMPORTANT:

Be aware that scanning the entire database (record by record and field by field) takes considerably longer processing time than using the indexed search method for identifying records to create your record set.

- Add individual records to a record set by entering the record ID number (see [Specific Records](#) on page 27)
- Specify the name of a file containing a list of record ID numbers (see [Specific Records](#) on page 27)
- Select a range of record ID numbers (see [Specific Records](#) on page 27)

A stored record set has the following characteristics:

- Record set name (up to 200 characters)
- Description (up to 2,000 characters)
- Record type (bibliographic, holdings, or authority)

NOTE:

All records in a record set must be the same type, bibliographic, holdings, or authority.

In addition to creating a new record set, new records can be added to an existing record set using the methods above.

NOTE:

A record may exist only once in a record set. Any duplicate additions to a record set are automatically handled by the system to maintain only one occurrence of the record (record ID) in the record set.

Also, records can be deleted from a record set individually using the preview function (see [Preview](#) on page 99). To remove large groups of records from a record set, scan the record set using a new rule and put the smaller result into a new record set.

NOTE:

Alternatively, use the scan function to edit the record set by creating a new record set (a subset of the original record set) as a result of the scan.

Special Record Set Considerations

Since the record set is a separate entity from your Voyager MARC 21 database, manual changes by catalogers and others, with the appropriate security, may

continue to occur in the database that could affect the outcome of your intended changes to be completed with the record set that you save.

You may notice this when, for example, the number of records in the record set does not match the number of records processed by the job in the log because a record was deleted manually from the database prior to processing a GDC data change that contains the record ID for the deleted record.

NOTE:

When using Preview on a record set that contains references to deleted records, Preview displays the record before or the record after the place in the record set where the deleted record id occurs.

This emphasizes the importance of creating and maintaining processes and procedures amongst the library staff to insure the quality of changes to your Voyager MARC 21 database. See **IMPORTANT - Before You Begin** on page 15 for additional information regarding suggested best practices and processing considerations.

Search

The GDC search function uses a Search dialog box (see **Figure 3**) similar to the one used in the other Voyager clients with the addition of the Saved Searches tab.

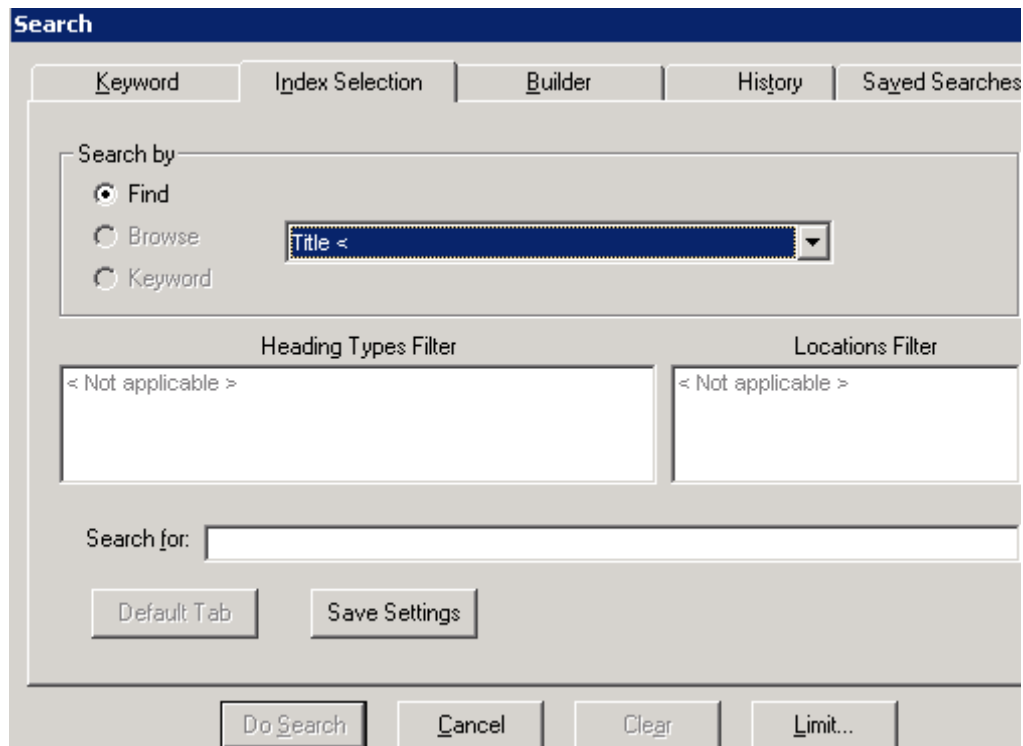


Figure 3: Search Dialog Box

The Titles Index search results display in GDC (see [Figure 4](#)) is similar to the other Voyager clients but adapted for use in GDC. Some of the differences include:

- Results greater than 10,000 records can be saved to either a new or existing record set

See [Search Timeout](#) on page 174 for additional information.

- The entire Titles Index list of records are saved to the record set
There is no partial list highlighting/selection option.

- Searches can be saved but any search limits used are not stored

Any current search limit that you have specified is applied to a new or previously saved search.

- Only bibliographic records (record ID numbers) are saved to the record set with a GDC staff search

For example, if you do a Staff Name Headings Search, only the bibliographic records associated with the heading are saved not the retrieved authority records.

Or, for example, when a Mfhd Call Number search is performed, the bibliographic records associated with the call number are saved.

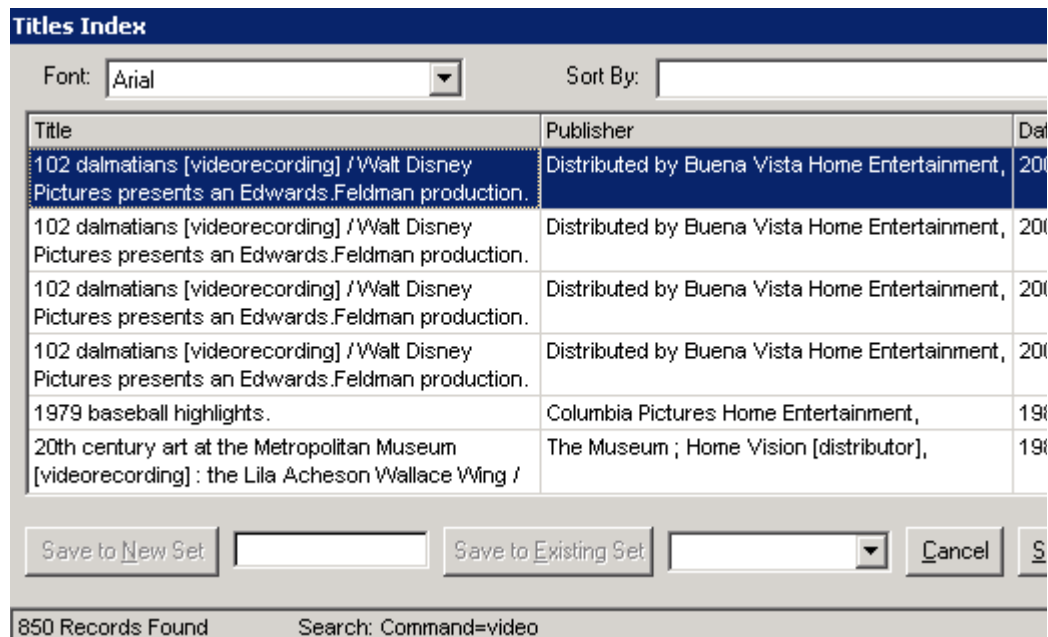


Figure 4: GDC Titles Index Display

To search the database for records to add to a record set:

- 1 Click **Search** in the GDC listbar.

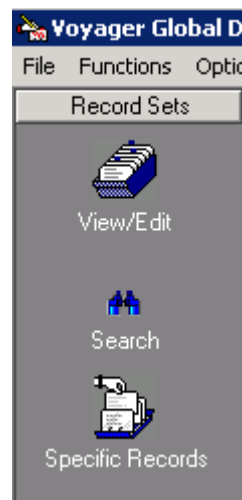


Figure 5: Search Listbar Option

- 2 Enter your search criteria using the tab/method you prefer, or select a saved search from the Saved Search tab and click **Do Search**.

- 3 Enter the name of a new record set in the field provided or select the name of an existing record set from the drop-down list on the Title Index display.
- 4 Click **Save to New Set** or **Save to Existing Set** to save the record ID number(s) of the search results to a record set.
- 5 Click **Search** to enter another search or click **Cancel**.

Saved Searches

Saved searches display on the Saved Searches tab. These are searches that you decide to save from the History tab, as a time-saving measure, for future use. All saved searches can be viewed by all operators.

NOTE:

The Saved Searches tab only displays for use in the (GDC) client.

From the Saved Searches tab, you may do the following with a saved search selected (highlighted) from the list:

- View
- Delete
- Run a search (Do Search)

To create a saved search:

- 1 Click **Search** in the GDC listbar.
- 2 Click the **History** tab.
- 3 Click the row of the search that you want to save.
- 4 Click **Save Search**.

NOTES:

The Save Search button on the History tab only displays for use in the (GDC) client.

Saved searches do not include limits that were used to conduct the search.

- 5 Enter a unique name for the search when prompted and click **OK**.

Specific Records

To add records to a record set one record at a time or with a file of record IDs:

- 1 Click **Specific Records** in the GDC listbar.
- 2 Select the record type from the drop-down list.
 - Bib
 - Mfhd
 - Auth

NOTE:

All records in each record set must be of the same type, bibliographic, holdings, or authority.

- 3 In the Select Record(s) section, do one of the following:
 - Enter the record ID number to be added to the record set
 - Specify the name of the file containing record ID numbers to be added to the record set

If you use this option of creating your own file, it needs to be a text file with one record ID per line. This file is stored on your local PC. Click the ellipsis button to browse for the file name.
 - Enter a range of Voyager record ID numbers.
- 4 In the Select Record Set section, enter a name in the field provided to create a new record set or select the name of an existing record set from the drop-down list and click **Save**.

Scan

To select records to add to a record set using the scan method:

- 1 Create one or more scan rule sets (see [Scan Rule Sets](#) on page 33).
- 2 Create a scan rule set group (see [Scan Rule Set Groups](#) on page 45).
- 3 Submit a scan job (see [Submit a Scan Job](#) on page 106).

Manage Record Sets

In order to manage the record sets that you create, the Voyager GDC client provides the capability to do the following with record sets:

- **View**
- **Edit**
- **Copy**
- **Delete**

View

The record set view displays the following information about a record set:

- Name
- Description
- Record type
- Number of records in the set
- Date and time of the last modification to the record set
- Who modified the record set (operator ID)

NOTE:

To view the contents of the records in the record set, use Preview (see **Preview** on page 99).

To view a specific record set:

- 1 Click **View/Edit** in the GDC Record Sets listbar.
- 2 Click the row of the record set to view.

Edit

You can edit the name and/or description for a record set. When you add records to an existing record set, you may want to change the name and/or description to something more meaningful for your reference later.

To edit a record set:

- 1 Click **View/Edit** in the GDC Record Sets listbar.
- 2 Click the row of the record set to edit.
- 3 Click **Edit**.

- 4 Change the Name and/or Description.
- 5 Click **Save**.

Copy

You may find that there are times when you want to add records to an existing record set to process with a global data change, but you also want to maintain the original record set. Use the copy function to do this.

To copy a record set:

- 1 Click **View/Edit** in the GDC Record Sets listbar.
- 2 Click the row of the record set to copy.
- 3 Click **Copy**.
- 4 Change the Name and/or Description.
- 5 Click **Save**.

Delete

To delete a record set:

- 1 Click **View/Edit** in the GDC Record Sets listbar.
- 2 Click the row of the record set to delete.
- 3 Click **Delete**.
- 4 Click **Yes** to confirm your delete request when prompted (Are you sure?).

Export Record Sets (Record IDs)

You can export a record set (file of record IDs) by using the View/Edit Record Sets listbar component.

To export a record set:

- 1 Click **View/Edit** in the GDC Record Sets listbar.
- 2 In the Record Sets - View/Edit dialog box, click the row of the record set you want to export.
- 3 Click **Export**.
- 4 Specify the file name (the default is the record set name with the extension of .txt).

5 Click **Save**.

3

Rules Generation

This section includes:

- **Overview** on page 31
- **Scan Rule Sets** on page 33
- **Scan Rule Set Groups** on page 45
- **Data Change Rule Sets** on page 50
- **Data Change Rule Set Groups** on page 64
- **Conditions** on page 70
- **Consequences** on page 80
- **Rule Considerations** on page 98

Overview

GDC uses rules to specify the actions (conditions/consequences) the system is to process when:

- Executing a change request
- Identifying scanned records to build a record set

See the appendix for GDC usage examples that include creating rules.

The GDC Rules listbar component (see **Figure 6**) provides access to the options for identifying these rules and storing them in sets and rule set groups. A rule set group may contain multiple rule sets. This allows for the flexibility of assembling different combinations of rule sets and sharing common rule sets in a rule set group that is used to process a data change or build a scanned record set.

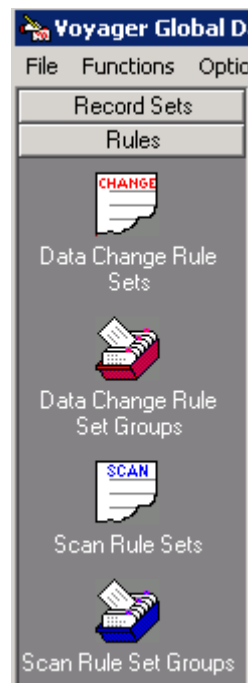


Figure 6: Rules Listbar

To create rules for executing a change request, GDC uses a combination of the following options from the Rules listbar:

- **Data Change Rule Sets**
- **Data Change Rule Set Groups**

The workflow is:

- 1 Create one or more data change rule sets.
- 2 Create a data change rule set group that contains one or more data change rule sets that identifies the changes you want to process.

To create rules for identifying scanned records for a record set, GDC uses a combination of the following options from the Rules listbar:

- **Scan Rule Sets**
- **Scan Rule Set Groups**

The workflow is:

- 1 Create one or more scan rule sets.
- 2 Create a scan rule set group that contains one or more scan rule sets that identifies the records you want to store in a record set.

Scan Rule Sets

Scan rule sets contain one or more rules that define the logic (conditions/consequences) that the GDC rules engine uses to locate records to store in a record set.

Scan processing provides a different level of capability to identify records (bibliographic, MFHD, or authority) to be stored in a record set. In **Record Selection** on page 21, you learned how to identify bibliographic records for processing through the search dialog box (see **Search** on page 23) that is similar to other Voyager clients that searches indexed records.

With the GDC scan function, the search is performed through the entire contents for any field you want to check for each record in one of the following that you identify when you execute the scan in Job Management:

- Your entire MARC 21 database
- An existing record set
- A range of records in your MARC 21 database

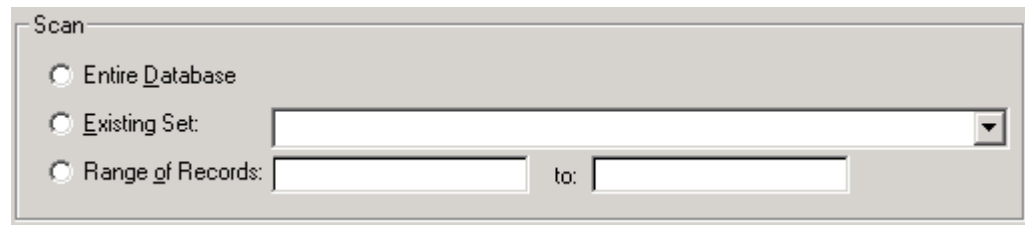


Figure 7: Job Management Scan Options

HINT:

Use scanning to create a narrowly focused record set. A narrowly focused record set may reduce the complexity of the data change rules that you need to create and reduce errors. In order to create a narrowly focused record set, you may need to use scanning repeatedly against each record set result.

Scan allows you to search in greater detail beyond the standard indexes but requires more processing time due to the granularity of data that is being reviewed/scanned.

With Scan Rule Sets, you can:

- **Create (New) Scan Rule Sets**
- **Edit Scan Rule Sets**
- **Delete Scan Rules**

- **Share (Export/Import) Scan Rules**
- **Copy Scan Rule Sets**

Create (New) Scan Rule Sets

Creating scan rule sets is similar to creating data change rule sets. The difference is that scan rule sets only have two consequence options:

- Include
- Exclude

The purpose of the scan rule set is to identify which records are to be included in a record set or to be excluded from a record set as the system scans the database searching for records based on the condition(s) that you identify in the scan rule set.

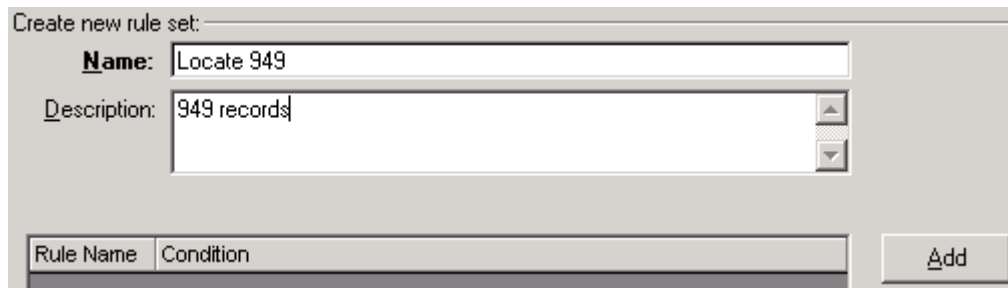
To create scan rule sets:

- 1 Click **New**.
- 2 Enter the name (up to 200 alphanumeric characters) and description (up to 2,000 alphanumeric characters) for the new scan rule set.

Since you are most likely to have many scan rule sets, use the Description field to help you distinguish the purpose of each scan rule set.

NOTE:

Data change rule sets and scan rule sets may not have the same name.
Each rule set name (data change or scan) must be unique.



Create new rule set:

Name:

Description:

Rule Name	Condition
-----------	-----------

Figure 8: Add New Scan Rule

- 3 Click **Add**.
- 4 Enter the new rule name (up to 200 alphanumeric characters).
You may have more than one rule in a scan rule set in order to identify the records to be stored in a record set. Each rule requires its own name.



Figure 9: New Scan Rule Name

- 5 Click **Add** to define the conditions for the scan rule.
The default Rule Condition Template displays.

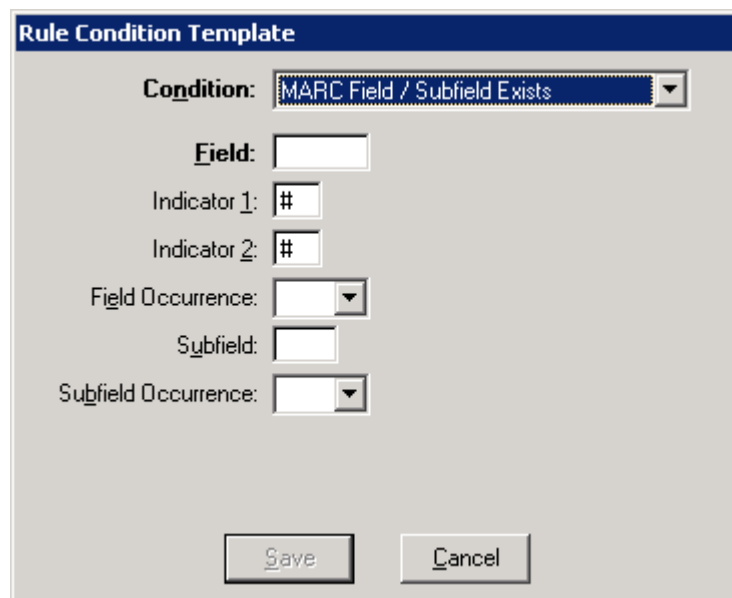


Figure 10: Rule Condition Template

- 6 Select one of the following conditions from the Condition field drop-down list.
 - Create Date
 - Created By
 - MARC Control Field Exists
 - MARC Control Field Value
 - MARC Control Field/Subfield Exists
 - MARC Field Has Any
 - MARC Field nnX Exists
 - MARC Field nXX Exists
 - MARC Field Value

- Owning Library
- Update Date
- Updated By

With each different condition option, the dialog box changes to present the appropriate fields to complete for the condition selected.

See [Conditions](#) on page 70 for a description of these options.

NOTE:

At least one condition is required for each rule.

- 7 Enter the information required on the Rule Condition Template and click **Save**.

- 8 Select one of the following consequences:

- Include
- Exclude

See [Consequences](#) on page 80 for a description of these options.

- 9 When you have finished entering the condition and consequence information for the new scan rule, click **OK**.

A new scan rule row displays for your new scan rule set.

If you have multiple rules defined for your rule set, you may use the Up and Down buttons to change the order of the rows to specify the order in which the rules should be processed for scanning.

- 10 When you have finished entering one or more rules, click **Save** to store your new scan rule set.

Edit Scan Rule Sets

To edit data change rules:

- 1 Select the rule set (click the row) that contains the rule that you want to change.

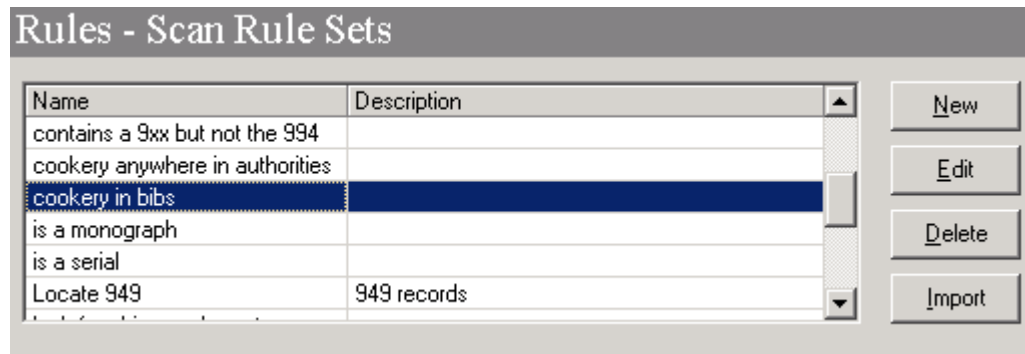


Figure 11: List of Scan Rule Sets

- 2 Click the row of the rule you want to edit (if there is more than one rule in your scan rule set), and click **Edit**.

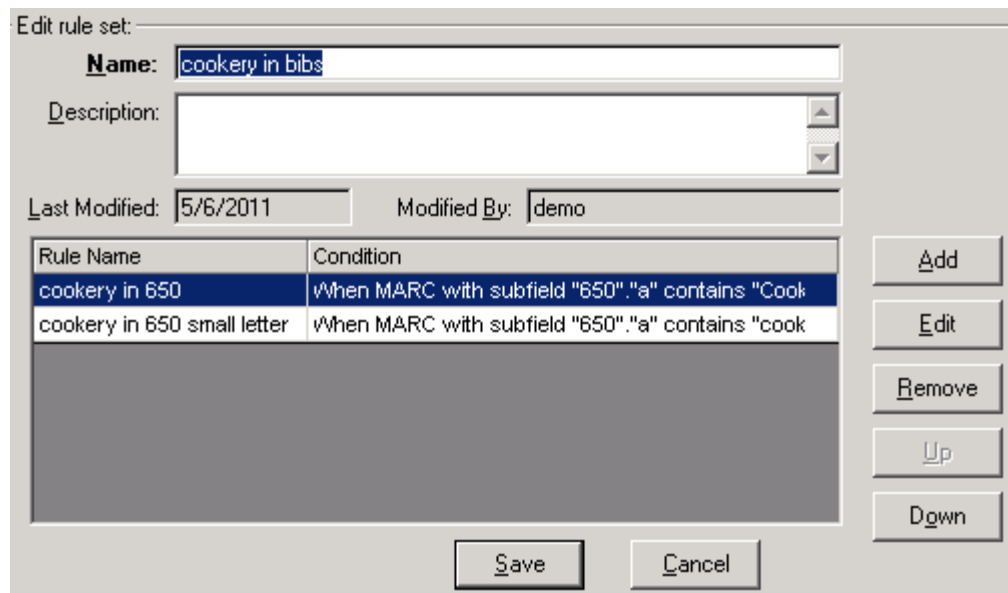


Figure 12: Edit Scan Rule

- 3 Change the conditions and/or consequences to meet your requirements.
See **Conditions** on page 70 and **Consequences** on page 80 for a description of these options.
Use the Up and Down buttons to change the order of your conditions as needed.
- 4 Click **OK**.
- 5 Optionally use the Up and Down buttons to change the order of your scan rules if you have more than one.
- 6 Click **Save** to store the updated scan rule(s)/scan rule set.
When you save an updated scan rule set, any changes are automatically reflected in any scan rule set group that contains that scan rule set.

IMPORTANT:

Since common rule sets may be shared/used in multiple rule set groups, it is important to note the timing of the changes you make to these common rule sets to avoid unintended changes for pending data change batch jobs. If you modify and resave a data change rule set that is in a rule set group for a data change batch job with a status of Pending, the most recent modified/saved rule set is used when the job runs. Modifications to shared rule sets do not affect data change batch jobs with a status of Running.

Delete Scan Rules

You may delete scan rules using the following options:

- Delete an entire scan rule set
Select the set (row) and click Delete.

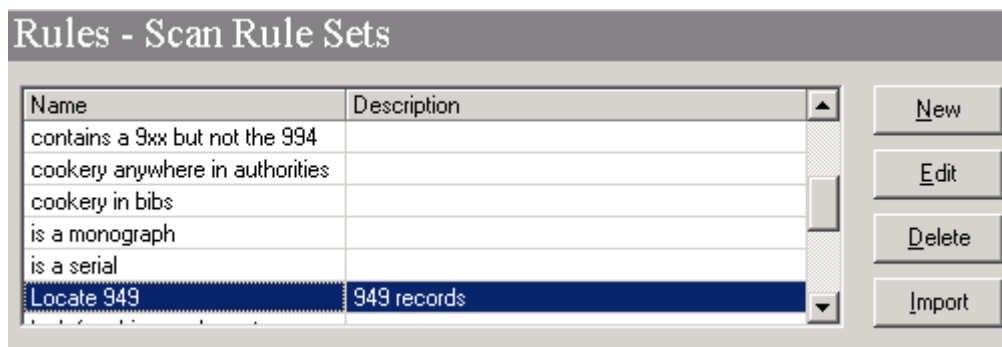


Figure 13: Delete Scan Rule Set

If the set contains multiple rules, all the rules saved in it are deleted.

NOTE:

You cannot delete a scan rule set that is saved within a scan rule set group.

- Remove a single rule from a set
Select the rule and click Remove.

Edit rule set:

Name: outdated 245h

Description:

Last Modified: 5/12/2011 **Modified By:** demo

Rule Name	Condition
245h exists	When MARC is "245"."h"
not 245h electronic	When MARC with subfield "245"."h" contains "electron
not 245h microform	When MARC with subfield "245"."h" contains "microfor
not 245h projected	When MARC with subfield "245"."h" contains "projecte
not 245 videorecording	When MARC with subfield "245"."h" contains "videorec
not 245 sound recording	When MARC with subfield "245"."h" contains "sound r

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 14: Remove Rule

- Delete part of a scan rule
When a scan rule has more than one condition, select a condition to delete, and click Remove to delete part of a scan rule.

Name: 245

Conditions:

WHEN	MARC with subfield "245"."a" contains "Harry Potter"
AND	MARC with subfield "245"."h" contains "videorecording"

Buttons: Add, Edit, Remove, Up, Down

Figure 15: Remove Scan Condition

Share (Export/Import) Scan Rules

For institutions that want to share scan rules with other institutions or within a consortium, GDC provides an export/import capability.

HINT:

You may choose to use Ex Libris EL Commons to facilitate sharing rule sets with other locations.

The steps for exporting/importing scan rules is similar to exporting/importing data change rules.

To export scan rules:

- 1 Select the scan rule set to export and click **Export**.

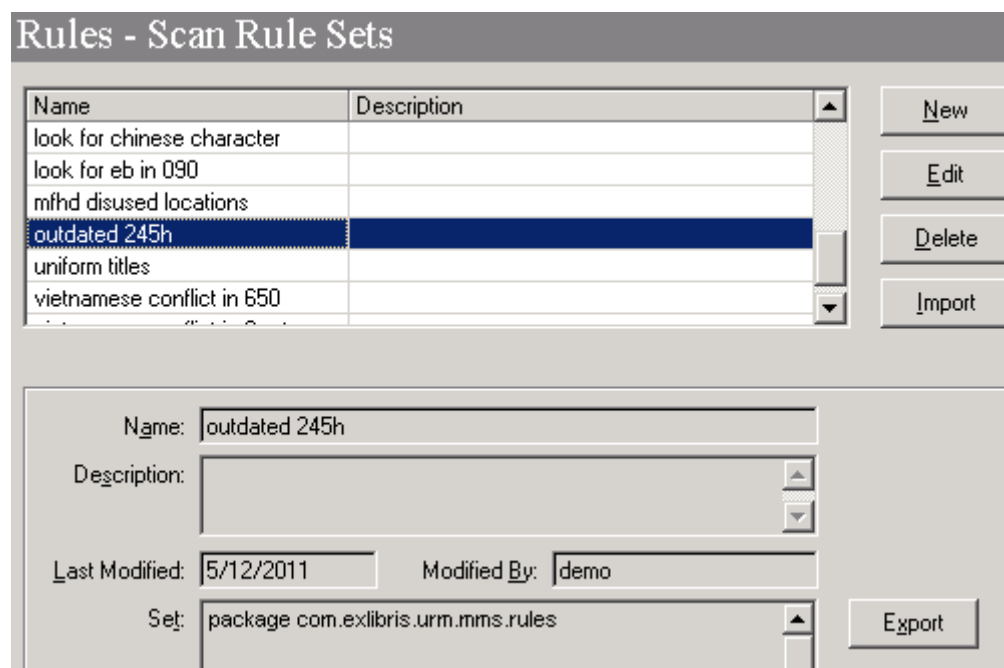


Figure 16: Select/Export Scan Rule Set

The Export Rule Set to Disk dialog box displays.

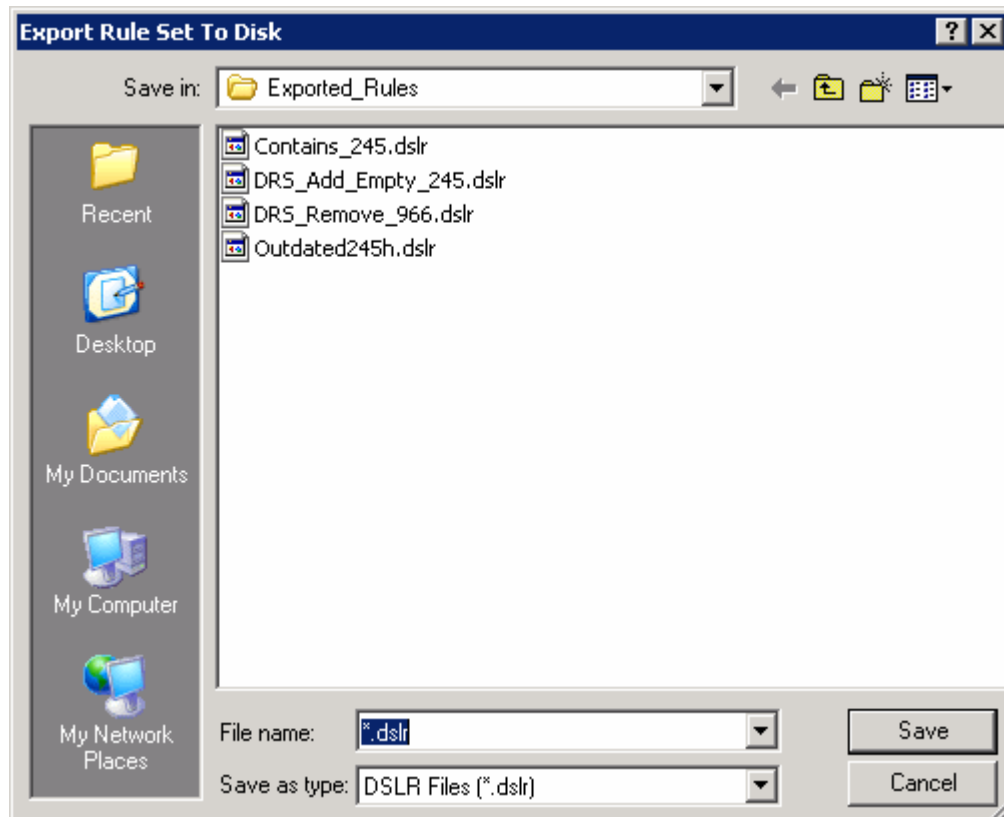


Figure 17: Export Rule Set to Disk

- 2 Type the .dslr file name (replacing the asterisk), and click **Save**.
Optionally, select a different folder or create a new folder for storing the .dslr file.

NOTE:

You can define default directories in session preferences (see **Folders and Files** on page 161), one folder for exporting/importing data change rule sets and another folder for exporting/importing scan rule sets.

To import scan rules:

- 1 Click **Import**.

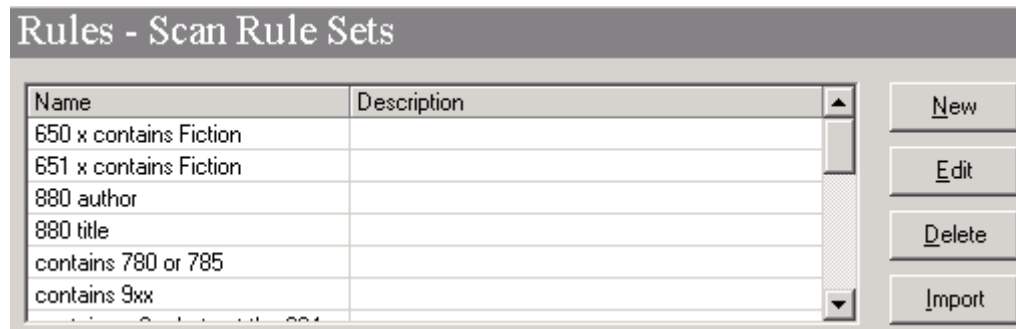


Figure 18: Import

- 2 Select the .dslr file to import and click **Open**.

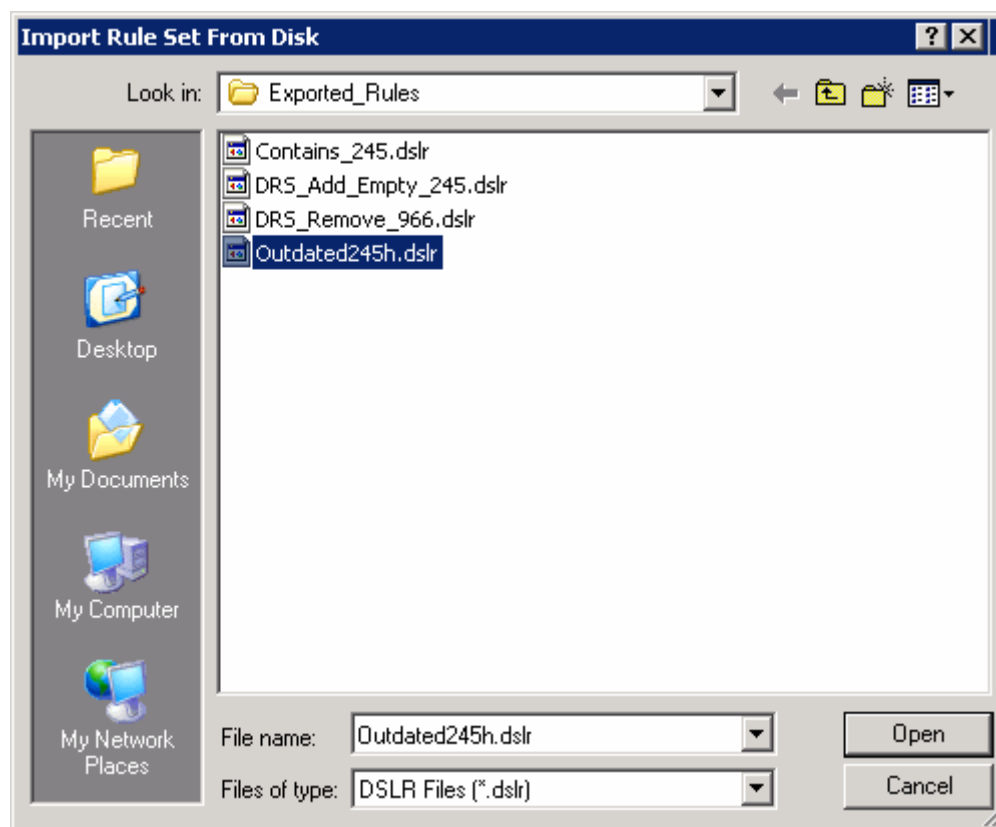


Figure 19: Import Scan Rule Set

- 3 Enter the name for the imported rule set, and click **Save**.

Import rule set:

Name: 245h

Description: U:\GDC\Exported_Rules\Outdated245h.dslr

Rule Name	Condition
245h exists	When MARC is "245"."h"
not 245h electronic	When MARC with subfield "245"."h" contains "electro
not 245h microform	When MARC with subfield "245"."h" contains "microfo
not 245h projected	When MARC with subfield "245"."h" contains "projecte
not 245 videorecording	When MARC with subfield "245"."h" contains "videore
not 245 sound recording	When MARC with subfield "245"."h" contains "sound r

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 20: Name Imported Scan Rule Set

The imported file is added to the list of existing rule sets.

Rules - Scan Rule Sets

Name	Description
245h	U:\GDC\Exported_Rules\Outdated245h.dslr
650 x contains Fiction	
651 x contains Fiction	
880 author	
880 title	
contains 780 or 785	

Buttons: New, Edit, Delete, Import

Figure 21: Imported Scan Rule Set

Copy Scan Rule Sets

Once you have created a scan rule set, you can use the Copy function to make a duplicate of it. This is especially useful when you want to create another scan rule set that is similar to an existing scan rule set but with a few modifications.

To create a copy of a scan rule set:

- 1 Highlight the row of the scan rule set that you want to copy.
- 2 Click **Copy**.

The Rules - Scan Rule Sets dialog box expands to display the **Create new rule set** section in edit mode in order for you to make any modifications before saving the duplicate scan rule set. The system automatically prepends the name of the duplicate rule set with *Copy of*, but you can also rename the duplicate file.

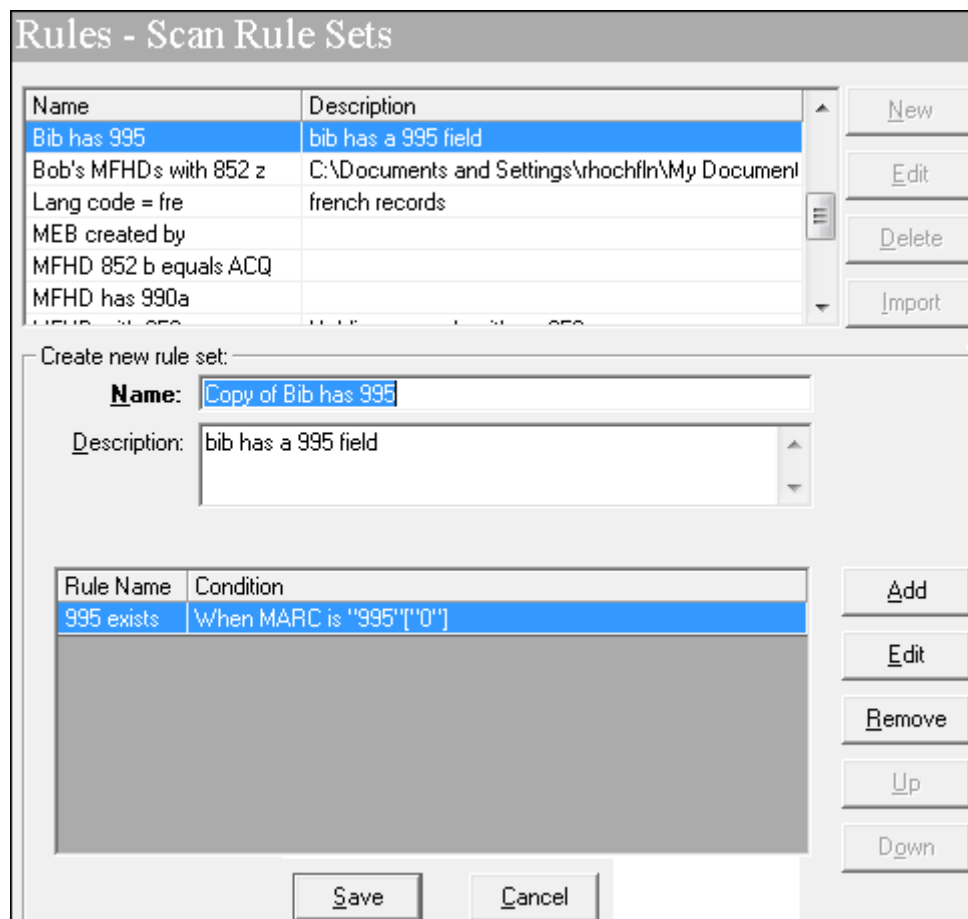


Figure 22: Copying Scan Rule Sets

- 3 Make any modifications to the scan rule set and click **Save**.

Scan Rule Set Groups

A scan rule set group contains one or more scan rule sets and is used in GDC Job Management (see [Figure 23](#)) to identify the scan rules to be processed for a specific job.

Figure 23: Scan Job Management Job Parameters

Scan rule set groups can be used to locate bibliographic, holdings (MFHD), and authority records to create a record set or add to an existing a record set.

With GDC Scan Rule Set Groups, you can:

- **Create (New) Scan Rule Set Groups**
- **Edit Scan Rule Set Groups**
- **Delete Scan Rule Set Groups**
- **Copy Scan Rule Set Groups**

Create (New) Scan Rule Set Groups

To create scan rule set groups:

- 1 Click **New**.

Name	Description
650x contains Fiction	
651 x contains Fiction	
880 author/title	
contains 780 or 785	
contains 9xx	
cookery in authorities	

Figure 24: Click New

- 2 Enter the name and description for the new scan rule set group.
- 3 Select one or more scan rule sets (defined in Scan Rule Sets) from the Available Rule Sets list, and click **Save**.

With the single right arrow button, you may add one scan rule set at a time to the Rule Sets in Set list. The double right arrow button moves all the files in the Available Rule Sets list to the Rule Sets in Set list.

Once there are rules selected in the Rule Sets in Set list, the single left arrow button and the double left arrow button are active, and you can move your selections back to the Available Rule Sets list.

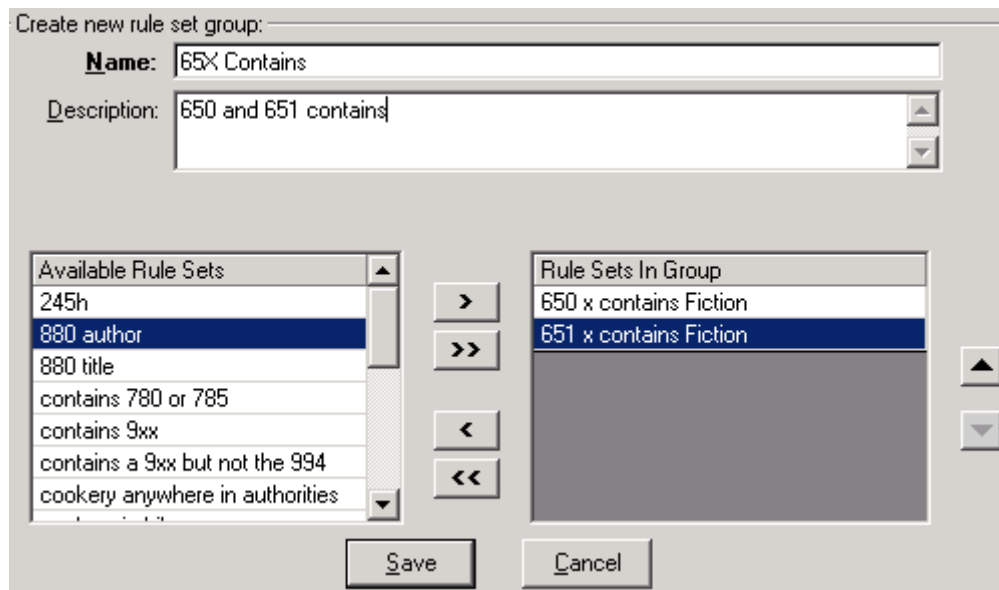


Figure 25: New Scan Rule Set Group Selections

Use the up/down arrows, if necessary, to change the order of the selected scan rule sets so that the rules process in the correct sequential order.

NOTE:

Where there are multiple rule sets in the rule set group, these rule sets imply the use of OR logic between them. See **GDC Scan Logic** on page 93 for additional information.

The new scan rule set group is added to the existing list of rule set groups and displays the characteristics of the new set to include the Last Modified date and the Modified By operator ID.

The screenshot shows a web application window titled "Rules - Scan Rule Set Groups". It contains a table with two columns: "Name" and "Description". The table has five rows of data. The third row, "65X Contains", is selected and highlighted in blue. To the right of the table are three buttons: "New", "Edit", and "Delete". Below the table, there is a form for editing the selected rule set group. It includes fields for "Name" (containing "65X Contains"), "Description" (containing "650 and 651 contains"), "Last Modified" (containing "6/23/2011"), and "Modified By" (containing "demo"). Below these fields is a section labeled "Rules:" which contains a list box with three items: "Rule Sets In Group", "650 x contains Fiction", and "651 x contains Fiction".

Name	Description
650x contains Fiction	
651 x contains Fiction	
65X Contains	650 and 651 contains
880 author/title	
contains 780 or 785	
contains 9xx	

Name: 65X Contains
Description: 650 and 651 contains
Last Modified: 6/23/2011 Modified By: demo
Rules: Rule Sets In Group
650 x contains Fiction
651 x contains Fiction

Figure 26: Saved Scan Rule Set Group

Edit Scan Rule Set Groups

To edit scan rule set groups:

- 1 Click **Edit**.

This screenshot is identical to the one in Figure 26, showing the "Rules - Scan Rule Set Groups" window. The table and form are the same. The "Edit" button on the right side of the table is highlighted with a blue border, indicating it is the next step in the process.

Figure 27: Edit Scan Rule Set Group

- 2 Make your changes, and click **Save**.

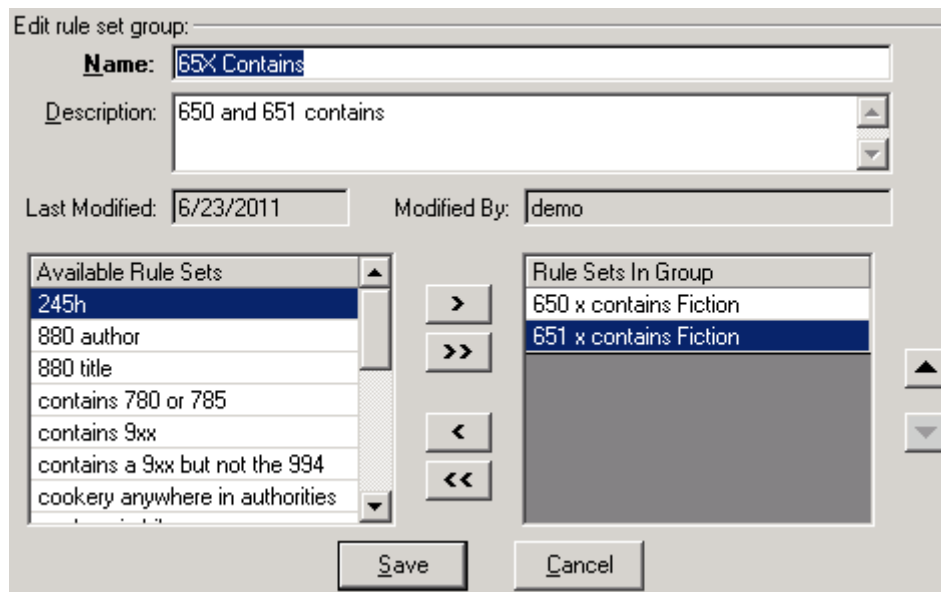


Figure 28: Edit Scan Rule Set Group Selections

Delete Scan Rule Set Groups

To delete scan rule set groups:

- 1 Select the row of the rule to be deleted from the Scan Rule Set Groups list.
Use the details of the scan rule set group that display for the selected set to confirm that you have selected the correct set to delete.
- 2 Click **Delete**.
- 3 Click **Yes**, when prompted, to confirm you delete request.

NOTE:

You can only delete one Scan Rule Set Group at a time.

NOTE:

You cannot delete a scan rule set group if it is specified for use with any pending or running batch jobs. Once the job's status, however, has reached Done, Killed, or Failed, the scan rule set group can be deleted.

Copy Scan Rule Set Groups

Once you have created a scan rule set group, you can use the Copy function to make a duplicate of it. This is especially useful when you want to create another

scan rule set group that is similar to an existing scan rule set group but with a few modifications.

To create a copy of a scan rule set group:

- 1 Highlight the row of the scan rule set group that you want to copy.
- 2 Click **Copy**.

The Rules - Scan Rule Set Groups dialog box expands to display the **Create new rule set group** section in edit mode in order for you to make any modifications before saving the duplicate scan rule set group. The system automatically prepends the name of the duplicate rule set group with *Copy of*, but you can also rename the duplicate file.

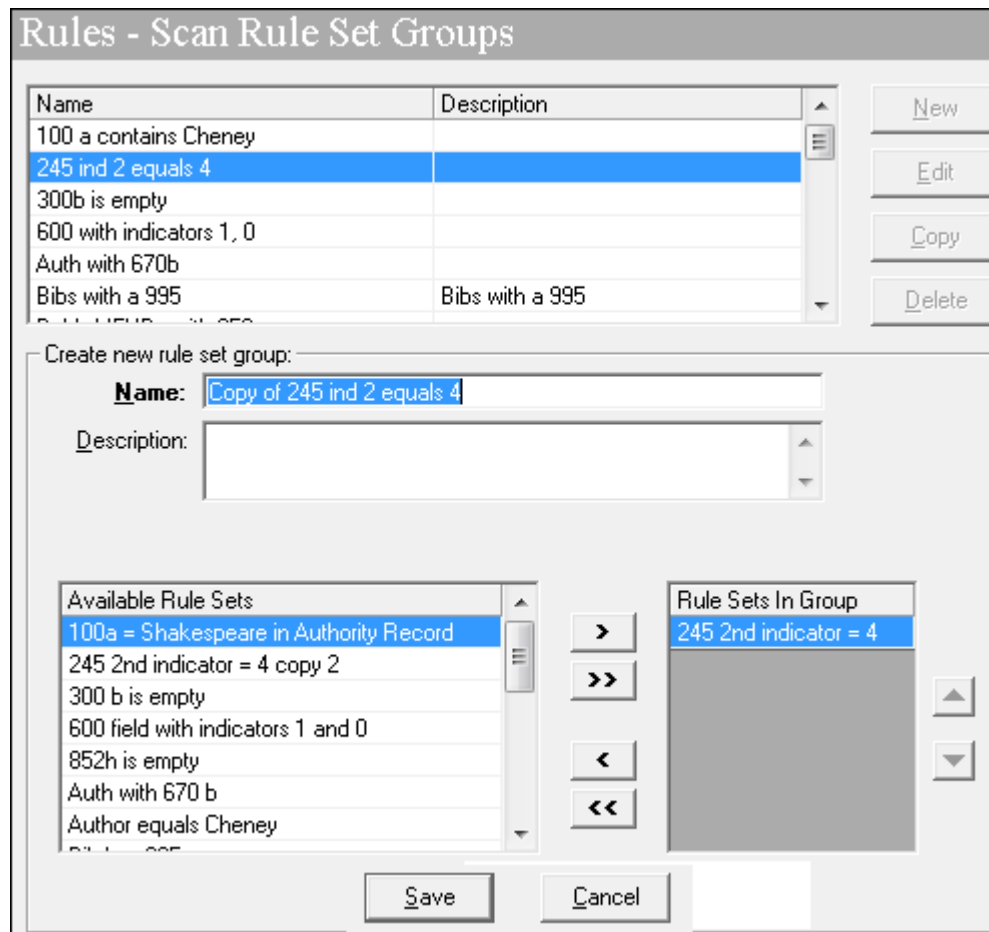


Figure 29: Copying Scan Rule Set Groups

- 3 Make any modifications to the scan rule set group and click **Save**.

Data Change Rule Sets

Data change rule sets contain one or more rules that define the logic (conditions/consequences) that the GDC rules engine uses to apply data changes to records that have been identified in a record set.

Creating data change rule sets prepares you for the next step that is necessary for executing a data change request through Job Management (see [GDC Execution/Job Management](#) on page 105). Separately, one or more rule sets need to be saved to a rule set group through Data Change Rule Set Groups (see [Data Change Rule Set Groups](#) on page 64).

With Data Change Rule Sets, you can:

- [Create \(New\) Data Change Rules](#)
- [Edit Data Change Rules](#)
- [Delete Data Change Rules](#)
- [Share \(Export/Import\) Data Change Rules](#)
- [Copy Data Change Rule Sets](#)

Create (New) Data Change Rules

To create data change rules:

- 1 Click **New**.
- 2 Enter the name (up to 200 alphanumeric characters) and description (up to 2,000 alphanumeric characters) for the new rule set.

Since you are most likely to have many rule sets, use the Description field to help you distinguish the purpose of each rule set.

NOTE:

Data change rule sets and scan rule sets may not have the same name.
Each rule set (data change or scan) must be unique.

Create new rule set:

Name:

Description:

Rule Name	Condition
-----------	-----------

Figure 30: Add New Rule

3 Click **Add**.

4 Enter the new rule name (up to 200 alphanumeric characters).

You may have more than one rule in a rule set in order, for example, to add, replace, and delete information in your database. Each rule requires its own name.



Figure 31: New Rule Name

5 Click **Add** to define the conditions for the data change rule.

The default Rule Condition Template displays.

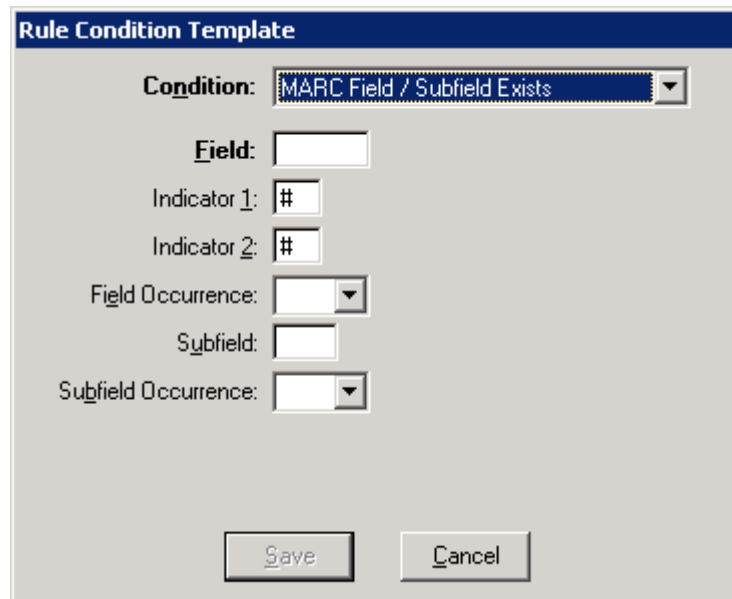


Figure 32: Rule Condition Template

6 Select one of the following conditions from the Condition field drop-down list.

- Create Date
- Created By
- MARC Control Field Exists
- MARC Control Field Value
- MARC Control Field/Subfield Exists

- MARC Field Has Any
- MARC Field nnX Exists
- MARC Field nXX Exists
- MARC Field Value
- Update Date
- Updated By

With each different condition option, the dialog box changes to present the appropriate fields to complete for the condition selected.

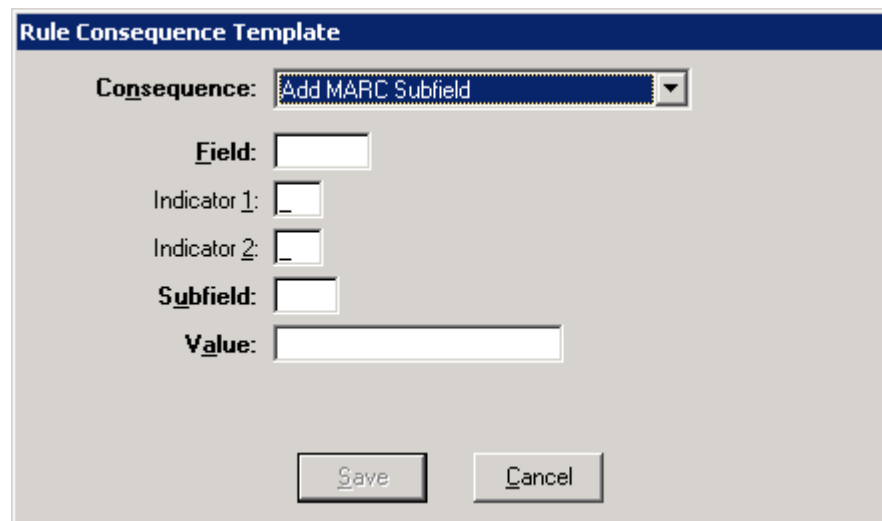
See [Conditions](#) on page 70 for a description of these options.

- 7 Enter the information required on the Rule Condition Template and click **Save**.
- 8 Click **Add** to enter the consequence for the rule.

The screenshot shows a dialog box for creating a rule. At the top, there is a text field labeled 'Name:' containing the text 'Remove Subfield U'. Below this is a section labeled 'Conditions:' which contains a table. The table has two columns. The first column contains the word 'WHEN'. The second column contains the text 'MARC is "856"["0"]."u"["0"]'. To the right of the table are five buttons: 'Add', 'Edit', 'Remove', 'Up', and 'Down'. Below the table is a section labeled 'Consequences:' which is currently empty. To the right of this section is an 'Add' button.

Figure 33: Consequences Add Button

The default Rule Consequence Template displays.



The image shows a dialog box titled "Rule Consequence Template". It contains a "Consequence:" label followed by a drop-down menu with "Add MARC Subfield" selected. Below this are five input fields: "Field:", "Indicator 1:", "Indicator 2:", "Subfield:", and "Value:". At the bottom are "Save" and "Cancel" buttons.

Figure 34: Rule Consequence Template

- 9 Select one of the following consequences from the drop-down list, enter the information required, and click **Save**.
- Add MARC Control Field
 - Add MARC Field
 - Add MARC Subfield
 - Change MARC
 - Change Owning Library
 - Copy MARC Field/Subfield
 - Copy MARC Field/Subfield (deprecated)
 - Export Option
 - Record Disposition (Changed, Delete, Error)
 - Remove MARC Control Field
 - Remove MARC Field/Subfield
 - Replace String At Position
 - Replace String With String
 - Set Subfield To Value

NOTE:

Every data change rule set requires that a record disposition consequence be defined as the last consequence. If one is not defined, the system adds one with Changed identified as the parameter.

For each different consequence option, the dialog box changes to present the appropriate fields to complete for the consequence selected.

See **Consequences** on page 80 for a description of these options.

- 10 When you have finished entering the condition and consequence information for the new rule, click **OK**.

A new rule row displays for your new rule set.

Create new rule set:

Name: URL Change

Description: Update link

Rule Name	Condition
Update 856 Link	When MARC with subfield "856". "u" contains "www.ref.oclc.org"

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 35: New Rule Row

If you have multiple rules defined in your rule set, you may use the Up and Down buttons to change the order of the rows to specify the order in which the rules should be processed.

When you create multiple rules (multiple rows) in a rule set, they use and-then logic. The first rule is executed and then the next rule is executed and so forth. See **GDC Scan Logic** on page 93 for additional logic information and comparison with scan.

- 11 When you have finished entering one or more rules, click **Save** to store your new rule set.

Edit Data Change Rules

To edit data change rules:

- 1 Select the rule set (click the row) that contains the rule that you want to change.

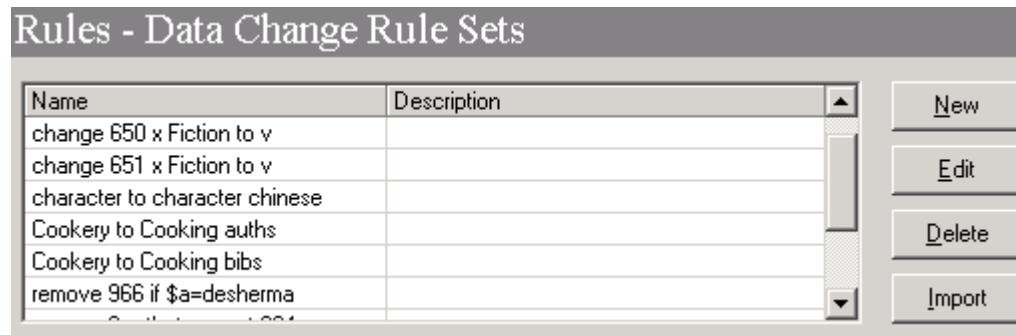


Figure 36: List of Rule Sets

- 2 Click the row of the rule you want to edit (if there is more than one rule in your rule set), and click **Edit**.

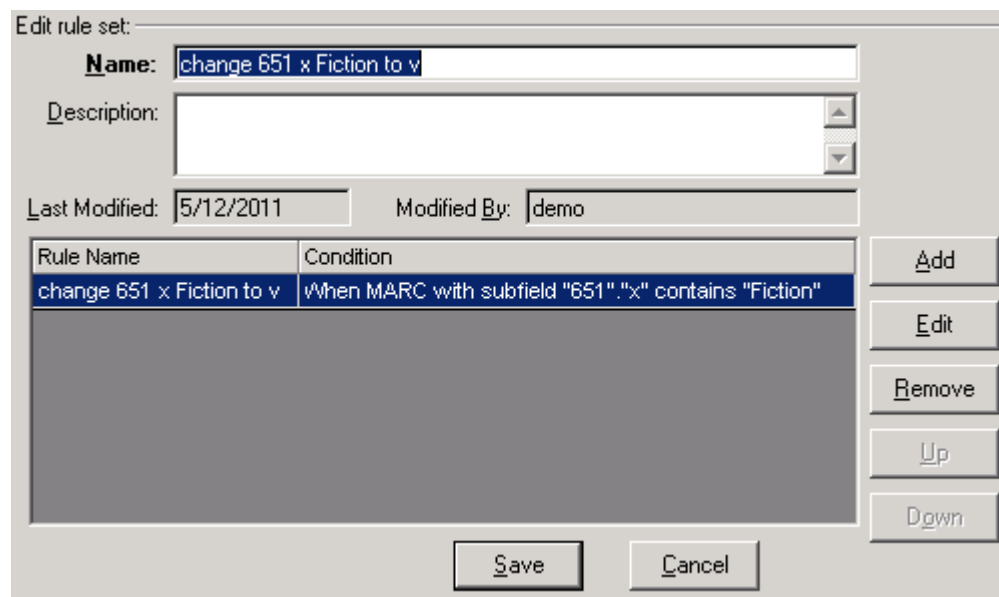


Figure 37: Edit Rule

- 3 Change the conditions and/or consequences to meet your requirements.
See **Conditions** on page 70 and **Consequences** on page 80 for a description of these options.
Use the Up and Down buttons to change the order of your conditions or consequences as needed if you have more than one.
- 4 Click **OK**.
- 5 Optionally, use the Up and Down buttons to change the order of your data change rules if there is more than one.
- 6 Click **Save** to store the updated rule(s)/rule set.

When you save an updated data change rule set, any changes are automatically reflected in any data change rule set group that contains that data change rule set.

IMPORTANT:

Since common rule sets may be shared/used in multiple rule set groups, it is important to note the timing of the changes you make to these common rule sets to avoid unintended changes for pending data change batch jobs. If you modify and resave a data change rule set that is in a rule set group for a data change batch job with a status of Pending, the most recent modified/saved rule set is used when the job runs. Modifications to shared rule sets do not affect data change batch jobs with a status of Running.

Delete Data Change Rules

You may delete rules using the following options:

- Delete an entire rule set
Select the set and click Delete.

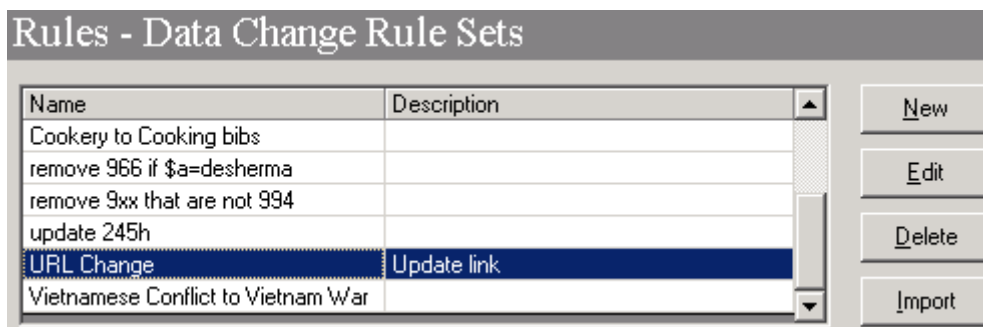


Figure 38: Delete Rule Set

If the set contains multiple rules, all the rules saved in it are deleted.

NOTE:

You cannot delete a data change rule set that belongs to a data change rule set group.

- Remove a single rule from a set
Select the rule and click Remove.

Edit rule set:

Name: remove 9xx that are not 994

Description:

Last Modified: 5/12/2011 **Modified By:** demo

Rule Name	Condition
remove 949	When MARC is "949"
remove 950	When MARC is "950"
remove 990	When MARC is "990"
remove 999	When MARC is "999"

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 39: Remove Rule

- Delete part of a rule
When a rule has one or more conditions/consequences, select a condition and/or consequence, and click Remove to delete part of a rule.

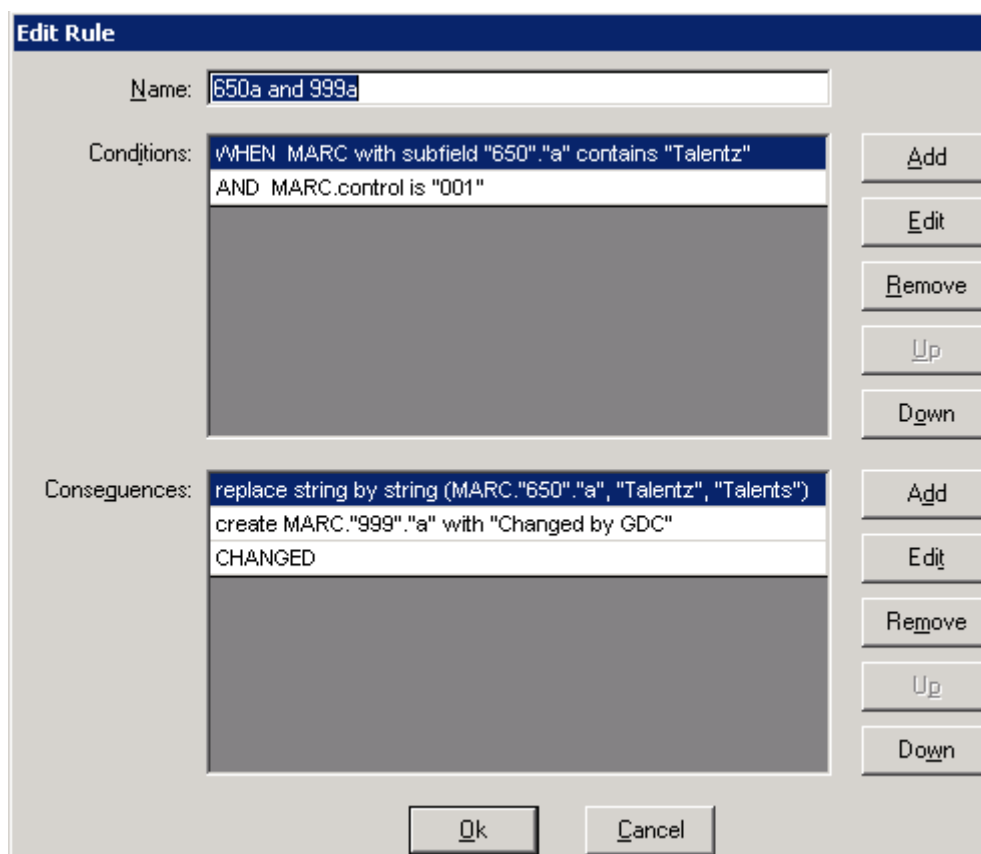


Figure 40: Remove Conditions/Consequences

NOTE:

Regarding display characteristics for the dialog box shown in **Figure 40**, the background color for a row may be gray and the edit button disabled when the GDC client is unable to parse a condition or consequence. The background color, of course, depends on your system color settings and is changeable with session preferences (see **Colors and Fonts** on page 163). If you right-click the affected row, an informational, pop-up message displays when the reason is known for the condition or consequence parsing issue.

Share (Export/Import) Data Change Rules

For institutions that want to share rules with other institutions or within a consortium, GDC provides an export/import capability.

HINT:

You may choose to use Ex Libris EL Commons to facilitate sharing rule sets with other locations.

To export data change rules:

- 1 Select the rule set to export and click **Export**.

Name	Description
change 650 x Fiction to v	
change 651 x Fiction to v	
character to character chinese	
Cookery to Cooking auths	
Cookery to Cooking bibs	
remove 966 if \$a=desherma	

Name: change 650 x Fiction to v

Description:

Last Modified: 5/12/2011 Modified By: demo

Set: package com.exlibris.urm.mms.rules

Export

Figure 41: Select/Export Rule Set

The Export Rule Set to Disk dialog box displays.

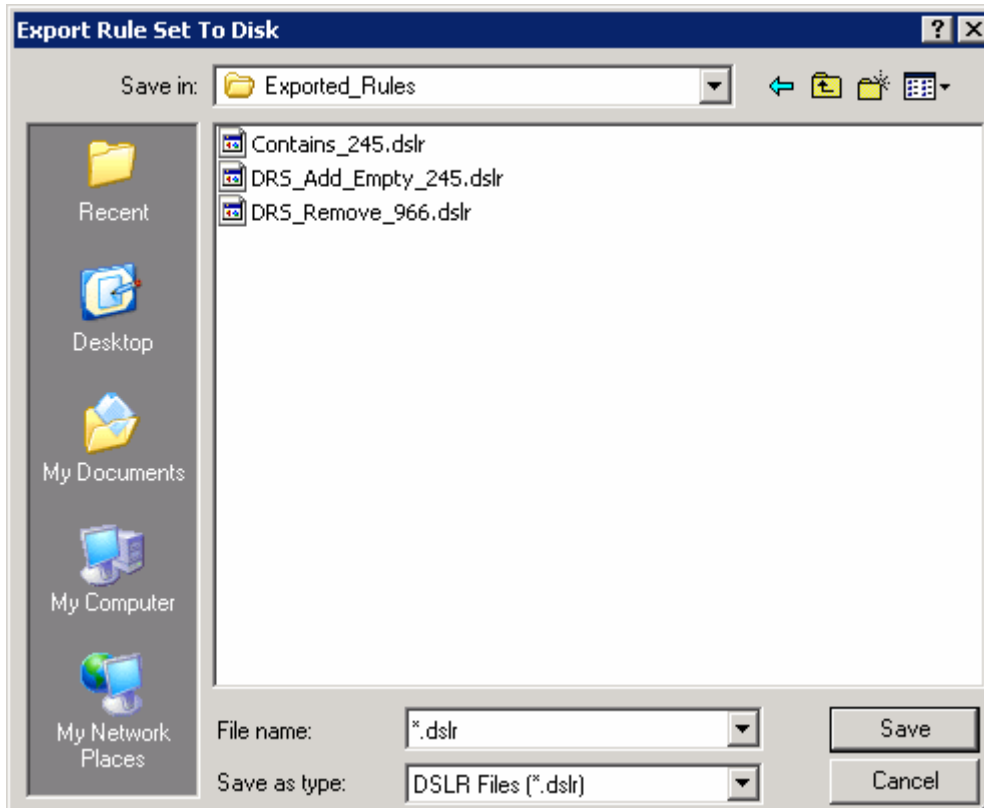


Figure 42: Export Rule Set to Disk

- 2 Type the .dslr file name (replacing the asterisk), and click **Save**.
Optionally, select a different folder or create a new folder for storing the .dslr file.

NOTE:

You can define default directories in session preferences (see **Folders and Files** on page 161), one folder for exporting/importing data change rule sets and another folder for exporting/importing scan rule sets.

To import data change rules:

- 1 Click **Import**.

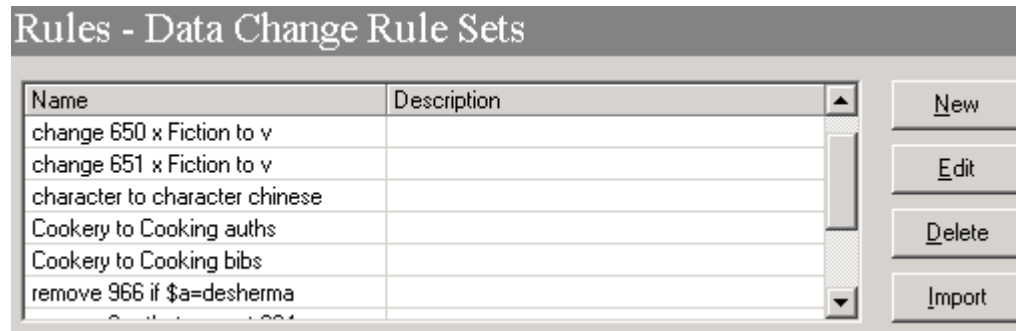


Figure 43: Import

- 2 Select the .dslr file to import and click **Open**.

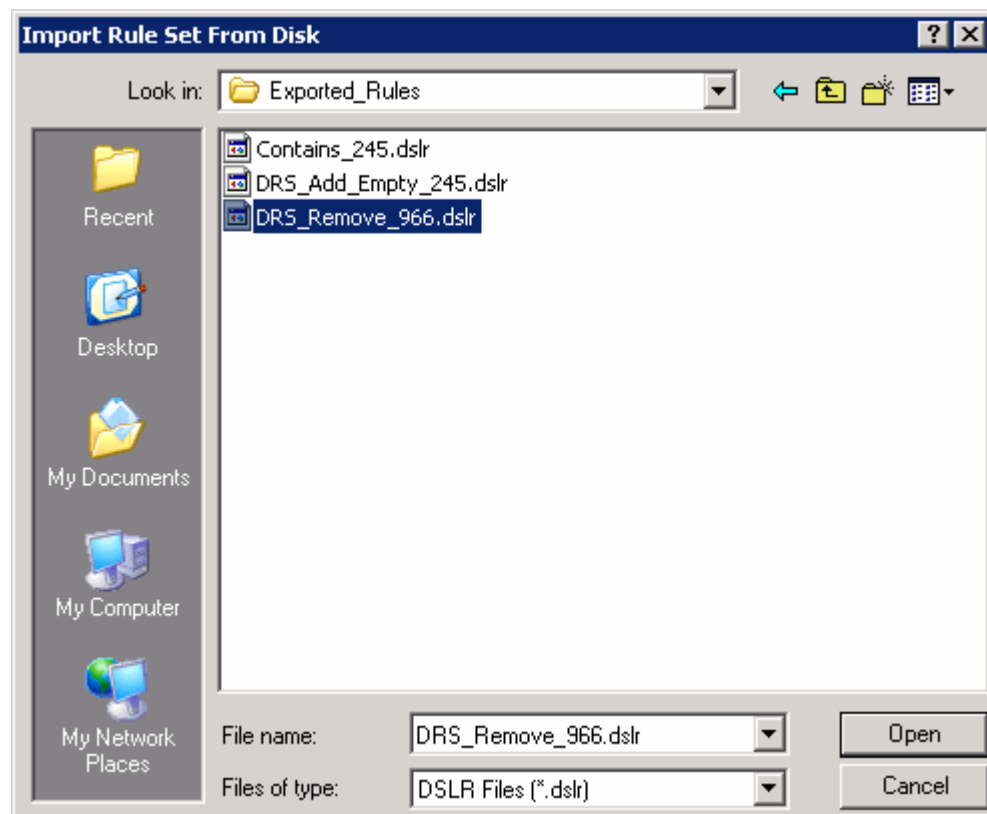
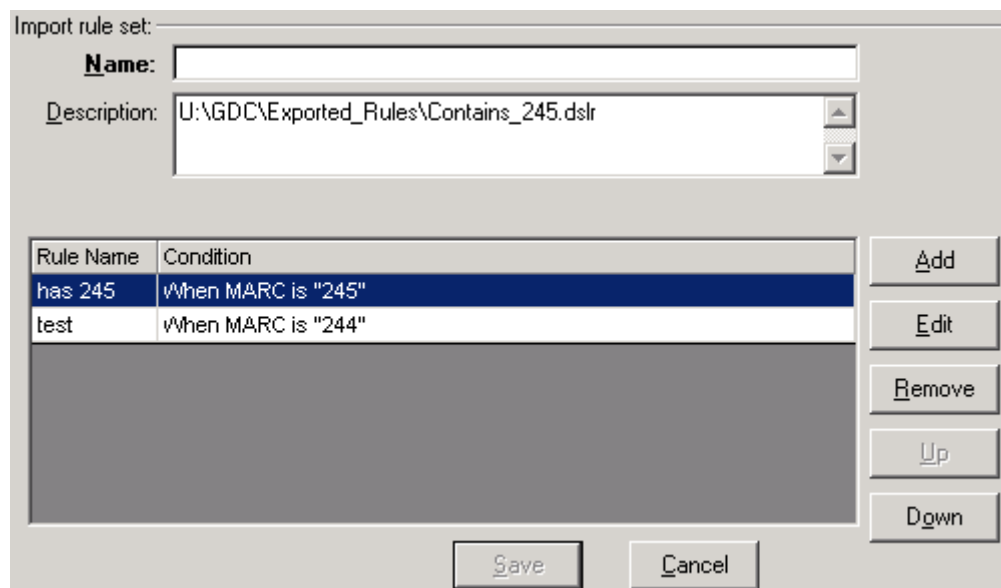


Figure 44: Import Rules

- 3 Enter the name for the imported rule set, and click **Save**.



Import rule set:

Name:

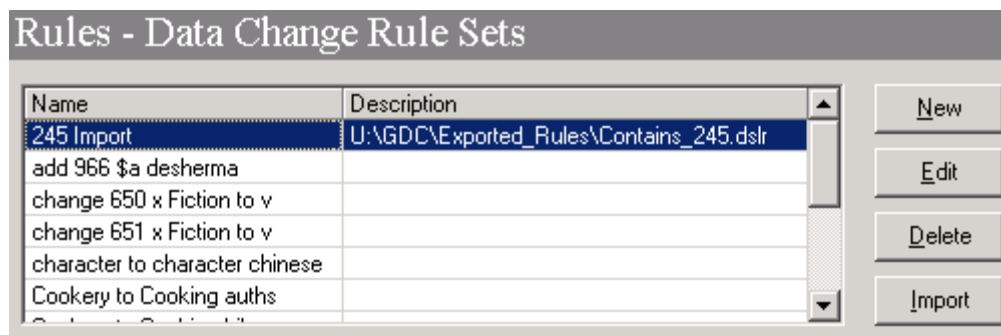
Description:

Rule Name	Condition
has 245	When MARC is "245"
test	When MARC is "244"

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 45: Name Imported Rule Set

The imported file is added to the list of existing rule sets.



Rules - Data Change Rule Sets

Name	Description
245 Import	U:\GDC\Exported_Rules\Contains_245.dslr
add 966 \$a desherma	
change 650 x Fiction to v	
change 651 x Fiction to v	
character to character chinese	
Cookery to Cooking auths	

Buttons: New, Edit, Delete, Import

Figure 46: Imported Rule Set

Copy Data Change Rule Sets

Once you have created a data change rule set, you can use the Copy function to make a duplicate of it. This is especially useful when you want to create another data change rule set that is similar to an existing data change rule set but with a few modifications.

To create a copy of a data change rule set:

- 1 Highlight the row of the data change rule set that you want to copy.
- 2 Click **Copy**.

The Rules - Data Change Rule Sets dialog box expands to display the **Create new rule set** section in edit mode in order for you to make any modifications before saving the duplicate data change rule set. The system automatically prepends the name of the duplicate rule set with *Copy of*, but you can also rename the duplicate file.

Name	Description
change 245 to 945	
Change 260c from I to 1	
Change 45@0 to 4500 in leader	
Change Dept to Department in 710b	
Change language code	
Change MFHD loc from main to ACQ	

Create new rule set:

Name: Copy of Change 260c from I to 1

Description:

Rule Name	Condition
260c I to 1	When MARC with subfield "260"."c" contains "I"

Figure 47: Copying Data Change Rule Sets

- 3 Make any modifications to the data change rule set and click **Save**.

Data Change Rule Set Groups

A data change rule set group contains one or more rule sets and is used in GDC Job Management (see [Figure 48](#)) to identify the data change rules to be processed for a specific job. This is the GDC component that contains the rules/instructions that specify the changes to occur when you process a GDC job.

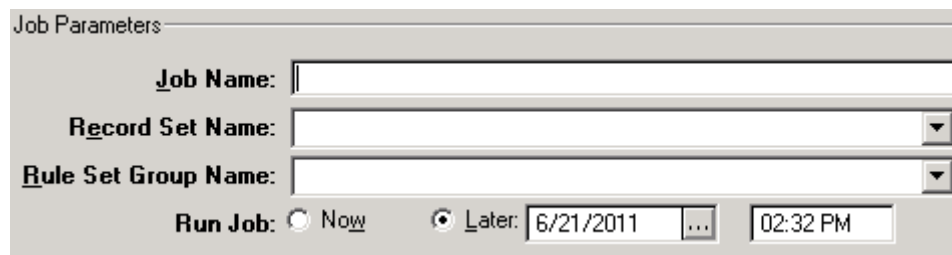
The image shows a screenshot of a software interface titled "Job Parameters". It contains three input fields: "Job Name:" followed by a text box, "Record Set Name:" followed by a text box with a dropdown arrow, and "Rule Set Group Name:" followed by a text box with a dropdown arrow. Below these fields, there is a "Run Job:" section with two radio buttons: "Now" and "Later:". The "Later:" radio button is selected. To the right of the "Later:" radio button, there is a date field showing "6/21/2011" with a calendar icon, and a time field showing "02:32 PM".

Figure 48: Data Change Job Management Job Parameters

A data change rule set group is required for processing changes to bibliographic, holdings (MFHD), and authority records that you have identified in record sets.

With GDC Data Change Rule Set Groups, you can:

- **Create (New) Data Change Rule Set Groups**
- **Edit Data Change Rule Set Groups**
- **Delete Data Change Rule Set Groups**
- **Copy Data Change Rule Set Groups**

Create (New) Data Change Rule Set Groups

To create data change rule set groups:

- 1 Click **New**.

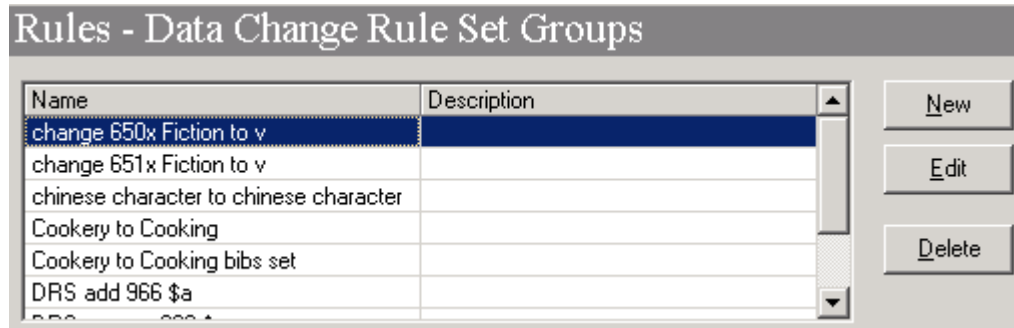


Figure 49: Click New

- 2 Enter the name and description for the new data change rule set group.
- 3 Select one or more rule sets (defined in Data Change Rule Sets) from the Available Rule Sets list, and click **Save**.

With the single right arrow button, you may add one rule set at a time to the Rule Sets in Set list. The double right arrow button moves all the files in the Available Rule Sets list to the Rule Sets in Set list.

Once there are rules selected in the Rule Sets in Set list, the single left arrow button and the double left arrow button are active, and you can move your selections back to the Available Rule Sets list.

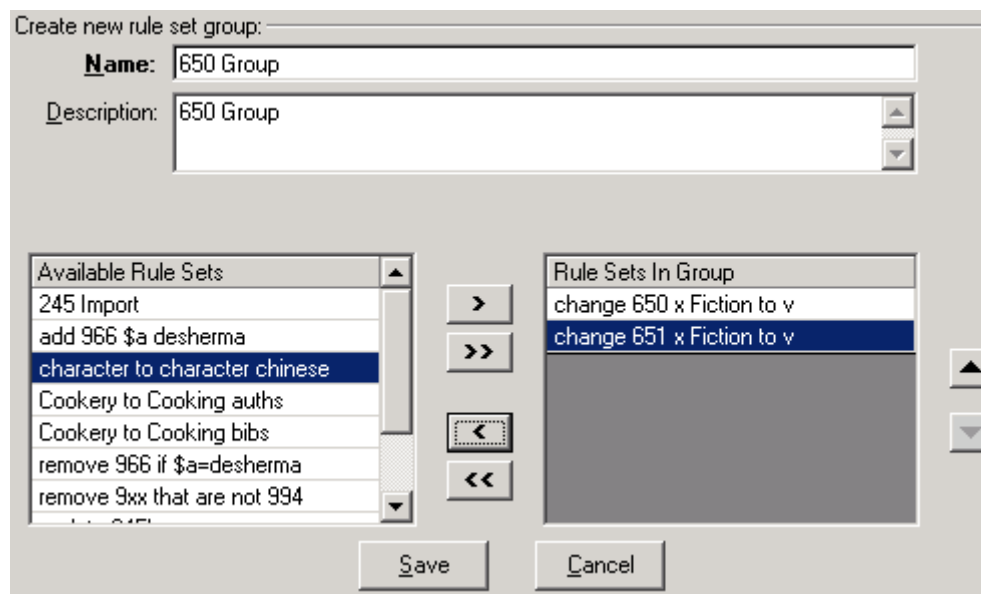


Figure 50: New Rule Set Group Selections

Use the up/down arrows, if necessary, to change the order of the selected rule sets so that the rules process in the correct sequential order.

NOTE:

When you add multiple rule sets (multiple rows) to a rule set group, they use and-then logic. The first rule set is executed and then the next rule set is executed and so forth. See **GDC Scan Logic** on page 93 for additional logic information and comparison with scan.

The new rule set group is added to the existing list of rule set groups and displays the characteristics of the new set to include the Last Modified date and the Modified By operator ID.

Name	Description
650 Group	650 Group
change 650x Fiction to v	
change 651x Fiction to v	
chinese character to chinese character	
Cookery to Cooking	
Cookery to Cooking bibs set	

Name: 650 Group

Description: 650 Group

Last Modified: 6/21/2011 Modified By: demo

Rules: Rule Sets In Group

- change 650 x Fiction to v
- change 651 x Fiction to v

Figure 51: Saved Data Change Rule Set Group

Edit Data Change Rule Set Groups

For data change rule set groups, you may change the:

- Rule set group name and/or description
- Selections made to the Rule Sets in Set list (add or remove)
- Order of the selected rule sets

To edit data change rule set groups:

- 1 Click **Edit**.
- 2 Make your changes, and click **Save**.

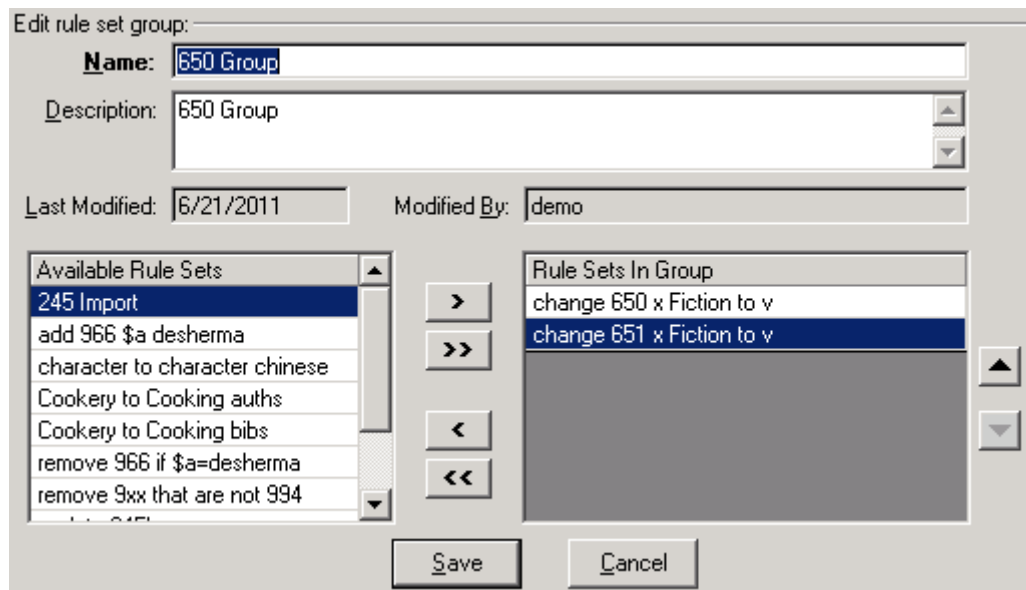


Figure 52: Edit Data Change Rule Set Group Selections

Delete Data Change Rule Set Groups

To delete data change rule set groups:

- 1 Select the row of the rule to be deleted from the data change rule set groups list.
Use the details of the data change rule set group that display for the selected set to confirm that you have selected the correct set to delete.
- 2 Click **Delete**.
- 3 Click **Yes**, when prompted, to confirm your delete request.

NOTE:

You can only delete one data change rule set group at a time.

NOTE:

You cannot delete a data change rule set group if it is specified for use with any pending or running batch jobs. Once the job's status, however, has reached Done, Killed, or Failed, the data change rule set group can be deleted.

Copy Data Change Rule Set Groups

Once you have created a data change rule set group, you can use the Copy function to make a duplicate of it. This is especially useful when you want to create another data change rule set group that is similar to an existing data change rule set group but with a few modifications.

To create a copy of a data change rule set group:

- 1 Highlight the row of the data change rule set group that you want to copy.
- 2 Click **Copy**.

The Rules - Data Change Rule Set Groups dialog box expands to display the **Create new rule set group** section in edit mode in order for you to make any modifications before saving the duplicate data change rule set group. The system automatically prepends the name of the duplicate rule set group with *Copy of*, but you can also rename the duplicate file.

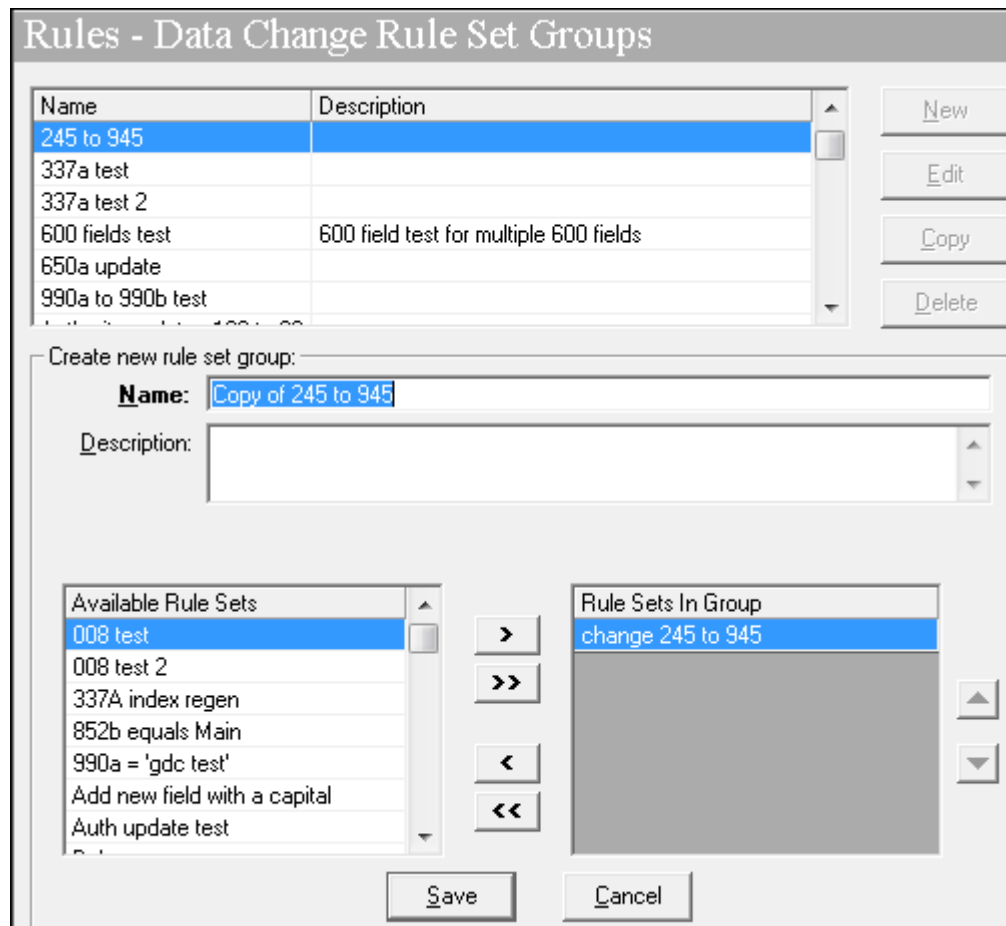


Figure 53: Copying Data Change Rule Set Groups

- 3 Make any modifications to the data change rule set group and click **Save**.

Conditions

Conditions are used to identify what is to be processed or selected in data changes or scanning, respectively.

With data changes for example, if you want to change the 949 field to the 969 field with data change rules, it is the condition that identifies the 949 field for change (but only for the records stored in a record set that you specify in your data change batch job). Separately, the consequence (see [Consequences](#) on page 80) identifies the action to be taken.

With scanning for example, if you want to scan your database and only select the records that have a 949 field to be saved in a record set through your scan batch job, it is the condition that identifies the 949 field for selection purposes. The consequence specifies the action to include the record in the record set.

The condition options for data change rules and scan rules are the same. However, the consequence options are different.

See [Table 1](#) for a description of the condition options.

NOTE:

If a rule applies multiple conditions to the same MARC tag, each condition for that tag must be in its own rule. (Multiple rules can be in the same rule set).

Table 1. Data Change and Scan Rule Condition Options

Options	Description
Create Date	Use this option to set a date-specific condition for records created: ■ Before a specific date ■ After a specific date ■ Between a range of dates
Created By	Use this option to set a condition for records created by a specific operator. NOTE: Enter the Voyager operator ID not the operator name that is defined in Voyager System Administration.

Table 1. Data Change and Scan Rule Condition Options

Options	Description
MARC Control Field Exists	Use this option to set a condition for records where the control field that you specify exists. Control fields that you can select are: ■ LDR (leader) ■ 001 ■ 003 ■ 004 ■ 005 ■ 006 ■ 007 ■ 008 For the LDR control field option, only bytes 6 and 7 (material type) are defined as named positions in the Position drop-down options list. For the control field 008 option, only bytes 00-17 and 35-39 are defined as named positions in the Position drop-down options list. NOTE: When a named position is not listed in the Position drop-down options list and no option is selected, the entire control field is checked for existence. If a position is not named or defined, consider using the byte position option to check certain positions in the LDR.

Table 1. Data Change and Scan Rule Condition Options

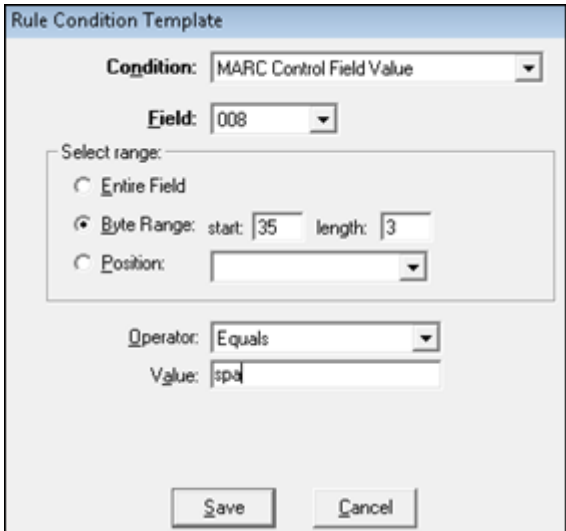
Options	Description
MARC Control Field Value	Use this option to set a condition for records where the control field that you specify has a certain value string. For the control field specified, you can select Entire Field, Byte Range, or Position. The field value (string) operators you can specify are Equals, Does Not Equal, or Contains. For example, to identify the records containing Spanish identified in 35-37 in the 008 control field, specify: ■ Field <i>008</i> ■ Byte Range start <i>35</i>, length <i>3</i> ■ Operator <i>Equals</i> ■ Value <i>spa</i>  NOTE: If a position is not defined in the Position drop-down options list, consider using the Byte Range option to check certain positions in the LDR, 006, 007, and 008. When a named position does not exist (or has not been selected) and no byte range is selected, the entire control field is checked for the condition. When using the Equals or Does Not Equal operator on a position of more than one byte, you must type in a value of the same length. If a blank is possible, include a space in the value.

Table 1. Data Change and Scan Rule Condition Options

Options	Description
MARC Field Exists And Does Not Have	Use this option to identify bibliographic, holdings, or authority records that have at least one occurrence of the MARC field specified in this condition without its specified subfield. For this condition, the Indicators and Field Occurrence that you specify are part of the field attributes and all must exist for a match to be found for this condition. In essence, this condition is the opposite of the condition MARC Field Has Any. You may specify multiple subfields with this condition by using a comma to separate them in the Subfields parameter. The commas entered in this parameter use OR logic, not AND logic, between subfields. See Usage Example 4 – MARC Field Exists And Does Not Have on page 227 for more information.

Table 1. Data Change and Scan Rule Condition Options

Options	Description
MARC Field/Subfield Exists	Use this option to set a condition for records where the field or field/subfield that you specify exists. This condition option also allows you to specify: ■ A value for Indicator 1 ■ A value for Indicator 2 NOTE: The Indicator 1 and 2 fields are one-character text fields. You may specify any character or blank (space) in these fields for matching except for the asterisk (*) or pound sign (#) which are reserved-use characters. When the asterisk (or the pound sign) is entered in these fields, it acts as a wildcard character that means any indicator value is considered a match. A blank (space) in the indicator field specifies that the system must match on a blank (space) in the indicator field. ■ The occurrence of the field (first, second, and so forth) if there is more than one occurrence ■ The occurrence of the subfield (first, second, and so forth) if there is more than one occurrence NOTE: If no specific occurrence is indicated, any matching occurrence causes the condition to evaluate as true. This applies to any place where occurrences can be specified.

Table 1. Data Change and Scan Rule Condition Options

Options	Description
MARC Field Has Any	Use this option to set a condition for records where you are trying to determine if the field has any of the subfield(s) that you specify. This condition option also allows you to specify: ■ A value for Indicator 1 ■ A value for Indicator 2 NOTE: The Indicator 1 and 2 fields are one-character text fields. You may specify <code>abcdefghijklmnopqrstuvwxyz0123456789*</code> or blank (space) in these fields. The asterisk acts as a wildcard character that means any indicator value is considered a match. A blank (space) in the indicator field specifies that the system must match on a blank (space) in the indicator field. ■ The occurrence of the field (first, second, and so forth) if there is more than one occurrence
MARC Field nnX Exists	Use this option to set a condition for records that contain fields beginning with <i>nn</i> where you specify a two-digit number in the field provided. For example, to identify the records containing fields that begin with 85, such as the 852 and 856 fields, you specify 85 in the field provided for this option. NOTE: In this example, all fields 850 through 859 are considered a match for this condition.
MARC Field nXX Exists	Use this option to set a condition for records that contain fields beginning with <i>n</i> where you specify a one-digit number in the field provided. For example, to identify the records that contain fields that begin with 1, such as the 100 and 110 fields, you specify 1 in the field provided for this option. NOTE: In this example, all fields 100 through 199 are considered a match for this condition.

Table 1. Data Change and Scan Rule Condition Options

Options	Description
MARC Field Value	Use this option to identify bibliographic, holdings, or authority records with a specific value for a field/subfield. You can specify the following operators for this condition: exists, equals, does not equal, contains, does not contain, or starts with. NOTE: To identify records that have a string/content in any field in the record, select contains for the Operator field and leave the Value field blank. This condition option also allows you to specify: ■ A value for Indicator 1 ■ A value for Indicator 2 NOTE: The Indicator 1 and 2 fields are one-character text fields. You may specify <code>abcdefghijklmnopqrstuvwxy0123456789*</code> or blank (space) in these fields. The asterisk acts as a wildcard character that means any indicator value is considered a match. A blank (space) in the indicator field specifies that the system must match on a blank (space) in the indicator field. ■ The occurrence of the field (first, second, and so forth) if there is more than one occurrence ■ The occurrence of the subfield (first, second, and so forth) if there is more than one occurrence For example, you could use this rules condition to specify records that contain <i>videorecording</i> in 245$\dagger$h.
Opac Suppress Flag is	Use this option to identify suppressed or unsuppressed bibliographic or holdings records.
Owning Library	Use this option to include or exclude records associated with certain owning libraries.
Update Date	Use this option to set a date-specific condition for records updated: ■ Before a specific date ■ After a specific date ■ Between a range of dates

Table 1. Data Change and Scan Rule Condition Options

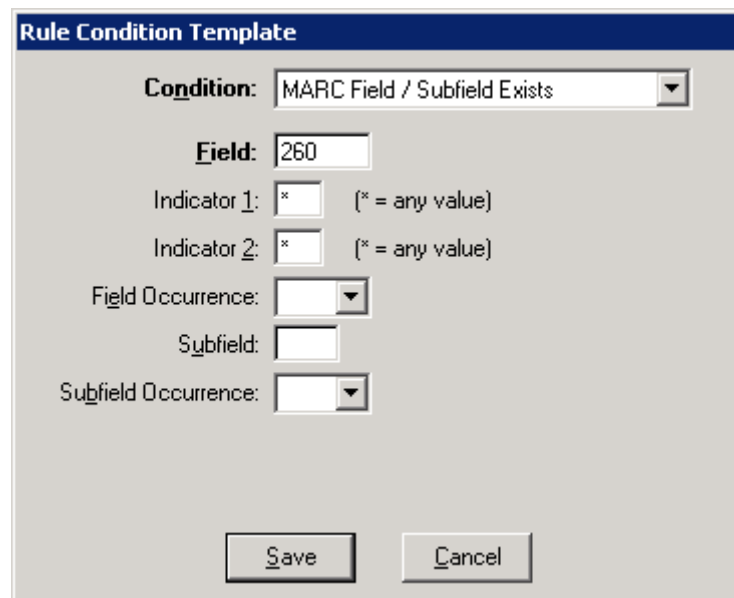
Options	Description
Updated By	Use this option to set a condition for records updated by a specific operator (Voyager operator ID).
	NOTE: This is specific to the last operator to update the record.

Special Condition Considerations

A condition is required for each rule. In some cases, like when you want to add a field, this may not seem obvious. In this instance, you may, for example, specify a condition of field 001 exists and, subsequently, the consequence to add the field you want to add.

When you define a data change rule for a subfield, you must define the subfield in the condition in order for the subfield in the consequence to be changed. The following data change rule example fails because subfield a (Ɽa) is not specified in the condition:

Change intended:	260Ɽa Berkley to 260Ɽa Berkeley
Condition specified: (see the figure below)	MARC Field/Subfield Exists Field=260
Consequence specified:	Replace String with String Field=260 Subfield=a Replace string=Berkley With string=Berkeley

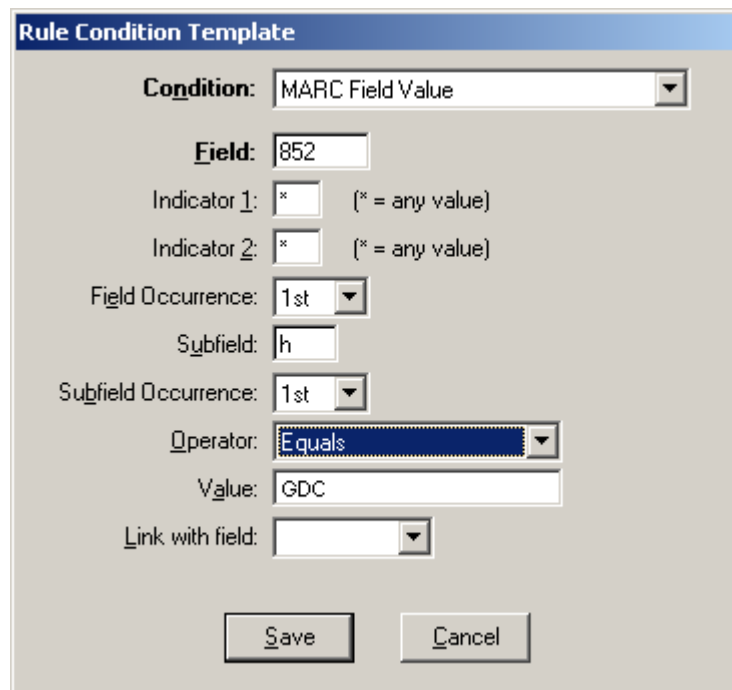


The image shows a 'Rule Condition Template' dialog box. It has a title bar with the text 'Rule Condition Template'. Inside the dialog, there are several fields and buttons. The 'Condition' field is a dropdown menu showing 'MARC Field / Subfield Exists'. The 'Field' field is a text box containing '260'. Below 'Field' are two indicator fields: 'Indicator 1' and 'Indicator 2', both containing an asterisk (*). To the right of each indicator field is a small text label: '(* = any value)'. Below the indicators are two more fields: 'Field Occurrence' and 'Subfield Occurrence', both of which are dropdown menus. At the bottom of the dialog are two buttons: 'Save' and 'Cancel'.

Figure 54: Subfield a Missing

Linking Conditions

Certain combinations of conditions may be linked. This can be useful where two conditions need to be applied to the same MARC field tag with a single consequence. For situations like these, the conditions should be linked. This linking is created within the Rule Condition Template from Rules > Date Change Rule Sets > Edit > Add or Edit > Condition Add or Edit.



The image shows a 'Rule Condition Template' dialog box. It contains several input fields and dropdown menus. The 'Condition' dropdown is set to 'MARC Field Value'. The 'Field' text box contains '852'. 'Indicator 1' and 'Indicator 2' are both set to '*' with a note '(* = any value)'. 'Field Occurrence' is set to '1st'. 'Subfield' is set to 'h'. 'Subfield Occurrence' is set to '1st'. The 'Operator' dropdown is set to 'Equals'. The 'Value' text box contains 'GDC'. The 'Link with field' dropdown is currently empty. At the bottom are 'Save' and 'Cancel' buttons.

Figure 55: Rule Condition Template Link with field Option

The Link with field drop-down list displays when the following conditions in this dialog box are met.:

- Condition = MARC Field Value
- Operator = Equals or Does Not Equal

The drop-down list is enabled when the following specific conditions have been created previously:

- Condition = MARC Field Has Any
- Condition = MARC Field Value & Operator = Contains
- Condition = MARC Field /Subfield Exists
- Condition = MARC Field nnX Exists
- Condition = MARC Field nXX Exists

These conditions populate the Link with field drop-down list.

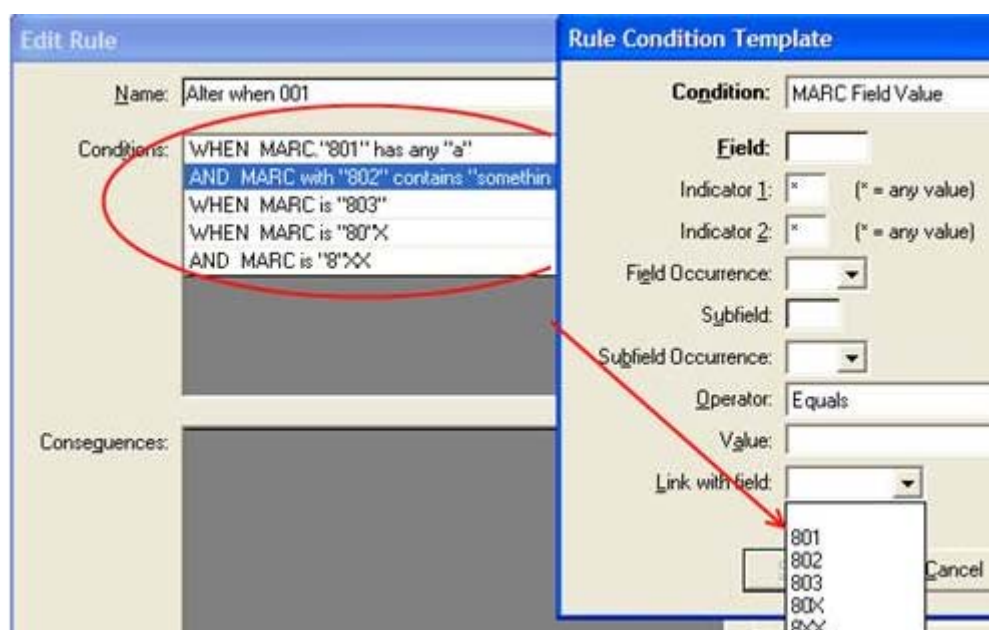


Figure 56: Link with field Example

If a new rule is created with no previously-created conditions, this drop-down list is disabled. As valid conditions are created, the drop-down list is updated.

Consequences

Consequences are used to identify the change/action to be taken or selection to be made in data changes or scanning, respectively. These are processed in a batch job specified in GDC Job Management (see [GDC Execution/Job Management](#) on page 105).

If, for example, you want to change the 949 field to the 969 field, the consequence identifies the 969 change to be made.

The consequence options for data change rules and scan rules are different.

See [Table 2](#) and [Table 3](#) for a description of the consequence options.

Table 2. Data Change Rule Consequence Options

Options	Description
Add MARC Control Field	Use this option to identify the MARC control field/value to be added.
Add MARC Field	Use this option to identify the MARC field to be added and its occurrence. When the system processes this consequence, indicator values are required. If you do not specify values for the Indicator 1 and Indicator 2 fields, the system inserts blanks (spaces) for the indicators. NOTE: The Add MARC Field consequence must be followed by an Add MARC Subfield consequence for the field specified in Add MARC Field. You cannot add an empty field.

Table 2. Data Change Rule Consequence Options

Options	Description
Add MARC Subfield	Use this option to identify a subfield to be added to a record. NOTE: This option may be used to add a subfield to an existing field, or it may be combined with the Add MARC Field consequence to create a subfield in a new field. Optionally, you may specify: ■ Link to condition field (see Link to Condition Field on page 89) Select this check box so that the GDC rule engine knows to add the subfield to the field(s) referenced in the rule condition. ■ Values for Indicator 1 and Indicator 2 NOTE: ▪ If you do not select the Link to condition field check box, the behavior of the GDC rules engine and how it processes the consequence(s) is dependent on what else is going on with the consequences and the values specified in Indicator 1 and 2. ▪ If the Add MARC Field consequence has already been executed for the field specified in Add MARC Subfield, the indicators for Add MARC Subfield are ignored because the field and indicators come from the newly created field (even if the indicators do not match but as long as the field does). ▪ If the Add MARC Subfield consequence is not preceded by an Add MARC Field consequence for the specified field, the indicators are required (the client defaults to blanks/spaces if nothing is specified); and whether a new field is created or the subfield is added to an existing field (identified by the condition or some other rule being executed) depends on whether the field and indicators all match or do not match. ■ Content (value) for the subfield If you leave the Value field blank, the subfield is added to the record without any content.

Table 2. Data Change Rule Consequence Options

Options	Description
Change MARC	Use this option to identify field, subfield, and/or indicator changes. You can change: ■ Field to a new field ■ Subfield to a new subfield ■ Indicator 1 or Indicator 2 to a new value To change 245\$a to 245\$b, for example, specify: ■ Field 245 ■ To New Field 245 ■ Subfield <i>a</i> ■ to new subfield <i>b</i>
Change Owning Library	Use this option to change the designated owning library to a different owning library. Once you have added this option to a rule, it cannot be edited. Instead, you can use the consequence Remove button to delete the consequence row that contains the consequence with Change Owning Library selected.

Table 2. Data Change Rule Consequence Options

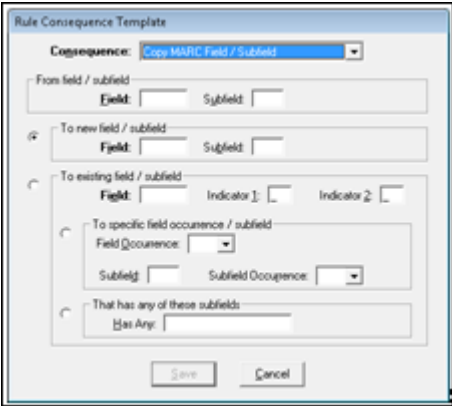
Options	Description
Copy MARC Field/Subfield	Use this option to identify a field (required)/subfield (optional) to copy to a new field (required)/subfield (optional). With enhanced precision, you can specify the copy to information when copying to an existing field/subfield. Your options include specifying the field (required) and indicators 1 and 2 (optional) and selecting from the two radio button options to specify occurrence of a field and/or subfield combination or the existence of one or more identified subfields (That has any of these subfields) using a comma to separate the subfields when more than one is entered. 
Copy MARC Field/Subfield (deprecated)	Use this option to identify a field/subfield to copy to a new field/subfield. In the copy to options, you may also specify Indicator 1 and Indicator 2 values. NOTE: This is the original Copy MARC Field/Subfield option that is available for your existing rules saved prior to the March 2013 service pack release. For future GDC rules development, it is recommended that you use the new version (Copy MARC Field/Subfield).

Table 2. Data Change Rule Consequence Options

Options	Description
Export Option	Use this option to set a record flag to identify records for export. The drop-down list options are: ■ No (don't export) ■ Yes (export and leave the export date as it is stored; if no export date exists, it will be set to the current date) ■ Yes, and change date (export and change the date for export to the current date)
Record Disposition	Use this option to specify one of the following resulting dispositions for the record after processing: ■ Changed ■ Delete ■ Delete All ■ Suppress ■ Suppress All ■ Unsuppress ■ Unsuppress All ■ Error See Using Consequences to Suppress, Unsuppress, and Delete Records on page 90 for additional information. One of the results of batch processing (see GDC Execution/Job Management on page 105) is to place the resulting records in the Changed, Delete, or Error disposition files. ■ *.marc_delete ■ *.marc_error ■ *.marc_after or *.marc_unchanged (for the Changed disposition) Every rule requires a record disposition consequence. If one is not defined when the record is saved, it automatically adds the Changed record disposition to the rule.

Table 2. Data Change Rule Consequence Options

Options	Description
Remove MARC Control Field	Use this option to specify the MARC control field to be removed from the record. You may select: ■ LDR (leader) ■ 001 ■ 003 ■ 004 ■ 005 ■ 006 ■ 007 ■ 008
Remove MARC Field/Subfield	Use this option to identify the field or field/subfield(s) to remove from the record. If you only specify a Field value, the entire field is removed. If you specify a field/subfield combination, only that subfield (within a field) is removed. Optionally, you may specify: ■ Link to condition field (see Link to Condition Field on page 89) Select this check box so that the GDC rule engine knows to remove the subfield to the field(s) referenced in the rule condition. NOTE: When the Link to condition field check box is selected, the Subfields option dynamically changes to Subfield so that you may specify the exact single subfield to be removed in instances where the condition specifies multiple subfields. ■ Multiple subfields for removal by entering them individually separated by commas (a,h,z) or as a range (a,h,p-z) when the Link to condition field check box is not selected

Table 2. Data Change Rule Consequence Options

Options	Description
Replace String At Position	Use this option to specify the content (With string) that is to replace existing content (or blank) that starts in a specific position (Replace string starting at position) that you identify in the consequence for a particular control field or subfield. To replace, for example, the content starting in position 35 of the 008 control field with <i>spa</i>, you specify: ■ Control Field <i>008</i> ■ With string <i>spa</i> ■ Replace string starting at position <i>35</i>

Table 2. Data Change Rule Consequence Options

Options	Description
Replace String With String	Use this option to specify the existing content (Replace string) and the replacement content (With string) for a specific control field or subfield. To replace, for example, [videorecording] with [sound recording] in 245\$h, you specify: ■ Field 245 ■ Subfield <i>h</i> ■ Replace string <i>[videorecording]</i> ■ With string <i>[sound recording]</i> NOTE: You may use JAVA regular expressions in the Replace string field. Example: Replace string = [Uu]nited With string = UNITED The Replace string is a regular expression checkbox must be selected when you use JAVA regular expressions in the Replace string field. NOTE: When creating a Replace String With String rule that matches a backslash character (with the Replace string is a regular expression option not selected), the Replace String field must use four backslashes to match each backslash in the target record. Since the sought-after text in this instance has two backslashes, a total of eight backslashes is required. The backslash character is an escape character in Java strings (not related to the use of regular expressions) and two backslashes are needed to indicate a single backslash character. In addition, each of the backslashes must be doubled again because the Drools/.dslr engine also regards the backslash as an escape character. If the Replace string is a regular expression option is selected, a total of eight backslashes is required to match a single backslash character; because the regular expression also considers each backslash to be an escape character.
Set Subfield To Value	Use this option to specify content for a particular subfield.

Table 3. Scan Rule Consequence Options

Option	Description
Include	Use this option to specify that records matching the condition(s) are included in (added to) a record set. The record set name (new or existing) is specified in one of the Job Management Save Records Into options when you run a scan batch job.
Exclude	Use this option to specify that records matching the condition(s) are excluded from the records that are saved to a record set. The record set name (new or existing) is specified in one of the Job Management Save Records Into options when you run a scan batch job.

Special Consequence Considerations

There are many ways to combine the GDC options to achieve the changes you want. This section highlights some consequence scenarios for your consideration regarding:

- [Link to Condition Field](#)
- [Special Record Disposition Usage](#)

Link to Condition Field

Use the Link to condition field check box option with the Add MARC Subfield consequence to insure achieving your intended data change results. In this example, the intended result is to add subfield x to all records with 650\$a as follows:

```
650 $a one $x added
650 $a two $x added
650 $a three $x added
```

If you do not select the Link to condition field check box, you may, instead, have the following result:

```
650 $a one $x added $x added $x added
650 $a two
650 $a three
```

Special Record Disposition Usage

The error record disposition is typically used by the system to place records in an error file when an error is encountered in processing. The error record disposition can also be used to achieve special results.

For this example, the intended result is to change the 240 field to 241 when the record is not a serial record. Using the error record disposition, you can set the following rules:

- Check the leader to see if the record is a serial and set the record disposition to Error
- Check if field 240 exists and subsequently change 240 to 241 with the record disposition set to Changed

In this example, the order of the rules may be reversed; and you can achieve the same end result. Even though the 240 change occurs first, the serial records are still identified with the error record disposition before processing is complete and thus achieving the same result.

Using Consequences to Suppress, Unsuppress, and Delete Records

You can use the following record disposition consequence options (see [Figure 57](#)) to suppress, unsuppress, and delete records:

- Suppress
- Suppress All
- Unsuppress
- Unsuppress All
- Delete All

See Record Disposition in [Table 2](#) for additional information.

Using these record disposition consequences, you may process the following types of changes:

- Suppress or unsuppress bibliographic records
- Suppress or unsuppress MFHD (holdings) records
- Suppress or unsuppress bibliographic records and all the related MFHD (holdings) records
- Delete a bibliographic record, all of its related MFHD (holdings) records, and all the related item records.

When deleting records, if there are related records such as circulation activity, purchase orders, fines/fees, and so forth, GDC does not delete the

record. Instead, it suppresses the relevant records and logs an error. Any blocks that prevent record deletion are logged.

The Use “Delete entire record” Rule operator permission is required to delete records. See the section, [Security](#) on page 15, for more information.

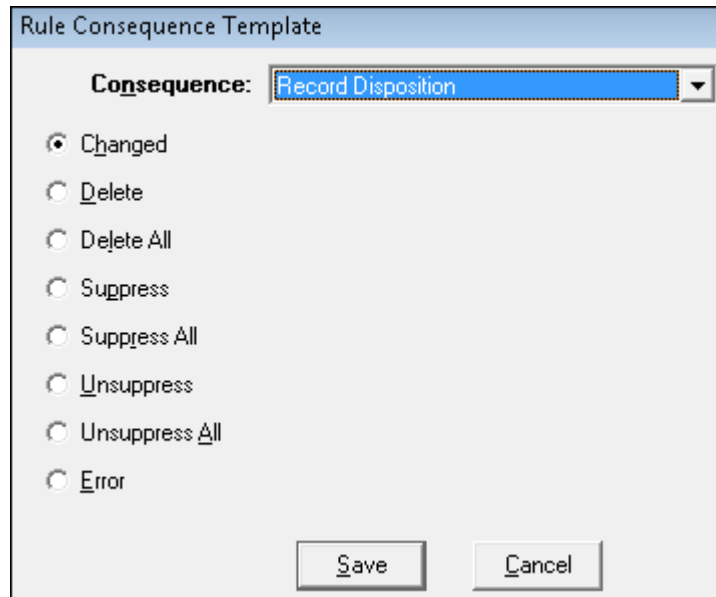


Figure 57: Record Disposition Consequences

Rule Results - Delete All

Rule results are placed in files located on the server in /m1/voyager/xxxdb/gdc. Files created from rules using the Delete All record disposition consequence option, are created/named using the following format:

`gdc.<jobid>.<NormJobName>.<jobStartDTM>.id_deleteall.<seqnum>`

These files display in the GDC client in the Job Result Files list in Job Management > View Running/Completed (see [Figure 58](#)).

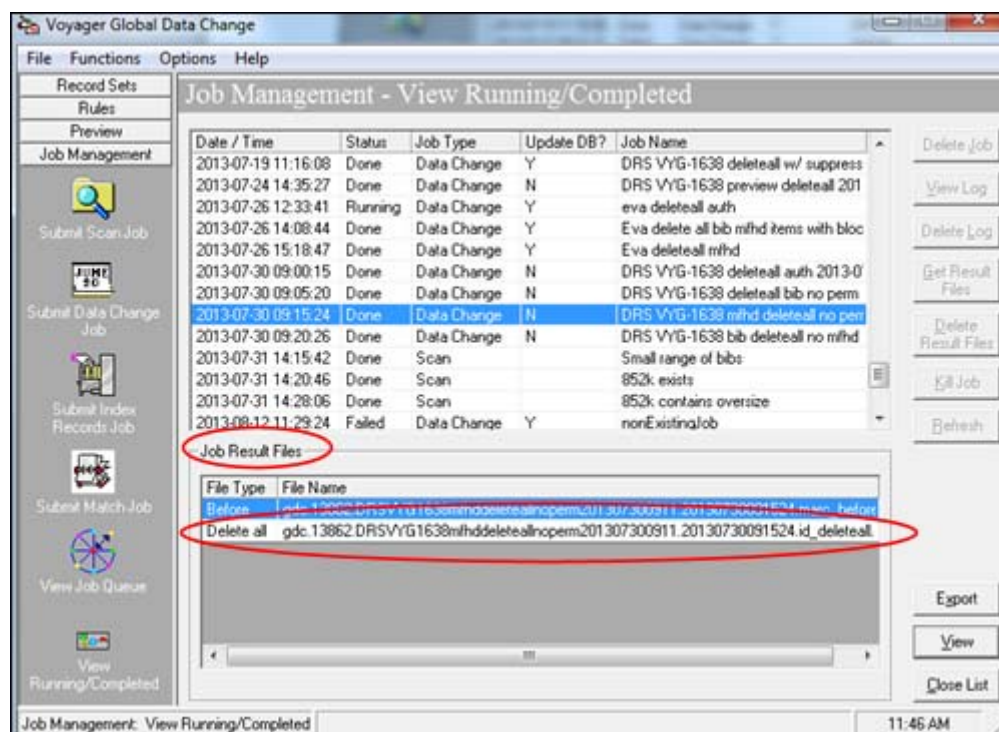


Figure 58: Delete All Job Result Files

Rule Results - Suppress/Unsuppress

Rule results are placed in files located on the server in /m1/voyager/xxxdb/gdc. Files created from rules using the Suppress, Suppress All, Unsuppress, or Unsuppress All record disposition consequence options, are created/named using the following format:

`gdc.<jobid>.<NormJobName>.<jobStartDTM>.<id_dbchg>.<seqnum>`

These files display in the GDC client in the Job Result Files list in Job Management > View Running/Completed.

The file content contains one line per records which is formatted in the following manner:

- Record ID
- Record type, bibliographic (B) or holdings (H)
- Command to process (suppress, suppressall, unsuppress, unsuppressall)

Example:

123, B, suppress

456, B, unsuppress

789, B, suppressall

789, B, unsuppress

2347, H, suppress

GDC Scan Logic

GDC scan logic uses AND, OR, and NOT. See examples/descriptions of this logic in:

- **OR - Multiple Scan Rules in a Scan Rule Set** on page 93
- **OR - Multiple Scan Rule Sets in a Scan Rule Group** on page 95
- **AND - Run Multiple Scan Jobs** on page 96
- **NOT - Use Exclude Consequence** on page 97

NOTE:

By comparison, when creating a data change rule set group, there is no rule set group logic. Data change rule set groups are processed sequentially. For example, do the first rule, then do the next rule, and then do the next rule, and so forth.

OR - Multiple Scan Rules in a Scan Rule Set

GDC OR logic is implemented when you create one scan rule set with multiple rules (see below).

Edit rule set:

Name:

Description:

Last Modified: **Modified By:**

Rule Name	Condition
cookery in 100	When MARC with "100" contains "Cookery"
cookery in 150	When MARC with "150" contains "Cookery"
cookery 180	When MARC with "180" contains "Cookery"

Figure 59: OR Logic in Scan Rule Sets

In this example, cookery is in 100, or cookery is in 150, or cookery is in 180. All records that match any of these conditions are included.

OR - Multiple Scan Rule Sets in a Scan Rule Group

GDC OR logic is implemented when you create one scan rule set group with multiple sets (see below).

The screenshot shows a dialog box titled "Edit rule set group:". It contains the following fields and controls:

- Name:** A text field containing "880 author/title".
- Description:** An empty text field.
- Last Modified:** A date field showing "5/6/2011".
- Modified By:** A text field showing "demo".
- Available Rule Sets:** A list box containing the following items:
 - 245h
 - 650 x contains Fiction
 - 651 x contains Fiction
 - contains 780 or 785
 - contains 9xx
 - contains a 9xx but not the 994
 - cooking anywhere in authorities
- Rule Sets In Group:** A list box containing the following items:
 - 880 author
 - 880 title
- Buttons:** Between the two lists are four arrow buttons: ">", ">>", "<<", and "<". At the bottom are "Save" and "Cancel" buttons.

Figure 60: OR Logic in Scan Rule Groups

In this example, an 880 tag exists for an author, or an 880 tag exists for a title. All sets that match either of these conditions are included in the set.

AND - Run Multiple Scan Jobs

GDC AND logic is implemented when you create a set and subsequently run a scan job on that set (see below).

Job Management - Submit Scan Job

Job Parameters

Job Name: look for uniform titles that are also monographs

Rule Set Group Name: is a monograph

Record Type: Bib

Run Job: ☐ Now ☒ Later: 6/28/2011 04:53 PM

Scan

☐ Entire Database

☒ Existing Set: uniform title

☐ Range of Records: to:

Save Records Into

☐ Existing Set:

☒ New Set: uniform title and is a monograph

Submit **Cancel**

Figure 61: AND Logic with Running Multiple Scan Jobs

For this example, first create a set that contains bibliographic records with a 240 (with a uniform title). Subsequently, create a second scan rule that checks if these bibliographic records are monographs. The end result is a set where the bibliographic records have a uniform title field that are also monographs.

NOT - Use Exclude Consequence

GDC NOT logic is used with the exclude consequence (see below).

Edit rule set:

Name: contains a 9xx but not the 994

Description:

Last Modified: 5/10/2011 **Modified By:** demo

Rule Name	Condition
9xx exists	When MARC is "9"XX
does not contain 994	When MARC is "994"

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 62: NOT Logic Using Exclude - Part 1

Edit Rule

Name: does not contain 994

Conditions: WHEN MARC is "994"

Consequence: ☐ Include ☒ Exclude

Buttons: Add, Edit, Remove, Up, Down, Ok, Cancel

Figure 63: NOT Logic Using Exclude - Part 2

For this example, include bibliographic records that have a 9XX field but do NOT include the bibliographic records that have a 994.

Rule Considerations

Some considerations for working with rules:

- Create more rules/sets that are smaller and simpler rather than large and complex. For best results, try to limit each rule to affecting one field or subfield.
- A minimal record validation is applied to the results after all rules are applied. If the end result of rule application is an invalid record, an error is logged. Validation is not currently configurable to local standards. It is simply making certain that the record is parseable according to MARC 21 standards.

4

Preview

This section includes:

- **Overview** on page 99
- **Preview Display and Options** on page 100
- **Do Not Update Database Preview** on page 103

Overview

Before making any permanent changes to your database, use the GDC preview function to verify the condition/consequence logic in your data change rules to insure the end result is what you intend. You may also want to use Preview to verify that scanning is generating the record set that you expect prior to processing any change request.

You may use Preview to view bibliographic, MFHD, or authority record changes.

See the appendix for GDC usage examples that include previewing records.

Preview provides the capability to view your intended changes on your PC monitor with the before and after versions displaying side-by-side and the intended change highlighted for your review.

In order to use Preview, you need a:

- Saved record set or the record ID number for the record you want to view
- Saved data change rule set group containing the condition/consequence logic you want to review

Preview Display and Options

To preview your intended changes:

- 1 Select **Preview** from the menu listbar and click **Select Criteria**.
- 2 Select or enter:
 - **Record Type**
Your options are Bib, Mfhd, or Auth.
 - **Record Source**
Enter a single record ID number or select a record set from the drop-down list.
 - **Rule Set Group Name**
Select the data change rule set group from the drop-down list that contains the condition/consequence logic that you want to preview.
 - **Field Order Configuration**
Select the MARC Field Ordering Rule from the drop-down list that contains the field sorting rule(s) that you want to apply to the preview.

Refer to the *MARC Field Ordering Rules* section in the *Voyager System Administration User's Guide* for more information.

The screenshot shows a dialog box titled "Preview - Select Criteria". It contains the following elements:

- Record Type:** A dropdown menu with "Bib" selected.
- Record Source:** A section with two radio buttons:
 - ☒ Record Id: followed by a text input field.
 - ☐ Record Set: followed by a dropdown menu.
- Rule Set Group Name:** A dropdown menu.
- Field Order Configuration:** A dropdown menu.
- At the bottom: "Preview" and "Cancel" buttons.

Figure 64: Preview Criteria

- 3 Click **Preview**.

4 View/confirm your intended changes.

The change is highlighted in color. See Session Preferences, **Colors and Fonts** on page 163 for more information regarding color settings.

The left side of the window displays the current version of the record before the change is made, and the right side of the window displays the record after the change is made.

HINT:

The Preview window can be adjusted to view more of each record.

Tag	Ind 1	Ind 2	Data (before rules applied)	Tag	Ind 1	Ind 2	Data (after rules applied)
000			01927cam a2200269 4500	000			01932cam a2200269 4500
001			15685	001			15685
005			20140207105254.0	005			20140207105254.0
008			720217s1956 dcu b 000 0 engm	008			720217s1956 dcu b 000 0 engm
010			\$a 56003432	010			\$a 56003432
035			\$a CNV01101114	035			\$a CNV01101114
040			\$a DLC \$c YNG \$d OCL \$d m.c. \$d NFM	040			\$a DLC \$c YNG \$d OCL \$d m.c. \$d NFM
049			\$a SHCM	049			\$a SHCM
050	0	0	\$a Z7164.D \$b G4	050	0	0	\$a Z7164.D \$b G4
082	1		\$a 016.32573	082	1		\$a 016.32573
110	2		\$a George Washington University.	110	2		\$a George Washington University.
245	1	2	\$a A report on world population migrations as related to the United States of America : \$b an exploratory survey of past studies and researches on world population migration with the view of evaluating areas already covered and outlining areas which warrant development / \$c [Stanley J. Tracy, project director].	245	1	2	\$a A report on world population migrations as related to the United States of America : \$b an exploratory survey of past studies and researches on world population migration with the view of evaluating areas already covered and outlining areas which warrant development / \$c [Stanley J. Tracy, project director].
260			\$a Washington, D.C. : \$b The Washington University, \$c [C1956].	260			\$a Washington, D.C. : \$b The Washington University, \$c [C1956].
300			\$a v. 449 p. ; \$c 22 cm.	300			\$a v. 449 p. ; \$c 22 cm.
504			\$a Bibliographies, an introductory bibliography for the history of American immigration, 1607-1955 [and] an annotated bibliography on the demographic, economic and sociological aspects of immigration, pgs. 85-449.	504			\$a Bibliographies, an introductory bibliography for the history of American immigration, 1607-1955 [and] an annotated bibliography on the demographic, economic and sociological aspects of immigration, pgs. 85-449.
505	0		\$a The economic effects of migration, by W. E. Schmidt and staff, Dept. of Economics--Needed research in the demographic and sociological aspects of immigration, by C. B. Levell and staff, Dept. of Sociology--Problems and prospects in the history of American immigration, by R. C. Haskett and staff, Dept. of History--Summary, by S. J. Tracy--Bibliographies: An introductory bibliography for the history of American immigration, 1607-1955, by R. C. Haskett and staff (p. 85-295) An annotated bibliography on the demographic, economic, and sociological aspects of immigration, by C. B. Levell and W. E. Schmidt and staff (p. 296-449).	505	0		\$a The economic effects of migration, by W. E. Schmidt and staff, Dept. of Economics--Needed research in the demographic and sociological aspects of immigration, by C. B. Levell and staff, Dept. of Sociology--Problems and prospects in the history of American immigration, by R. C. Haskett and staff, Dept. of History--Summary, by S. J. Tracy--Bibliographies: An introductory bibliography for the history of American immigration, 1607-1955, by R. C. Haskett and staff (p. 85-295) An annotated bibliography on the demographic, economic, and sociological aspects of immigration, by C. B. Levell and W. E. Schmidt and staff (p. 296-449).
650	0		\$a Immigrants \$x United States \$x Bibliography.	650	0		\$a Immigrants \$x United States \$x Bibliography.
651	0		\$a United States \$x Emigration and immigration \$x Bibliography.	651	0		\$a United States \$x Emigration and immigration \$x Bibliography.
651	0		\$a United States \$x Emigration and immigration.	651	0		\$a United States \$x Emigration and immigration.
700	1		\$a Tracy, Stanley James.	700	1		\$a Tracy, Stanley James.
710	1		\$a United States \$b Migration Dept	710	1		\$a United States \$b Migration Departments

Figure 65: Change 650 Highlighted

The display also shows the:

- Record ID number for the record that you are viewing
- Name of the record set that you are previewing (in the title bar)
- Name of the rule set group that you are previewing
- Number of the record within the set such as Record 7 of 32 if there is more than one record in the set you selected to preview

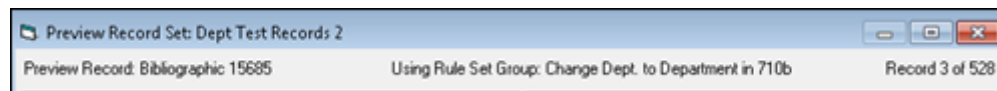


Figure 66: Preview Details

- Errors (upper-left corner) that Preview can identify for rules:
 - Error parsing 'after' record
 - Error compiling rule set
- OK to Export set to Y (Yes)

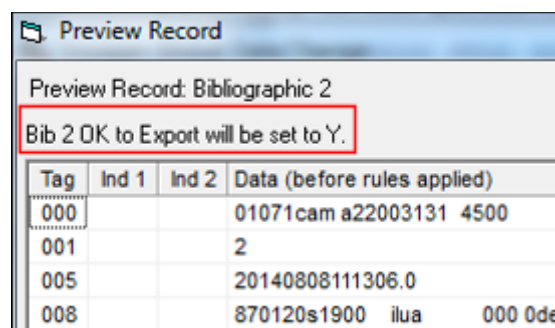


Figure 67: OK to Export Set to Y

- Change Owning Library indication

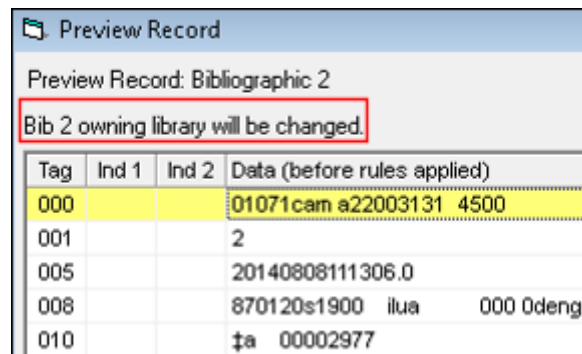


Figure 68: Change Owning Library Indication

- 5 Optionally, if you specified a record set containing more than one record, you may display additional records.
 - Click **Next Record** or **Previous Record** to move forward or backward one record at a time.

- Enter a number in the Jump ahead field and click **Jump**.

The number you enter identifies how many records to skip ahead from the record you are currently viewing. If you are viewing Record 17 of 100 and enter Jump ahead of 10, the system displays Record 27 of 100.

You can also use negative numbers to jump backwards.

- 6 Optionally, you may click **Remove this record from set** to delete it from the saved record set that you are previewing.
- 7 Click **Close** when you are finished with your preview.

Do Not Update Database Preview

The Submit Data Change Job facility in the execution/job management component of GDC provides the Update Database option Do not update databases (preview). When this option is selected, GDC processes the change request to one or more files that can be previewed before committing your changes to your MARC 21 database. See [Submit a Data Change Job](#) on page 109 and [Table 8](#) on page 113.

5

GDC Execution/Job Management

This section includes:

- [Overview](#) on page 105
- [Submit a Scan Job](#) on page 106
- [Submit a Data Change Job](#) on page 109
- [Submit an Index Records Job](#) on page 114
- [Submit a Match Job Using External MARC Binary Files \(*.bib or *.aut\)](#) on page 117
- [Submit Authority Loading Match Job](#) on page 119
- [Submit Authority Loading Merge Job](#) on page 126
- [View the Job Queue](#) on page 130
- [View the Running/Completed Jobs](#) on page 132

Overview

Data change requests and scanning are run as batch processes that are scheduled through GDC Job Management.

NOTE:

GDC Job Management (job queue) only manages GDC scan and data change jobs. It does not interact or manage other jobs on the Voyager server such as bulk import jobs or daily circulation jobs, for example.

See [Data Change Job Processing \(Server\)](#) on page 170 for more information regarding job processing.

See the appendixes for GDC usage examples that include job management.

Prior to scheduling a job, you must have created a:

- Record set (for data change jobs only)

- Rule set group (for both data change and scanning jobs)

With GDC Job Management, you can:

- **Submit a Scan Job**
- **Submit a Data Change Job**
- **Submit an Index Records Job**
- **View the Job Queue**
- **View the Running/Completed Jobs**

Submit a Scan Job

Submitting a scan job requires that you identify:

- Job parameters:
 - Job name
 - Scan rule set group name
 - Record type
 - Run job options
- What to scan:
 - Entire database
 - Existing record set
 - Range of records
- Record set for saving the results:
 - Existing record set
 - New record set

To submit a scan job:

- 1 Click **Submit Scan Job** from the Job Management listbar.
The Submit Scan Job dialog box displays.

Figure 69: Submit Scan Job

- 2 Complete the Job Parameters, Scan, and Save Records Into options. See [Table 4](#), [Table 5](#), and [Table 6](#).

Table 4. Submit Scan Job - Job Parameters

Option	Description
Job Name	Use this option to specify the name of the job that displays in the batch queue (see View the Job Queue on page 130). The job name can be up to 200 characters long. The job name must be unique.
Scan Rule Set Group Name	Select the rule for this job from the drop-down list of rule set groups that you have already created and saved.
Record Type	Select one of the valid record types, bibliographic, holdings, or authority from the drop-down list.

Table 4. Submit Scan Job - Job Parameters

Option	Description
Run Job	Specify if the batch job is to run immediately (now) or select/enter the date and time for it to run later. NOTE: Selecting the Now option actually means insert this job into the queue with a start time of now and execute it as soon as the queue processing rules make this the next job. If no other batch jobs are in the queue or running, the job begins as soon as the scheduler recognizes the job is available to be run. This may take as long as five minutes since the scheduler does a periodic check for work to be done every five minutes. However, if there is a job currently running, a new job set with the Now option queues up behind that job. Or if there is a job already running and another job in the queue with a start time prior to now, the new job set with the Now option queues up behind that job. That is, both jobs need to complete before the Now job.

Table 5. Submit Scan Job - Scan Options

Option	Description
Entire Database	Use this option to specify that your entire MARC database is to be scanned.
Existing Set	Use this option to select an existing record set to scan from the drop-down list of existing record set names.
Range of Records	Use this option to specify a range of record IDs to identify a subset of your entire database to scan.

Table 6. Submit Scan Job - Save Record Into Options

Option	Description
Existing Set	Use this option to specify the name of an existing record set (from the drop-down list) to which the results of your scan are added.

Table 6. Submit Scan Job - Save Record Into Options

Option	Description
New Set	Use this option to specify the name of a new record set to which the results of your scan are added. The record set name can be up to 200 characters long.

- 3 Click **Submit** to send your job request to the batch queue (see [View the Job Queue](#) on page 130).

Submit a Data Change Job

When you run a data change job the:

- 1 Records are exported from your MARC 21 database.
- 2 Changes are processed and applied by the GDC rules engine.
- 3 Records are reimported (using Voyager's bulk import) and replace the existing records in the database.

See additional details regarding this process in [Data Change Job Processing \(Server\)](#) on page 170.

Submitting a data change job requires that you identify:

- Job parameters:
 - Job name
 - Record set name
 - Rule set group name
 - Field order configuration
 - Run job options
- Database update options:
 - Update the database
 - Do not update the database (preview)
- Keyword indexing (when Update the database is selected):
 - Run records through keyword index
 - Do not run records through keyword index

To submit a data change job:

- 1 Click **Submit Data Change Job** from the Job Management listbar.
The Submit Data Change Job dialog box displays.

Job Management - Submit Data Change Job

Job Parameters

Job Name:

Record Set Name:

Rule Set Group Name:

Field Order Configuration:

Run Job: ☐ Now ☒ Later:

Update Database

☐ Update database

☒ Do not update database (preview)

Figure 70: Submit Data Change Job

When one of the rules you select has a Change Owning Library consequence selected, the Submit Data Change Job dialog box displays the following additional options:

- Update Location
- Change Owning Library

Otherwise when one of the rules you select has a Suppress/Suppress All or Unsuppress/Unsuppress All consequence selected, the Submit Data Change Job dialog box displays the following additional option:

- Update Location

Figure 71: Submit Data Change Job with Additional Options

- 2 Complete the job parameter and update database options.

See [Table 7](#), [Table 8](#), and [Table 9](#).

The Keyword Indexing options dynamically display when you select the Update database radio button.

Figure 72: Keyword Indexing

Table 7. Submit Data Change Job - Job Parameters

Option	Description
Job Name	Use this option to specify the name of the job that displays in the batch queue (see View the Job Queue on page 130). The job name can be up to 200 characters long. The job name must be unique.

Table 7. Submit Data Change Job - Job Parameters

Option	Description
Record Set Name	Select the name of the record set from the drop-down list of record sets that you have already created and saved.
Rule Set Group Name	Select the name of the rule set group from the drop-down list of rule set groups that you have already created and saved.
Field Order Configuration	Select the MARC Field Ordering Rule from the drop-down list that contains the field sorting rule(s) that you want to apply to the data change job. Refer to the <i>MARC Field Ordering Rules</i> section in the <i>Voyager System Administration User's Guide</i> for more information.
Update Location	Use this option to specify an update location for your Change Owning Library or OK to Export, record changes or your Suppress / Suppress All and Unsuppress / Unsuppress All record disposition changes.
Change Owning Library	Specify the owning library to change to when you have selected Change Owning Library as a consequence in the rule that you have selected in Rule Set Group. Refer to Data Change Rule Sets on page 50 for more information.

Table 7. Submit Data Change Job - Job Parameters

Option	Description
Run Job	Specify if the batch job is to run immediately (now) or select/enter the date and time for it to run later. NOTE: Selecting the Now option actually means insert this job into the queue with a start time of now and execute it as soon as the queue processing rules make this the next job. If no other batch jobs are in the queue or running, the job begins as soon as the scheduler recognizes the job is available to be run. This may take as long as five minutes since the scheduler does a periodic check for work to be done every five minutes. However, if there is a job currently running, a new job set with the Now option queues up behind that job. Or if there is a job already running and another job in the queue with a start time prior to now, the new job set with the Now option queues up behind that job. That is, both jobs need to complete before the Now job.

Table 8. Submit Data Change Job - Update Database Options

Option	Description
Update database	Select this option to indicate that the database should be updated as a result of the batch job process.
Do not update database (preview)	Select this option to indicate that you want to have the option to preview the end result of the batch process.

Table 9. Submit Data Change Job - Keyword Indexing Options

Option	Description
Run records through keyword index	Use this option to specify that the new/updated bibliographic records resulting from the data change job should be keyword indexed. This applies to Data Change jobs on bibliographic record sets as well as bibliographic records associated with MFHDs for MFHD record sets.
Do not run records through keyword index	Use this option to specify that the new/updated records resulting from the data change job should not be keyword indexed. Due to the number of records being processed or local system constraints, you may decide that it is best to handle keyword indexing for the new/updated records at a later time. This is recommended for large data changes for better performance. See Performance on page 168. Refer to the <i>Voyager Technical User's Guide</i> for additional information regarding the keyword indexing process (in the "Bulk Import, Replace, and Merge of MARC Records" chapter).

- 3 Click **Submit** to send your job request to the batch queue (see [View the Job Queue](#) on page 130).

Submit an Index Records Job

When you run an index records job, the:

- 1 Records are exported from your MARC 21 database.
- 2 Records are reimported (with Voyager's bulk import) using a flag set to maintain the records' history fields.

Submitting an index records job requires that you identify:

- Job parameters:
 - Job name
 - Run job options
- Records to index:
 - Record set name
 - Range of records

To submit an index records job:

- 1 Click **Submit Index Records Job** from the Job Management listbar.
The Submit Index Records Job dialog box displays.

The screenshot shows a dialog box titled "Job Management - Submit Index Records Job". It is divided into two main sections: "Job Parameters" and "Index".
In the "Job Parameters" section, there is a "Job Name:" label followed by a text input field. Below this is the "Run Job:" section, which includes two radio buttons: "Now" and "Later". The "Later" radio button is selected. To the right of the "Later" radio button is a date field showing "7/24/2012" and a time field showing "01:11 PM".
In the "Index" section, there are two options: "Record Set:" with a dropdown menu, and "Range of Records:" with two text input fields separated by "to:".
At the bottom of the dialog are two buttons: "Submit" and "Cancel".

Figure 73: Submit Index Records Job

- 2 Complete the job parameters and identify the records to index.
See [Table 10](#) and [Table 11](#).

Table 10. Submit Index Records Job - Job Parameters

Option	Description
Job Name	Use this option to specify the name of the job that displays in the batch queue (see View the Job Queue on page 130). The job name can be up to 200 characters long. The job name must be unique.

Table 10. Submit Index Records Job - Job Parameters

Option	Description
Run Job	Specify if the batch job is to run immediately (now) or select/enter the date and time for it to run later. NOTE: Selecting the Now option means insert this job into the queue with a start time of now and execute it as soon as the queue processing rules make this the next job. If no other batch jobs are in the queue or running, the job begins as soon as the scheduler recognizes the job is available to be run. This may take as long as five minutes since the scheduler does a periodic check for work to be done every five minutes. However, if there is a job currently running, a new job set with the Now option queues up behind that job. Or if there is a job already running and another job in the queue with a start time prior to now, the new job set with the Now option queues up behind that job. That is, both jobs need to complete before the Now job.

Table 11. Submit Index Records Job - Index (Records)Options

Option	Description
Record Set	Select the name of the record set (of bibliographic record IDs), that you want to index, from the drop-down list of record sets that you have already created and saved.
Range of Records	Use this option to specify a range of record IDs to identify a subset of your entire database to index.

- 3 Click **Submit** to send your job request to the batch queue (see [View the Job Queue](#) on page 130).

Submit a Match Job Using External MARC Binary Files (*.bib or *.aut)

The purpose of this match job is to provide the capability to use an external MARC binary file of bibliographic (*.bib) or authority (*.aut) records that resides on your local PC or network drive to compare and identify matching records in your Voyager database. When GDC identifies a match, it stores the record ID from your Voyager database into a GDC record set file that can be used later for GDC processing. Specifically, this match processing is designed to locate matches in your Voyager database on the 035 field using the 035A index (for bibliographic records) or the A035A index (for authority records).

During the match job processing, GDC reads the .bib or .aut file you have specified as the source file and takes the contents of the 001 and 003 fields to build a search term to find records based on the content of the 035 field.

Example:

Record in your file:

001 = ocn123456789

003 = (OCoLC)

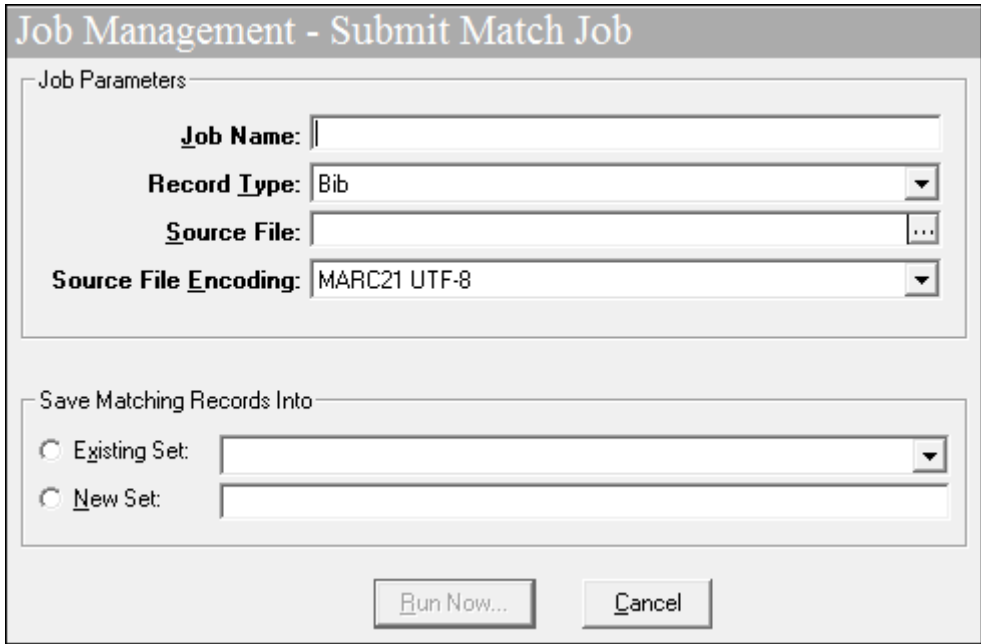
Matches existing record with:

035 = (OCoLC)ocn123456789

GDC places the Voyager record ID number resulting from a search term match into the record set you specified in the Submit Match Job dialog box.

To submit a match job:

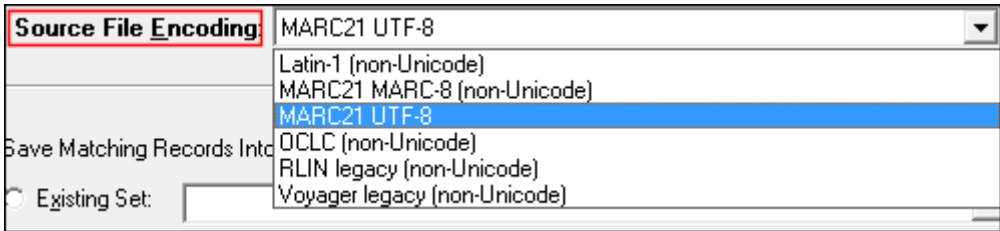
- 1 Click **Submit Match Job** from the Job Management listbar.
The Submit Match Job dialog box displays.



The dialog box is titled "Job Management - Submit Match Job". It contains two main sections. The first section, "Job Parameters", includes a text field for "Job Name", a dropdown menu for "Record Type" (currently set to "Bib"), a text field for "Source File" with a browse button (three dots), and a dropdown menu for "Source File Encoding" (currently set to "MARC21 UTF-8"). The second section, "Save Matching Records Into", has two radio buttons: "Existing Set:" and "New Set:". At the bottom are "Run Now..." and "Cancel" buttons.

Figure 74: Submit Match Job Dialog Box

- 2 Enter a job name.
- 3 Specify the record type (Bib or Auth)
- 4 Specify the name of the *.bib or *.aut source file located on your local PC or network drive.
Click the ellipsis button to browse for this file.
- 5 Select the encoding option from the drop-down list to indicate the character set encoding for your source file.



This image shows a close-up of the "Source File Encoding" dropdown menu. The menu is open, displaying a list of encoding options: "MARC21 UTF-8", "Latin-1 (non-Unicode)", "MARC21 MARC-8 (non-Unicode)", "MARC21 UTF-8" (highlighted in blue), "OCLC (non-Unicode)", "RLIN legacy (non-Unicode)", and "Voyager legacy (non-Unicode)". The "Source File Encoding" label is highlighted with a red box.

Figure 75: Source File Encoding Options

- 6 Specify the record set file name for storing the record ID numbers of any matches that result from the match job processing (either into an existing record set or a new record set).

7 Click **Run Now**.

The Match Job Progress status window displays until the job is complete or canceled.

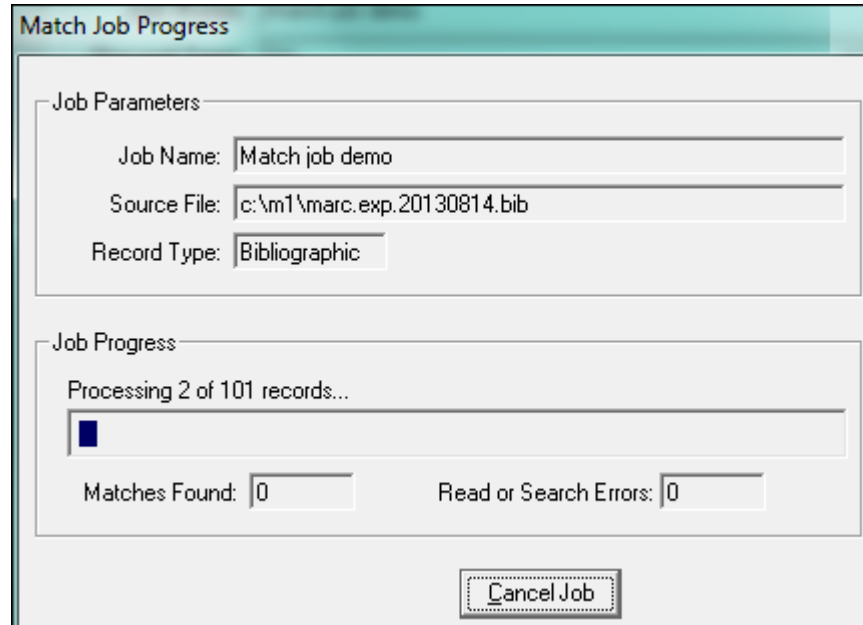


Figure 76: Match Job Progress Status Window

8 View the completed job in Job Management > View Running/Completed.

Submit Authority Loading Match Job

Once you have created a Load Match Configuration (see [Load Match Configuration](#) on page 144) and obtained the external file of authority records from which you want to update the Voyager database, you are ready to process an Auth Load Match Job.

The purpose of the Auth Load Match Job is to evaluate your incoming authority records (external file) against the existing authority records in the Voyager database and generate the following output files based on your input criteria (where *=gdc.<JobID>.<NormalizedJobName>.<JobStartDateandTimeStamp>):

- *.marc_match

This file contains authority records from the external file (on the client workstation) that were identified as having a single match against the existing Voyager database after applying the rules identified in the authority

load match configuration that you specified for the Match Configuration option in the Auth Load Match Job.

Subsequently, the external matching records (from *.marc_match) are used by the Auth Load Merge Job (see [Submit Authority Loading Merge Job](#) on page 126) to merge the incoming record into the database record. The result of the merge is in the *.marc_after file (see [Files Generated from the Auth Load Merge Job](#) on page 129) that is subsequently loaded into the Voyager authority database.

This file is in binary MARC format.

■ *.marc_nomatch

This file contains authority records from the external file (on the client workstation) that were identified as having no match against the existing Voyager database after applying the rules identified in the authority load match configuration that you specified for the Match Configuration option in the Auth Load Match Job.

Subsequently, the external records (from *.marc_nomatch) are used by the Auth Load Merge Job (see [Submit Authority Loading Merge Job](#) on page 126) as input to a simple database load to the Voyager authority database if the Match Configuration is set to load unmatched records.

This file is in binary MARC format.

■ *.marc_multimatch

This file contains authority records from the external file (on the client workstation) that were identified as having multiple matches in the existing Voyager database after applying the rules identified in the authority load match configuration that you specified for the Match Configuration option in the Auth Load Match Job.

As part of multimatch processing, a best record from the Choose Best Record Rules (see [Choose Best Record Rules](#) on page 157) out of the multiple matching records from the Voyager database is identified and used as the incoming record to collapse the multiple matches down to one. Subsequently, this one record is merged with the original incoming record as part of the Auth Load Merge Job (see [Submit Authority Loading Merge Job](#) on page 126), and the *.marc_after file that is generated (see [Files Generated from the Auth Load Merge Job](#) on page 129) updates the Voyager authority database.

NOTE:

The best record merge is dependent on the Merge Configuration that you use. The system only merges records of the type(s) selected to be merged. If the record is not of a type selected to merge, the system simply chooses the best record (according to the rules selected) and merges the incoming

record to it. If there are no Choose Best Record Rules selected, the system doesn't process multimatch records at all.

This file is in binary MARC format.

■ *.marc_split

After applying the rules identified in the authority load match configuration that you specified for the Match Configuration option in the Auth Load Match Job, this file contains authority records from the external file (on the client workstation) that were identified to be deleted because they each have been split into two or more new headings records. This file is in binary MARC format.

(Refer to www.loc.gov/marc/authority/adleader.html and *05 - Record status* for more information.)

This file is available for your review (see [View the Running/Completed Jobs](#) on page 132) and analysis. With this file/information, you can determine if you need to edit one or more records using Voyager Cataloging to process the change.

■ *.marc_discard

After applying the rules identified in the authority load match configuration that you specified for the Match Configuration option in the Auth Load Match Job, this file contains authority records from the external file (on the client workstation) that were identified as a type that should not be loaded into the Voyager database. This file is in binary MARC format.

■ *.marc_deleted

After applying the rules identified in the authority load match configuration that you specified for the Match Configuration option in the Auth Load Match Job, this file contains authority records from the external file (on the client workstation) that were identified as having one or more matches against the existing Voyager database and that were identified as records that should be deleted.

This file is in binary MARC format.

■ *.marc_error

This file contains authority records from the external file (on the client workstation) that encountered some error that prevented further processing when applying the rules identified in the authority load match configuration that you specified for the Match Configuration option in the Auth Load Match Job. Each record in this file should have one or more related messages in the *.log file. This file is in binary MARC format.

■ *.log

This file contains text messages with information about record processing. The disposition of each record processed such as match, no match, multiple matches, and so forth is also included.

These output files are intended for later use. Some of them will be used by the Auth Load Merge Job (see [Submit Authority Loading Merge Job](#) on page 126), the next stage in loading authority records.

To submit an Auth Load Match Job:

NOTE:

Confirm that you have the appropriate Auth Load permissions set in the GDC security profile in the Voyager System Administration client.

- 1 Click **Submit Auth Load Match Job** from the Job Management listbar.
The Submit Auth Load Match Job dialog box displays.

Job Management - Submit Auth Load Match Job

Job Parameters

Job Name:

Source File: ...

Source File **E**ncoding: MARC21 UTF-8 ▼

Match Configuration: ▼

☐ Add 035 field when creating new Auth records

Run Job: ☐ Now ☒ Later: 7/15/2015 ... 03:56 PM

Figure 77: Submit Auth Load Match Job

- 2 Enter the Auth Load Match Job parameters. Refer to [Table 12](#) for a description of your options.

Table 12. Auth Load Match Job Options

Options	Description
Job Name	Use this option to specify the name of the job that displays in the batch queue (see View the Job Queue on page 130) and the View Running/Completed GDC area (see View the Running/Completed Jobs on page 132). The job name can be up to 200 characters long. The job name must be unique. NOTE: You will need to specify this job name in the Match Job's Name parameter for the Submit Auth Load Merge Job stage of loading authority records (see Submit Authority Loading Merge Job on page 126).
Source File	Enter the full path name for the external file located on your client workstation that contains the new authority records for evaluation or use the browse (ellipsis) button to locate the file.
Source File Encoding	Select one of the following encoding options from the drop-down list to indicate the character set encoding for your source file: ■ Latin-1 (non-Unicode) ■ MARC21 MARC8 (non-Unicode) ■ MARC21 UTF-8 ■ OCLC (non-Unicode) ■ RLIN legacy (non-Unicode) ■ Voyager legacy (non-Unicode)
Match Configuration	Select the configuration file from the drop-down list that contains the rules you want the system to use for evaluating the new authority records in the external file on your client workstation against the existing authority records in the Voyager database. See Load Match Configuration on page 144 for more information.

Table 12. Auth Load Match Job Options

Options	Description
Add 035 Field When Creating New Authority Records	Select the Add 035 field when creating new Auth records option when you want the system to add the 035 field to new records that are created when you run an Auth Load Match Job and no matching records are found. For bibliographic records, the standard number for matching is the 035 field; and for authority records, the standard field number used for matching is the 010 field (Library of Congress control number). By default, this option is not selected. You can change the default on the Workflow tab in Session Preferences (Options > Session Preferences).
Run Job (Schedule)	Use the options for Run Job to identify when you would like to schedule your job to run. NOTE: Selecting the Now option actually means insert this job into the queue with a start time of now and execute it as soon as the queue processing rules make this the next job. If no other batch jobs are in the queue or running, the job begins as soon as the scheduler recognizes the job is available to be run. This may take as long as five minutes since the scheduler does a periodic check for work to be done every five minutes. However, if there is a job currently running, a new job set with the Now option queues up behind that job. Or if there is a job already running and another job in the queue with a start time prior to now, the new job set with the Now option queues up behind that job. That is, both jobs need to complete before the Now job.

3 Click **Submit**.

Your job results display in the View Running/Completed jobs GDC area (see **View the Running/Completed Jobs** on page 132) under the Job Type column as Auth Load Match. To complete the authority loading process, you need to proceed to the next stage of the authority loading process, Submit Auth Load Merge Job (see **Submit Authority Loading Merge Job** on page 126).

Job Management - View Running/Completed

Date / Time	Status	Job Type	Update DB?	Job Name
2013-10-04 12:33:21	Done	Data Change	Y	Suppress MFH
2013-10-04 12:43:25	Done	Data Change	Y	Unsuppress Bit
2013-10-04 12:58:30	Done	Data Change	Y	Unsuppress Mf
2013-10-04 13:03:34	Done	Data Change	Y	Unsuppress All
2013-11-06 10:49:52	Done	Data Change	Y	VYG-4932 dele
2014-07-10 11:31:17	Done	Data Change	Y	MFHD Delete
2014-07-18 17:02:43	Done	Auth Load Match		Auth Load 1
2014-07-18 17:07:52	Done	Auth Load Merge		Auth Merge Te
2014-07-21 12:14:13	Done	Data Change	N	Auth Export Te
2014-07-21 12:24:33	Done	Auth Load Match		A3 Test
2014-07-21 12:29:52	Done	Auth Load Match		A1
2014-07-28 13:01:00	Done	Auth Load Match		Discard Auth T

[Delete Job](#)
[View Log](#)
[Delete Log](#)
[Get Result Files](#)
[Delete Result Files](#)
[Kill Job](#)
[Refresh](#)

Job Summary

Job name:	A1		
Job type:	Auth Load Match	Job status:	Done
Scheduled start:	2014-07-21 12:27:54	Actual start:	2014-07-21 12:29:52
Operator Id:	demo	Modify date:	2014-07-21 12:30:09
Records to process:	1000	Records processed:	1000
Current bulk number:	1	Record error count:	0

Figure 78: Auth Load Match Job Types

Job Management - View Running/Completed

Date / Time	Status	Job Type	Update DB?	Job Name
2013-10-04 12:33:21	Done	Data Change	Y	Suppress MFI
2013-10-04 12:43:25	Done	Data Change	Y	Unsuppress B
2013-10-04 12:58:30	Done	Data Change	Y	Unsuppress M
2013-10-04 13:03:34	Done	Data Change	Y	Unsuppress A
2013-11-06 10:49:52	Done	Data Change	Y	VYG-4932 del
2014-07-10 11:31:17	Done	Data Change	Y	MFHD Delete
2014-07-18 17:02:43	Done	Auth Load Match		Auth Load 1
2014-07-18 17:07:52	Done	Auth Load Merge		Auth Merge T
2014-07-21 12:14:13	Done	Data Change	N	Auth Export T
2014-07-21 12:24:33	Done	Auth Load Match		A3 Test
2014-07-21 12:29:52	Done	Auth Load Match		A1
2014-07-28 13:01:00	Done	Auth Load Match		Discard Auth

Job Result Files

File Type	File Name
Before	gdc.140.A1.20140721122754.marc_before.1
Multi match	gdc.140.A1.20140721122952.marc_multimatch.1
Match	gdc.140.A1.20140721122952.marc_match.1

Delete Job

View Log

Delete Log

Get Result Files

Delete Result Files

Kill Job

Refresh

Export

View

Close List

Figure 79: Auth Load Match Job Types - Job Result Files (Get Result Files)

Submit Authority Loading Merge Job

The Auth Load Match Job identifies records for processing, in a certain manner, as identified by the type of output file in which they are placed. It is the Auth Load Merge Job that makes the actual changes to the Voyager authorities database using the output files from the Auth Load Match Job.

To submit an Auth Load Merge Job:

NOTE:

Confirm that you have the appropriate Auth Load permissions set in the GDC security profile in the Voyager System Administration client.

- 1 Click **Submit Auth Load Merge Job** from the Job Management listbar.
The Submit Auth Load Merge Job dialog box displays.

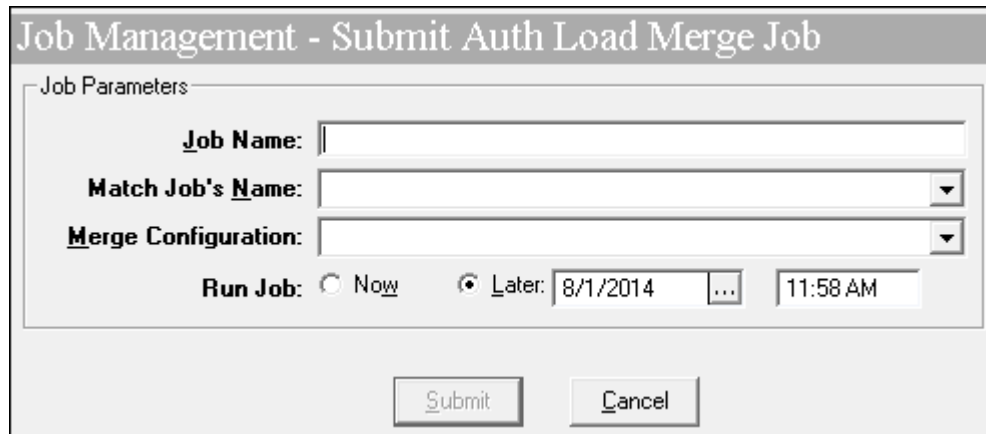


Figure 80: Submit Auth Load Merge Job

- 2 Enter the Auth Load Merge Job parameters. Refer to [Table 13](#) for a description of your options.

Table 13. Auth Load Merge Job Options

Options	Description
Job Name	Use this option to specify the name of the job that displays in the batch queue (see View the Job Queue on page 130) and the View Running/Completed GDC area (see View the Running/Completed Jobs on page 132). The job name can be up to 200 characters long. The job name must be unique.
Match Job's Name	Select from the drop-down list the Auth Load Match Job's name that contains the output files for this merge stage of loading authority records. See Figure 79 for an example and refer to the procedure in Submit Authority Loading Match Job on page 119 for additional details.

Table 13. Auth Load Merge Job Options

Options	Description
Merge Configuration	Select the configuration file from the drop-down list that contains the rules you want the system to use for handling the output files from the Auth Load Match Job (see Submit Authority Loading Match Job on page 119). See Load Merge Configuration on page 150 for more information regarding the Merge Configuration settings.
Run Job (Schedule)	Use the options for Run Job to identify when you would like to schedule your job to run. NOTE: Selecting the Now option actually means insert this job into the queue with a start time of now and execute it as soon as the queue processing rules make this the next job. If no other batch jobs are in the queue or running, the job begins as soon as the scheduler recognizes the job is available to be run. This may take as long as five minutes since the scheduler does a periodic check for work to be done every five minutes. However, if there is a job currently running, a new job set with the Now option queues up behind that job. Or if there is a job already running and another job in the queue with a start time prior to now, the new job set with the Now option queues up behind that job. That is, both jobs need to complete before the Now job.

3 Click [Submit](#).

Your job initially starts processing and displays in the View Job Queue dialog box. Subsequently, it appears in the View Running/Completed dialog box once it has started to execute.

Your job results are identified as Auth Load Merge under the Job Type column in the View Running/Completed dialog box (see [View the Running/Completed Jobs](#) on page 132 for more information).

The files generated as a result of the Auth Load Merge process are described in [Files Generated from the Auth Load Merge Job](#) on page 129.

Job Management - View Running/Completed					
Date / Time	Status	Job Type	Update DB?	Job Name	
2013-10-04 12:33:21	Done	Data Change	Y	Suppress MF	Delete Job
2013-10-04 12:43:25	Done	Data Change	Y	Unsuppress E	View Log
2013-10-04 12:58:30	Done	Data Change	Y	Unsuppress M	Delete Log
2013-10-04 13:03:34	Done	Data Change	Y	Unsuppress /	Get Result Files
2013-11-06 10:49:52	Done	Data Change	Y	VYG-4932 de	Delete Result Files
2014-07-10 11:31:17	Done	Data Change	Y	MFHD Delete	Kill Job
2014-07-18 17:02:43	Done	Auth Load Match		Auth Load 1	Refresh
2014-07-18 17:07:52	Done	Auth Load Merge		Auth Merge T	
2014-07-21 12:14:13	Done	Data Change	N	Auth Export T	
2014-07-21 12:24:33	Done	Auth Load Match		A3 Test	
2014-07-21 12:29:52	Done	Auth Load Match		A1	
2014-07-28 13:01:00	Done	Auth Load Match		Discard Auth	

Job Summary	
Job name:	Auth Merge Test 1
Job type:	Auth Load Merge
Scheduled start:	2014-07-18 17:04:07
Operator Id:	demo
Bulks to process:	1
Current bulk number:	1
Records deleted:	0
Job status:	Done
Actual start:	2014-07-18 17:07:52
Modify date:	2014-07-18 17:08:25
Bulks processed:	1
Record error count:	0

Figure 81: Auth Load Merge Job Types

Files Generated from the Auth Load Merge Job

As a result of running the Auth Load Merge Job, the system generates the following files (where *=gdc.<JobID>.<NormalizedJobName>.<JobStartDateandTimeStamp>):

- *.marc_redundant

This file contains Voyager database authority records (with a Voyager authority ID in the 001) that were one of several that matched an incoming record but were not selected as the best matching record. The records in this file are provided for your reference. By the time the job is finished, these records have been deleted.

This file contains authority records in binary MARC format.

■ *.marc_reject

This file contains records that satisfied a rule indicating these records should not be merged into the database due to some data condition encountered while completing Auth Load Merge Job processing. This file also contains records resulting from multiple matches that were found but were identified to not be loaded or merged. For multiple match records, the record numbers are in the 935 (or whichever tag you specified for storing the multiple match record numbers).

These records are the incoming records with a matching record ID in the 001. The *.marc_reject file is created for user review when the Auth Load Merge Job processing is complete. This file is not used by a system process.

This file contains authority records in binary MARC format.

■ *.marc_after

This file (populated as result of Auth Load Merge Job processing) contains MARC records that are imported to the Voyager authority database replacing the record with the ID that matches the 001 field.

(The processing of this file is similar in concept to the *.marc_after file used in a GDC Data Change Job.)

View the Job Queue

To view and manage jobs in the job queue:

- 1 Click **View Job Queue** from the Job Management listbar.
The View Job Queue dialog box displays.

Job Management - View Job Queue

Scheduled	Job Type	Job Name
2011-07-28 12:26:00	Scan	scan for 9xx

Job Summary

Job type: Scan Scheduled start: 2011-07-28 12:26:00

Operator Id: demo Record type: Bibliographic

Record set name:

Record range start: Record range end:

Rule set group name: contains 9xx

Save record set name: 9xxs in bibs [new]

Update database flag: ☐ Keyword index flag: ☐ Modify date: 2011-05-06 12:21:45

Figure 82: View Job Queue - Data Change

- 2 Select the row of the job for which you want to:
 - View the job summary (displayed below the job queue list)
 - Edit the job run time (Edit button)

With edit, you can change when the job is scheduled to run.

(If you need to change other job parameters such as the rule set group, remove the job and resubmit it.)
 - Remove jobs from the queue (Remove button)

This removes the job/row that is selected.
- 3 Click **Refresh** to update the display to reflect any edit/remove changes that you have made.

NOTE:

Refresh displays all job queue changes. Any jobs that are added, edited, or removed by other GDC users are reflected in the refresh. Also, if a job has started to run since the last refresh, it no longer displays in the queue.

View the Running/Completed Jobs

After GDC jobs have been submitted, you can view the running and completed jobs in Job Management > View Running/Completed.

To view and manage running/completed jobs:

- 1 Click **View Running/Completed** from the Job Management listbar.
The View Running/Completed dialog box displays (see [Figure 83](#)). For a description of the contents of the View Running/Completed display, see [Table 14](#).

Job Management - View Running/Completed			
Date / Time	Status	Job Type	Job Name
2011-05-11 12:34:54	Done	Scan	852h blank records scan
2011-05-11 12:46:31	Done	Data Change	Remove empty 852h
2011-09-08 16:14:05	Done	Scan	Leader test
2011-09-08 16:26:26	Done	Scan	Leader test 2
2011-09-08 16:53:13	Done	Data Change	Leader test1
2012-05-31 17:11:06	Done	Data Change	Piv 14417 test
2013-09-27 10:45:31	Failed	Data Change	CC Example 1 Data Change Job
2013-10-07 10:07:07	Done	Data Change	MFHD Delete All Test
2013-10-07 10:22:11	Done	Data Change	Delete all test with PD
2013-10-07 10:42:13	Done	Data Change	Delete all test for title level hold
2013-10-07 11:22:14	Done	Data Change	Delete all when item is charged
2013-10-07 11:37:15	Done	Data Change	Delete all test when item has hold

Delete Job
View Log
Delete Log
Get Result Files
Delete Result Files
Kill Job
Refresh

Job Summary
Job name: MFHD Delete All Test
Job type: Data Change
Job status: Done
Scheduled start: 2013-10-07 10:05:25
Actual start: 2013-10-07 10:07:07
Operator Id: demo
Modify date: 2013-10-07 10:07:11
Records to process: 1
Records processed: 1
Current bulk number: 1
Update database flag: Y

Figure 83: View Running/Completed Job Queue

Table 14. Job Management - View Running/Completed Display

Component	Description
List of Jobs:	
Date/Time	This represents the date/time associated with the change in status of the job. For example, the date/time that the job switched to the Running status or the date/time that the job switched to the Kill status.

Table 14. Job Management - View Running/Completed Display

Component	Description
Status	■ Pending - The submitted job has not yet begun to process. ■ Running - The submitted job is in process. ■ Failed - The submitted job did not complete successfully. ■ Kill - The kill request has been initiated. ■ Killed - The kill request has been completed. ■ Done - Processing of the submitted job has been successfully completed.
Job Type	■ Scan ■ Data Change ■ Index Records ■ Match ■ Auth Load Match ■ Auth Load Merge
Update DB	This identifies which option was selected for the Update Database parameter when the job was submitted, either Y (yes, update the database) or N (no, do not update the database).
Job Name	This is the name you gave the job when you submitted it to the job queue. See Figure 69 (Submit Scan Job) and Figure 70 (Submit Data Change Job). NOTE: The job name displayed for jobs with a type of Auth Load Match is the same job name that you need to specify for Match Job's Name in the Submit Auth Load Merge Job dialog box (see Submit Authority Loading Merge Job on page 126).
Job Summary (varies per job type selected):	
Job Name	This is the name of the job that you selected/ highlighted in the list of jobs displayed in Job Management - View Running/Completed.
Job Type	This is the job type for the job that you selected/ highlighted.

Table 14. Job Management - View Running/Completed Display

Component	Description
Job Status	This is the job status for the job that you selected/highlighted from the list of jobs.
Scheduled Start	This is the run job date/time specified when you submitted the job. See Figure 69 (Submit Scan Job) and Figure 70 (Submit Data Change Job).
Actual Start	This is the actual job start date/time for the job that you selected/highlighted from the list of jobs.
Operator ID	This is the operator ID of the person that submitted the job.
Modify Date	This is the date/time that the submitted job request was changed, when the Run Job parameters were edited.
Records to Process	This is the number of records identified in the record set to process.
Records Processed	The number of records processed may match the number of records to process or be less, depending on what happens during processing. NOTE: For records processed greater than 1,000, the records processed number represents the number of bulks (record grouping of 1,000 records). For an Auth Load Merge Job, the system displays processing measured in Bulks to Process and Bulks Processed.
Records Deleted	This is the number of records deleted as a result of the job that was submitted/run.
Record Error Count	This represents the number of records that were identified with an error as a result of the job that was run.
Bulks to Process	Number of bulks to process (Auth Load)
Bulks Processed	Number of bulks processed (Auth Load)
Current Bulk Number	During processing this component dynamically changes to reflect the bulk that is being processed. Bulks are increments/groupings of 1,000 records.
Update Database Flag	■ Y (yes) or N (no) for data change jobs ■ Blank for scan jobs

2 Click the row/job for which you want to:

- View the job summary

The Job Summary area updates while the job is running. It describes the progress of the data change or scan process. If you are processing a large job, the Job Summary area identifies the number of records processed in 1K bulks and the number of errors it may have encountered.

- Take one or more (button) actions.

NOTE:

The buttons display as active or inactive depending on the status of the job.

3 Click one of the following buttons to elect one of the job management functions:

- Delete the job

Delete Job deletes the job log as well as the record files.

When you click Delete Job, the following warning displays:

The summary files from this job will be permanently deleted, with no way to retrieve them. Are you sure you want to do this? Yes/No

CAUTION:

Deleting the record files means that if a mistake was made during the data change run, you have no method to restore the records except by doing a database restore. See **Error Handling/Prevention** on page 173 for more information.

- View the log (see **View Log** on page 137)

- Delete the log

Delete Log deletes the job log.

When you click Delete Log, the following warning displays:

The log file from this job will be permanently deleted, with no way to retrieve them. Are you sure you want to do this?" Yes/No

Keep the log file until you are sure that the GDC run was successful. If there is a problem, Voyager Customer Support needs this log to help determine the cause.

- Get result files (see **Get Result Files** on page 139)

- Delete result files

When you click Delete Result Files, the following warning displays:

The result files from this job will be permanently deleted, with no way to retrieve them. Are you sure you want to do this? Yes/No

CAUTION:

Deleting the record files means that if a mistake was made during the data change run, you have no method to restore the records except by doing a database restore. See **Error Handling/Prevention** on page 173 for more information.

- Kill the job (see **Kill Job** on page 142)
- 4 Click **Refresh** to update the job management display to reflect its current status.

View Log

When you click the View Log button, the log displays for the job/row selected.

```
INFO - Job Started...
      Job Name = CC Job
      Job ID = 4068
      Job Operator = demo
      Job Type = DataChangeJob
      Job Scheduled Start Date = 2016-10-19 16:22:34.0
      Job Actual Start Date = Wed Oct 19 16:25:56 CDT 2016
      Total Records = 73
      Job Parameters =
        recordSetId = bibs with 787 (2524)
        ruleSetId = 650z when 650a (760)
        updateDatabaseFlag = (N)
        keywordIndexingFlag = (N)
        REQ_LIBRARY_ID =
        REQ_LOCATION_ID =
        MFONAME =
      Start Time = Wed Oct 19 16:25:56 CDT 2016
INFO - Worker Init
INFO - Worker Running... Bulk:1
INFO - Creating tempfile ID's for Export...
INFO - tempfile ID's are ready for export...
INFO - Start Exporting Records...
INFO - Completed Exporting Records...
INFO - Export 1 Elapsed Time: 00:00:02
INFO - Start Transforming records...
INFO - Finished bulk 1
INFO - Completed Transforming records...
INFO - Transform 1 Elapsed Time: 00:00:03
INFO - Start delete all...
INFO - No delete all actions found.
INFO - Delete All 1 Elapsed Time: 00:00:00
INFO - Job Is Not Updating The Database.
INFO - Start database changes...
INFO - No database changes found.
INFO - Database Changes 1 Elapsed Time: 00:00:00
INFO - Finished with bulk 1 of 1 Elapsed Time: 00:00:05
INFO - Job Ended...
      End Time = Wed Oct 19 16:26:01 CDT 2016
      Records Processed = 73
      Records Matched and Deleted = 0
      Record Hierarchies with deletions by Delete All = 0
      Record Errors = 0
      Unchanged Records = 73
      Running Time = 00:00:05
```

Figure 84: View Log

NOTE:

The default editor for this view is Notepad. You may identify a different editor for viewing the log in your Session Preferences (see **Workflow** on page 159).

The log displays:

- Job started status
- Job name
- Job ID
- Job operator
- Job type
- Scheduled job start date/time
- Actual job start date/time
- Total records
- Job Parameters
- Processing informational messages regarding temp files, transforming records (for data change), and so forth
- End of job date/time
- Number of records processed
- Number of record errors
- Number of deleted records
- Unchanged records
- Length of running time for the job in hours/minutes/seconds

NOTE:

The log may be viewed for a running job. Periodic checks of the log for a large job (one running several hours, for example) can help you track the progress of the job.

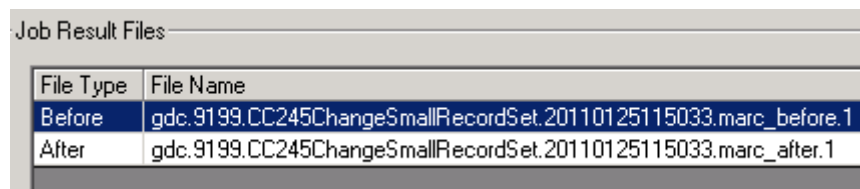
Get Result Files

When you click the Get Result Files button, the following file types display in the Job Result Files list (see [Figure 85](#) and [Figure 86](#)):

- Before (exported records)
*.marc_before.<seqnum>
- After (changed records)
*.marc_after.<seqnum>
- Unchanged (unchanged records)
*.marc_unchanged.<seqnum>

- Deleted (records to be deleted)
*.marc_deleted.<seqnum>
- Suppress, Suppress All, Unsuppress, Unsuppress All (records for export)
*.id_dbchg.<seqnum>
- Delete All (records for export)
*.id_deleteall.<seqnum>
- Auth Load Match (see [Submit Authority Loading Match Job](#) on page 119)
- Auth Load Merge (see [Files Generated from the Auth Load Merge Job](#) on page 129)

See [Data Change Job Processing \(Server\)](#) on page 170 for more information regarding job result files.



File Type	File Name
Before	gdc.9199.CC245ChangeSmallRecordSet.20110125115033.marc_before.1
After	gdc.9199.CC245ChangeSmallRecordSet.20110125115033.marc_after.1

Figure 85: Job Result Files

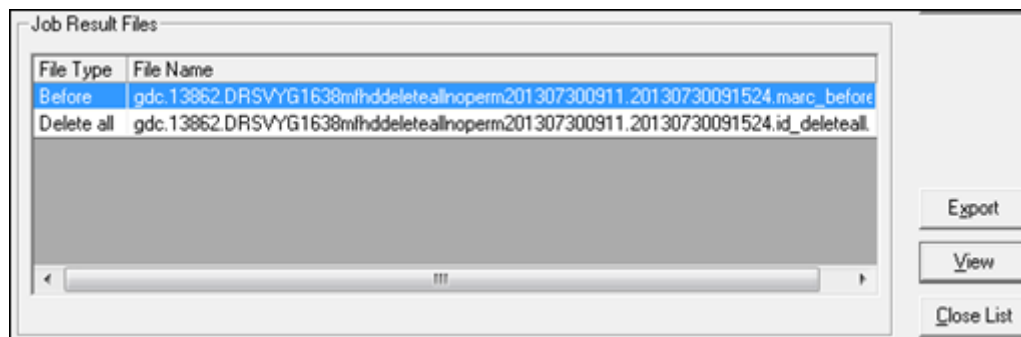


Figure 86: Job Result Files List with Delete All Example

The Job Result Files list displays with the following action buttons:

- Export (see [Job Result Files - Export](#) on page 141)
- View (see [Job Result Files - View](#) on page 141)
- Close List

Job Result Files - Export

When you select a row and click **Export**, the Export MARC Records to Disk dialog box displays (see [Figure 87](#)). With this option, GDC creates a *.mrc file that is a binary (Unicode) file of MARC data with records separated by a record separator character.

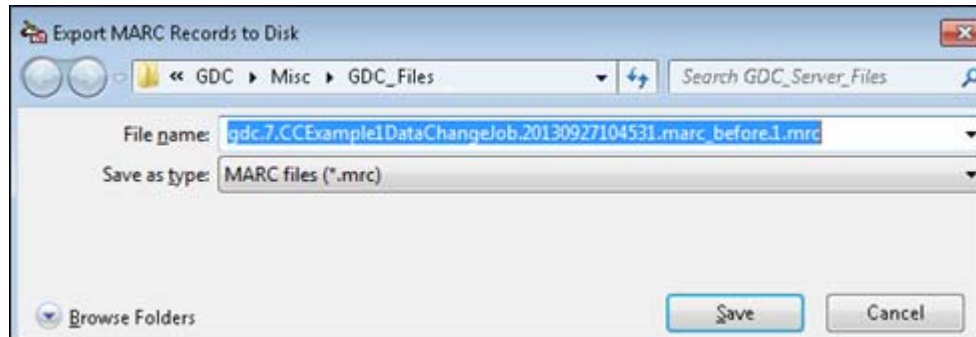


Figure 87: Export MARC Records to Disk Dialog Box

Job Result Files - View

When you select a row and click **View**, the file contents display using the default editor specified in your Session Preferences (see [Workflow](#) on page 159).

NOTE:

If your database contains records with Unicode data, the editor that you use needs to support a Unicode font. Otherwise, substitute symbols display in place of the Unicode characters.

```

1 LEADER 01832cam a22004451a 4500
2 001 67450
3 005 20030916134038.0
4 008 940216r19431941ja b 000 0djpn
5 035 $a(OCOLC)ocm30581391
6 035 $a(WaOLN)cjk0136276
7 035 $a(CStRLIN)NYCOA0136276-B
8 035 $a(CStRLIN)NYCOA0136276B
9 035 $a(NIC)notisAPR9603
10 035 $a2996577
11 040 $aCU$cCU$dNIC
12 043 $aa-ja---$aa-cc---
13 050 14$aPL2268.Z65$bK56 1943
14 066 $c$1
15 090 $i09/22/97 X
16 245 10$a6880-01$aKinsei kangakusha denki cho:
17 246 30$a6880-02$aTsuketari keifu nenpyoï,,
18 260 $a6880-03$aToï,,kyoï,, :$bIda Shoten hat:
19 300 $a29, 33, 573, 100, 44 p. ;$c27 cm.
20 500 $a6880-04$aOriginally published in 194
21 650 0$aChinese literature$xBio-bibliograph
22 651 0$aChina$xStudy and teaching$zJapan.
23 700 1 $a6880-05$aSeki, Giichiroï,,.
24 700 1 $a6880-06$aSeki Yoshinao.
25 740 0 $a6880-07$aKindai kangakusha chojutsu

```

Figure 88: View Results File

Kill Job

When you click the Kill Job button, the status of the job changes from Running to Kill and sends a notice to the background process to cancel the running job. This initiates a graceful close of any open processes for the running batch job. When the job is actually stopped (the kill request is complete), the job status changes to Killed. Check your logs for additional information when the kill request is complete.

6

Authority Loading

This section includes:

- **Overview** on page 143
- **Load Match Configuration** on page 144
- **Load Merge Configuration** on page 150

Overview

With GDC authority loading, you can load, update, and delete authority records in the Voyager database. The high-level workflow for GDC authority loading is:

- 1 Define Auth Load configurations (see **Load Match Configuration** on page 144 and **Load Merge Configuration** on page 150)
- 2 Filter and match
 - a Define and run a load match job (see **Load Match Configuration** on page 144 and **Submit Authority Loading Match Job** on page 119) that includes uploading a file of authority records that reside on your Voyager client/PC

For each new incoming authority record, the database is checked for matching records using the rules/criteria you select to determine if the record has zero, one, or multiple matches in the Voyager database. Also, records are checked for validity and may be filtered out based on the rules selected.

- b Review results
 - Multiple files of authority records in MARC format on the Voyager server

There is one file set generated for each possible outcome: zero matches, one match, multiple matches, and/or records to delete. Consistent with other GDC-generated files, each file in a set contains a maximum of 1,000 records (1 bulk).

- Log file of actions taken
- Error file

See [Submit Authority Loading Match Job](#) on page 119 and [Files Generated from the Auth Load Merge Job](#) on page 129 for more information regarding generated files.

3 Merge and load

- a Confirm/identify the file sets (zero matches, one match, multiple matches, or delete) created in the previous filter and match step

The rules to apply will differ for each type of file set with the end result being one input record transformed to a saved record in the database or removed in the cases where the record has been flagged for delete.

Where there are multiple matches, there will be additional existing records flagged for delete since the goal is one best record being saved to the database. Ultimately, the incoming record is merged with the database record.

Additionally, if you have selected merge criteria that indicate that no merge should happen, a result file is created for you to review later.

- b Define and run a load merge job (see [Load Merge Configuration](#) on page 150 and [Submit Authority Loading Merge Job](#) on page 126)
- c Review results
 - Log file with action details
 - Error file

4 Resolve any record issues (from the log file) that require manual review

5 Reconcile headings using Voyage GHC/Catjob 11, 12, and 13

In the Authority Loading section of GDC, the following options are provided:

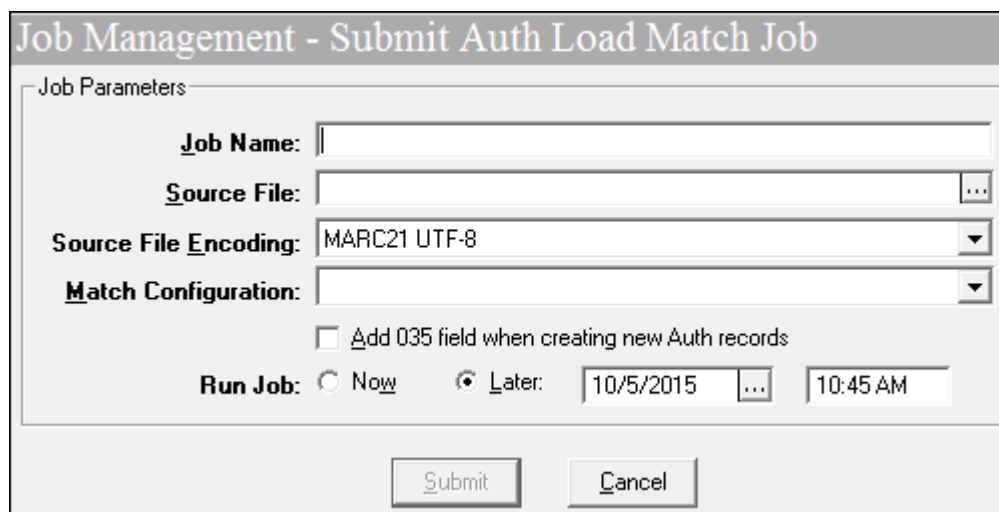
- [Load Match Configuration](#)
- [Load Merge Configuration](#)

Load Match Configuration

The Load Match Configuration feature in GDC is provided to address the first phase/step in loading authority records. The purpose of the first step is to identify the type of authority records in the external file of authority records with which you want to work and match those records against the Voyager authority database to produce files based on zero, one, or multiple matches and identify the ones for discard/delete.

The authority load match configuration that you create is required for running the Auth Load Match Job (**Job Management > Submit Auth Load Match Job**) in

GDC. These configurations may be used repeatedly for future authority record loads.



The dialog box is titled "Job Management - Submit Auth Load Match Job". It contains a section labeled "Job Parameters" with the following fields and controls:

- Job Name:** A text input field.
- Source File:** A text input field with a browse button (three dots) to its right.
- Source File Encoding:** A dropdown menu currently showing "MARC21 UTF-8".
- Match Configuration:** A dropdown menu.
- ☐ Add 035 field when creating new Auth records
- Run Job:** Two radio buttons, "Now" and "Later". The "Later" option is selected.
- Date/Time:** Two input fields next to the "Later" radio button, showing "10/5/2015" and "10:45 AM", each with a browse button (three dots) to its right.
- Buttons:** "Submit" and "Cancel" buttons at the bottom.

Figure 89: Auth Load Match Job Match Configuration Option

To create a Load Match Configuration for matching and filtering authority records:

- 1 Select **Authority Loading** from the menu listbar and click **Load Match Configuration**.

Authority Loading - Load Match Configuration

Name	Description
Auth Load Match 1	Auth Load Match Test 1

Name: Auth Load Match 1

Description: Auth Load Match Test 1

Last Modified: 7/28/2014Modified By: demo

Match Id Tag: 935Dedupe Profile: GDC Auth Test [AUTH1]

Rules:

Rule Sets In Group

Delete-By-Auth-Status

Discard Medical Subject Headings

Discard LC Names

Discard LC subject headings for children's literature

Discard LC Subjects

Discard Other

Figure 90: Authority Load Match Configuration

- 2 Click **New**.

Create new load match configuration:

Name:

Description:

Multi-match Id Tag: **Match Profile:**

Available Rule Sets

- Discard LC Names
- Discard LC Subdivision
- Discard LC subject headings for children's literatu
- Discard LC Subjects
- Discard Medical Subject Headings
- Discard Other

>

>>

<

<<

Rule Sets In Group

- Delete-By-Auth-Status

Figure 91: Create New Authority Load Match Configuration

- Enter the configuration parameters to match your requirements using the descriptions in [Table 15](#) for additional information.

Table 15. Authority Load Match Configuration Options

Option	Description
Name	Enter a name that uniquely identifies this configuration.
Description	Enter text that further describes the purpose of this configuration so that you can identify it separate from other configurations for future use.

Table 15. Authority Load Match Configuration Options

Option	Description
Multi-Match ID Tag	Specify the tag where you want the system to store the IDs of the authority records in the Voyager database that match the incoming MARC record when there are multiple matching records. The default tag provided is 935. You can change the default on the Workflow tab in Session Preferences (Options > Session Preferences). If there is only one match, the ID is stored in the incoming record's 001 field.
Match Profile	Select the name of the GDC deduplication profile that you created for this configuration. Refer to the <i>Voyager System Administration User's Guide</i> for more information regarding Authority Duplicate Detection Profiles where the GDC duplicate detection profile is described. The purpose of the deduplication profile is to identify matches between the incoming records and the records in the database based on the indexed fields that you specify for match purposes. There is also a field weight option that you can specify in the GDC deduplication profile to indicate the priority of one indexed field over another.

Table 15. Authority Load Match Configuration Options

Option	Description
Available Rule Sets / Rule Sets in Group	Select one or more of the following available discard rule sets provided for the authority load match configuration to indicate when to move these types of authority records to the discard file (see *.marc_discard on page 121): ■ Discard LC Names ■ Checks if the authority record 008/11=a ■ Checks if the authority record 008/14=a ■ Checks if the authority record 008/15=b (All three must be true for discard to occur.) ■ Discard LC Subdivision ■ Checks if the authority record contains a 18X field and if 008/09=d ■ Discard LC Subject Headings for Children's Literature ■ Checks if the authority record 008/11=b ■ Discard LC Subjects (Library of Congress Subject Headings) ■ Checks if the authority record 008/11=a ■ Checks if the authority record 008/14=b ■ Checks if the authority record 008/15=a (All three must be true for discard to occur.) ■ Discard Medical Subject Headings ■ Checks if the authority record 008/11=c ■ Discard Other ■ Checks if the authority record 008/11=z Refer to http://www.loc.gov/marc/authority/ad008.html for more information.

Table 15. Authority Load Match Configuration Options

Option	Description
Available Rule Sets / Rule Sets in Group (continued)	The Delete by Auth Status rule set is the default/required rule set where when leader position 5 equals: ■ d - the record is identified for delete ■ s - the record is identified for split (headings) (see *.marc_split on page 121) ■ x - the record is identified for delete Refer to http://www.loc.gov/marc/authority/adleader.html for more information. NOTE: Delete is not necessarily a final state (for d and x). During the Auth Load Merge Job process, the Voyager authority database is also searched for a match to these records. If a match is found, the final state is delete (see *.marc_deleted on page 121). Otherwise, it is discard (see *.marc_discard on page 121).

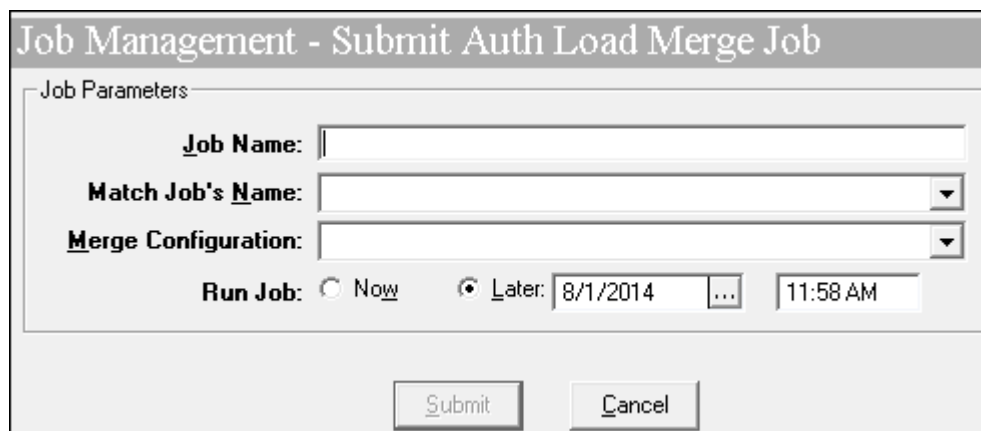
4 Click Save.

You now have a configuration that you can use for the Auth Load Match Job (see **Submit Authority Loading Match Job** on page 119). The name of the configuration that you created is specified in the Match Configuration parameter of the Auth Load Match Job dialog box.

Load Merge Configuration

The Load Merge Configuration feature in GDC is provided to address the second phase/step in loading authority records. The purpose of the second step is to use the files output by the Auth Load Match Job (see **Submit Authority Loading Match Job** on page 119) and the rules that you create in the Load Merge Configuration to update the Voyager authority records database.

The authority load merge configuration that you create is required for running the Auth Load Merge Job (**Job Management > Submit Auth Load Merge Job**) in GDC. These configurations may be used repeatedly for future authority record loads.



Job Management - Submit Auth Load Merge Job

Job Parameters

Job Name:

Match Job's **N**ame:

Merge Configuration:

Run Job: ☐ Now ☒ Later:

Figure 92: Auth Load Merge Job Merge Configuration Option

To create a Load Merge Configuration for updating authority records in the Voyager database:

- 1 Select **Authority Loading** from the menu listbar and click **Load Merge Configuration**.

Authority Loading - Load Merge Configuration

Name	Description
Auth Merge 1	Authority Loading Merge configuration test 1

New Edit Copy Delete

Name: Auth Merge 1
Description: Authority Loading Merge configuration test 1
Last Modified: 7/18/2014 Modified By: demo
☒ Import Unmatched Records
Local NUC: EXL Local NUC List:
Rules: Merge Multiple Matches of Type:
Topical (contains field 150)
Personal (contains field 100)
Do Not Merge If:
Incoming LDR/17 contains [user input list] a
Merge Rules:
Retain Local 008/06
043 Retain existing field instead of incoming field

Figure 93: Authority Load Merge Configuration

- 2 Click **New**.
- 3 Enter the merge configuration parameters to match your requirements using the descriptions in [Table 16](#) for additional information.

Table 16. Authority Load Merge Configuration Options

Option	Description
Name	Enter a name that uniquely identifies this configuration.
Description	Enter text that further describes the purpose of this configuration so that you can identify it separate from other configurations for future use.
Import Unmatched Records	Select this option to indicate if incoming records with no matches should be added to the database.

Table 16. Authority Load Merge Configuration Options

Option	Description
Local NUC	Specify a value that is to be used by the system when a rule preserves an existing field and flags it as locally modified. Refer to Merge Rules (Overview) in this table for more information.
Local NUC List	Specify a comma separated list of values to be used to recognize when an existing field has been locally modified. Refer to Merge Rules (Overview) in this table for more information.
Rules:	
Edit Rules Button	Click the Edit Rules button to display the Auth Load Merge Rules Configuration dialog box (see Figure 94, Auth Load Merge Rules Configuration Dialog Box (Edit Rules)) that enables you to provide additional merge configuration information in the following sections: ■ Do Not Merge If ■ Merge Rules ■ Merge Multiple Matches of Type ■ Choose Best Record Rules The configuration options provided in these sections are described below in this table. Click OK when you have completed selecting your options on the Auth Load Merge Rules Configuration dialog box.

Table 16. Authority Load Merge Configuration Options

Option	Description
Do Not Merge If	Use the options in this section to determine if the record in the Voyager database should be overlaid. Use the check boxes in this section to indicate that the field selected should be checked for the values specified in the blank field to the right of the check box. The incoming records (from the Auth Load Match output files) identified from this portion of the configuration are placed in the *.marc_reject file (see Files Generated from the Auth Load Merge Job on page 129). You will need to review the *.marc_reject file and manually merge these records. This section is intended to prevent the overlay of a preferred version of a record. The system will not perform this validation/check if nothing is selected.
Merge Rules (Overview)	Use the Merge Rules section to provide additional configuration information when you have entered a value for Local NUC or Local NUC List. These configuration options identify how you want to handle locally managed authority information. Locally modified authority fields are identified by the field having a \$5 that contains a value from the Local NUC List. To add \$5 to preserved local fields, select the check box under the Add \$5 column heading in the row of the field to which you want this to apply. If you add a \$5, the NUC value from Local NUC is added to the contents of the \$5.
Merge Rules (008/06, 008/12, 008/13)	To retain the 008/06 (geographic subdivision), 008/12 (series type), and/or 008/13 locally managed fields, select the check boxes next to these options.

Table 16. Authority Load Merge Configuration Options

Option	Description
Merge Rules (043, 09X, 0XX, 2XX, 3XX, 4XX, 5XX, 6XX, 781, 7XX other, 8XX, and 9XX)	For the 043, 09X, 0XX, 2XX, 3XX, 4XX, 5XX, 6XX (except 642, 644, 645, and 646), 781, 7XX other, 8XX, and 9XX, you can select the following retention options from the drop-down list (under the Retention column heading): ■ Use incoming field ■ Retain existing field instead of incoming field ■ Retain existing field and incoming field ■ Retain existing field if locally modified instead of incoming field ■ Retain existing field if locally modified and incoming field ■ Retain existing field if incoming field is empty For example, if an incoming authority record has no 4XX fields, Voyager retains any existing 4XX fields. ■ Retain existing field if locally modified and incoming field is empty ■ Retain existing field instead of incoming field unless headings differ (for 781 only) For 4XX, you can also select Ignore existing 4XX if existing 008/29='b' and incoming 008/29='a'. For 5XX, you can also select Ignore existing 5XX if existing 008/29='b' and incoming 008/29='a'. NOTE: You may need to maximize the Auth Load Merge Rules Configuration dialog box to access the additional 4XX and 5XX options.

Table 16. Authority Load Merge Configuration Options

Option	Description
Merge Rules (1XX)	Use the 1XX parameter to identify the handling of the 688 field every time the 1XX changes. The options are: ■ Discard old ■ Move old heading to 688 You can also select Add \$5 and specify fields in the Apply Only To Fields when defining your 1XX merge rules. When Move old heading to 688 is selected, the 1XX field is taken from the old record in the database and the following tag is merged into the record: <pre>688 ## \$a Heading changed <date> from: <1xx information></pre> where ■ <date> is taken from the 005 field of the incoming record and the date is formatted as YYYYMMDD ■ <1xx information> includes the entire 1XX field (including the tag). The subfields are changed into textual subfield indicators and the \$ is used. If the Add \$5 option is selected, the following is added to the record: <pre>\$5 <local NUC code></pre> Example: <pre>688 a Heading changed 20141218 from: 150## \$a Colbert, Stephen, \$d 1964- 5 EXL</pre> NOTE: The system does this in every case, even when the information duplicates information in the authority record's 4XX fields. NOTE: For the occasions where the heading type changes in addition to the heading itself, the system considers those as different headings as in the following example: <pre>150 \$a Ariel (fictional character) And 100 \$a Ariel (fictional character)</pre>

Table 16. Authority Load Merge Configuration Options

Option	Description
Merge Multiple Matches of Type	Use the check boxes in this section to indicate the types of authority records for which multiple matching records should be merged into a single record prior to merging the incoming record. You may select one or more of the check boxes. The default is for none of the check boxes to be selected. For example, if you want to manually manage multiple matches for Uniform titles instead of letting the program do it, do not select the Uniform Title check box.
Choose Best Record Rules	Select from these rule set options to identify how you want the system to sort out the best record when there are multiple matches found in the existing database of authority records. Choose one or more of the following rule sets for multimatch processing by clicking the single or double arrows to move your selection from the Available Rule Sets section to the Rule Sets in Group section: ■ Cataloging Source Description (040\$e) is rda ■ DLC Present in 040 ■ Encoding level is n ■ Latest update date of the record (to keep the newest/most recently modified record) ■ Length of 040 ■ Number of tags in record These Choose Best Record Rules options are used in the following manner: ■ You are selecting the best record out of a multimatch group. ■ The system merges the other multimatch records into the best record of the multimatch group Merging uses the merge criteria set for single-match merges. ■ After the multimatch records have been merged into one single record, the incoming record is merged with that single remaining record. If there are no Choose Best Record Rules selected, the system doesn't process any multimatch records at all.

The dialog box is titled "Auth Load Merge Rules Configuration". It contains several sections for configuring merge rules.

Do Not Merge If:

- ☐ Incoming LDR/17 contains [user input list]
- ☐ 040 \$e = 'rda' in matched record
- ☐ Matched LDR/18=i
- ☐ Matched record has 040 original agency [user input list]
- ☐ 040 in matched record is longer than 040 in incoming record
- ☐ Matched record has 040 latest agency [user input list]

Merge Rules:

Rule	Retention	Add \$5	Apply Only To Fields
☐ Retain Local 008/06			
☐ Retain Local 008/12			
☐ Retain Local 008/13			
043 Retention	Use incoming field		
09X Retention	Use incoming field	☐	
0XX Retention	Use incoming field	☐	
2XX Retention	Use incoming field	☐	
3XX Retention	Use incoming field	☐	

Merge Multiple Matches of Type:

- ☐ Series (008/16 == 'a')
- ☐ Topical (contains field 150)
- ☐ Name/Title (contains a subfield 100\$t)
- ☐ Personal (contains field 100)
- ☐ Corporate/Conference (contains field 110 or 111)
- ☐ Uniform Title (contains field 130)

Choose Best Record Rules:

Available Rule Sets	Rule Sets In Group
Cataloging Source Description (040\$e) is rda	
DLC Present in 040	
Encoding level is n	
Length of 040	
Number of tags in record	

Buttons: OK, Cancel

Figure 94: Auth Load Merge Rules Configuration Dialog Box (Edit Rules)

4 Click **Save**.

You now have a configuration that you can use for the Auth Load Merge Job (see [Submit Authority Loading Merge Job](#) on page 126). The name of the configuration that you created is specified in the Merge Configuration parameter of the Auth Load Merge Job dialog box.

7

Session Defaults and Preferences

This section includes:

- **Overview** on page 159
- **Workflow** on page 159
- **Folders and Files** on page 161
- **Colors and Fonts** on page 163

Overview

The GDC Options menu provides session defaults and preferences for:

- **Workflow**
- **Folders and Files**
- **Colors and Fonts**

With these options, you select and save settings to tailor the client interface/defaults to your preference. These settings may be changed whenever and as often as you choose to change them.

Workflow

From the Workflow tab, you can specify:

- **Search Properties**
 - Select Retain last search to have the system maintain the search parameters on the Search dialog box (see **Search** on page 23).
 - Select Automatic truncation for non keyword searches to automatically truncate non-keyword searches (such as Headings searches) without requiring the question mark (?) as a truncation character.

- External Applications

You can specify the path to the text editor (executable program file) that you prefer using to view log files and result files (see [View Log](#) on page 137 and [Get Result Files](#) on page 139).

NOTE:

If your database contains records with Unicode data, the editor that you use needs to support a Unicode font. Otherwise, substitute symbols display in place of the Unicode characters.

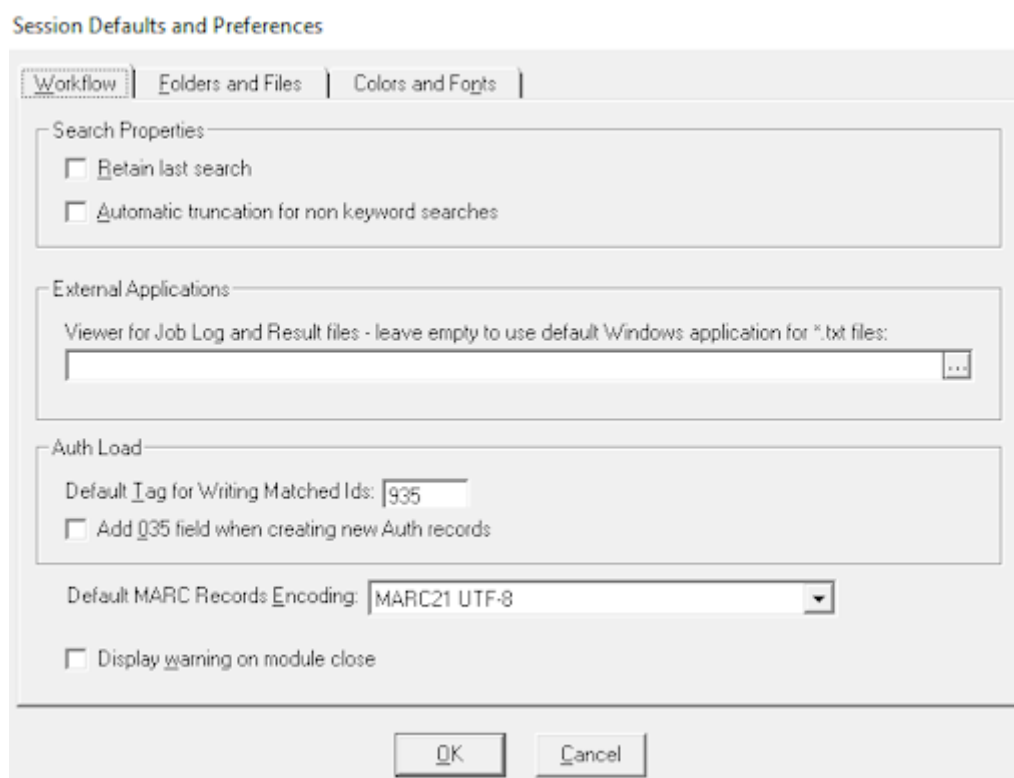


Figure 95: Workflow Tab

Examples of text editors include Notepad, Notepad++, and UltraEdit.

NOTE:

Word processing software may not be used.

- Authority Loading

- GDC uses the tag that you specify for **Default Tag for Writing Matched IDs** as the default for the Match ID Tag in the Load Match Configuration. The default tag provided is 935.

- Select the **Add 035 field when creating new Auth records** option when you want the **Add 035 field when creating new Auth records** option in the Submit Auth Load Match Job dialog box to be selected by default (refer to [Table 12](#) on page 123). When this option is selected, the system adds the 035 field to new records that are created when you run an Auth Load Match Job and no matching records are found. For bibliographic records, the standard number for matching is the 035 field; and for authority records, the standard field number used for matching is the 010 field (Library of Congress control number).
- **Encoding**
Select one of the encoding options to display as the default in job parameters when using Submit Match Job or Submit Auth Load Match Job

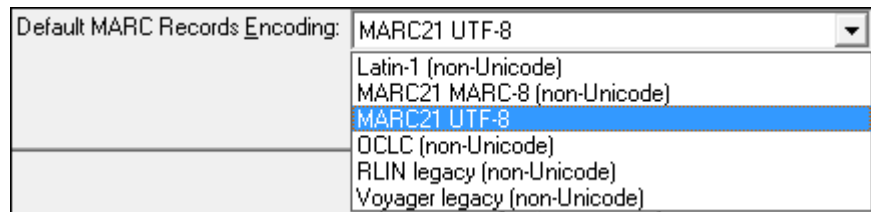


Figure 96: Default MARC Records Encoding Options

- **Display warning on module close**
Select this option to display a warning message when you close the Global Data Change module by selecting the **X** icon.
With the **Display warning on module close** option selected when you select the **X** icon to close the module, the system prompts you with the options **OK** and **Cancel** to close the client or return to the active window, respectively.

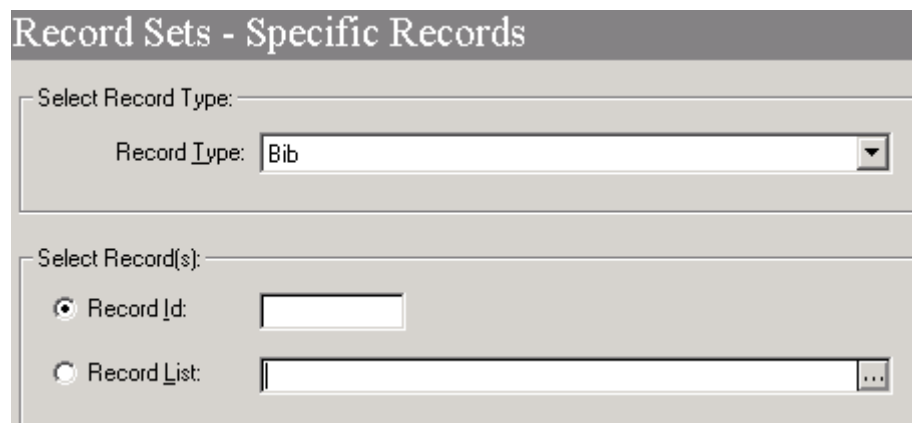
Folders and Files

From the Folders and Files tab, you can specify the default folders where:

- Scan rule files and data change rule files that you import are stored
- Scan rule files and data change rule files that you export are to be stored
- Files containing a list of record IDs are stored

These are the files that can optionally be used to create record sets from a list of record IDs.

- Files containing binary MARC records (for import/export) are stored



The dialog box is titled "Record Sets - Specific Records". It contains two main sections. The first section, "Select Record Type:", has a label "Record Type:" followed by a dropdown menu showing "Bib". The second section, "Select Record(s):", has two radio buttons. The first radio button is selected and is labeled "Record Id:", followed by a text input field. The second radio button is labeled "Record List:", followed by a text input field with an ellipsis button to its right.

Figure 97: Record ID List Usage Example

To set your folder preferences:

- 1 Click **Options > Session Preferences** from the menu bar.
- 2 Click the **Folders and Files** tab.



The image shows the "Folders and Files" tab in the "Session Preferences" dialog. At the top, there are three tabs: "Workflow", "Folders and Files" (which is selected), and "Colors and Fonts". Below the tabs, there are two sections. The first section is "Folders - Import/Export Rule Sets" and contains two text input fields: "Data Change:" and "Scan:", each with an ellipsis button to its right. The second section is "Folder - Record Id Lists" and contains a text input field labeled "Record Id Lists:" with an ellipsis button to its right.

Figure 98: Folders and Files Tab

- 3 Click the ellipsis button to select or create a folder or enter the path in the field provided.
- 4 If you are finished entering your session preferences, click **OK** to save your settings.

Colors and Fonts

From the Colors and Fonts tab, you can specify the:

- Rule set and preview font

IMPORTANT:

If your database contains records with Unicode data, you need to select a Unicode font as the default. Otherwise, substitute symbols display in place of the Unicode characters.

- Colors for Preview highlighting (see [Preview](#) on page 99)

The GDC Preview function highlights the following changes affected by the data change rule set group you specified:

- Changed fields
- Inserted fields
- Deleted fields

Using color makes it easier to view these changes. Use the color settings to select the colors you prefer for the highlighting in Preview.

- Color for unimplemented rules

This color option highlights rules in the Rule Editor that cannot be implemented. In general, this is unlikely to happen. However, if you edit an imported rule set in GDC (see [Figure 99](#)) that is damaged or was edited with an external editor where errors were introduced, you may see this highlighting to indicated that the GDC rules engine cannot implement what has been entered.

Edit Rule

Name:

Conditions:

WHEN MARC is "949"abcdefg&*()_+%\$#@!	Add
WHEN	Edit
WHEN	Remove
WHEN	Up
WHEN MARC field "949" to "969"	Down
WHEN CHANGED	

Consequences:

	Add
	Edit
	Remove
	Up
	Down

Figure 99: Example of Unimplemented Color

To change color settings:

- 1 Click the **Colors and Fonts** tab.

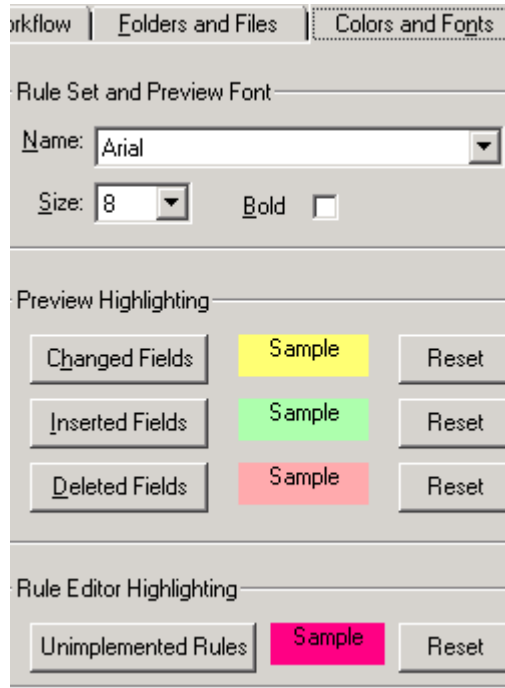


Figure 100: Colors and Fonts Tab

- 2 Click the labeled button for the color setting you want to change such as Changed Fields.

The Color dialog box displays.

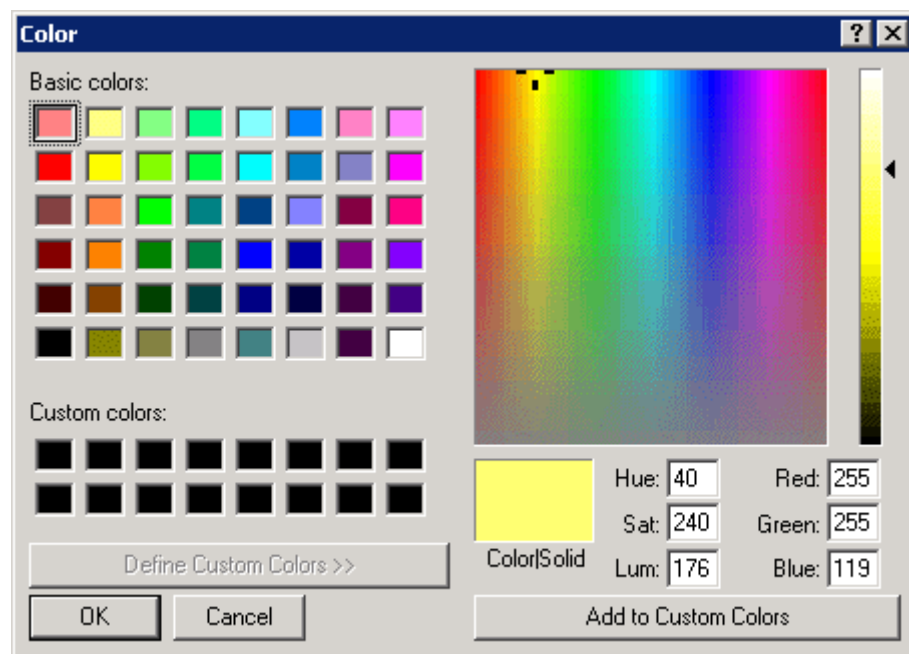


Figure 101: Color Dialog Box

- 3 Select a basic color or define a custom color, and click **OK**.
- 4 If you are finished entering your session preferences, click **OK** to save your settings.

NOTE:

Click the Reset button for any of the color settings to change the preference back to the original GDC default.

8

Technical Options/Considerations

This section includes:

- **Command Line Processing** on page 167
- **Performance** on page 168
- **Disk Space (Server)** on page 169
- **GDC Dæmon Processes** on page 169
- **Record Set Data (Server)** on page 170
- **Data Change Job Processing (Server)** on page 170

Command Line Processing

GDC provides a command line tool called `Prulemgmt`. With this tool, you can execute the following command line options:

- **Add a Rule Document to the Database**
`-a a -p <path> -n <name> -t <type> -o <operator>`
- **Retrieve a Rule Document from the Database**
`-a g -r <id> -p <path> -o <operator>`

Add a Rule Document to the Database

To add a rule document to the database, use the following syntax:

```
Prulemgmt -a a -p <path> -n <name> -t <type> -o <operator>
```

Refer to the table below for a description of the command line parameters.

Table 17. Add a Rule Document Parameters

Parameter	Description
Path	Specify the full path to the local input .dslr file.
Name	Specify the rule name.
Type	Specify the rule type (scan or data change).
Operator	Specify the operator ID for authorization.

Retrieve a Rule Document from the Database

To retrieve a rule document from the database, use the following syntax:

```
Prulemgmt -a g -r <id> -p <path> -o <operator>
```

Refer to the table below for a description of the command line parameters.

Table 18. Retriee a Rule Document Parameters

Parameter	Description
ID	Specify the rule document ID.
Path	Specify the full path to the local output .dslr file.
Operator	Specify the operator ID for authorization.

Performance

Consider your options to maintain and/or improve GDC performance starting with the suggestions provided in [Keyword Regen](#) and [Large Data Sets](#).

Keyword Regen

When you submit a data change job, you may select:

- Run records through keyword index (recommended)
- Do not run records through keyword index

If you select Do not run records through keyword index when you submit a data change job, you will improve performance for your data change job. If this option is selected, you need to have a bibliographic keyword regen run after the data change job in order for the records to be retrieved via keyword index searching.

Subsequent to the data change job completing, you can run bibliographic keyword regen to build the bibliographic keyword index if you are Cert300

certified; or you can log a case with Support via the Salesforce Support Portal to schedule Voyager Support to run the bibliographic keyword regen for you at no charge.

The Do not run records through keyword index option does not affect authority or MFHD (holdings) record changes. It affects only bibliographic record changes. It does not stop the entire keysvr from running as a whole on the database. Patrons and staff can perform keyword searches while the data change is run without error.

Large Data Sets

Processing large data sets may take a long time. Optionally, you may want to consider creating multiple record sets, and creating multiple jobs to complete large data change jobs. This option provides more flexibility to schedule multiple jobs to run during off hours and possibly over several days.

Disk Space (Server)

For large data change jobs or large numbers of small data change jobs, considerable disk space may be required for the log and intermediate files that are created. As part of GDC processing, the system checks for available space and stops processing if none is available.

If space is not available for a job, the job fails. In the GDC client (Job Management > View Running/Completed), the job that did not have enough space to run properly displays with a status of Failed. For jobs that fail, they are not held or postponed. Instead, they need to be resubmitted after cleanup activities have made enough space available. To estimate the disk space needed, use the following calculation:

{number of records} * 2 * 1.5 = KB required

To free up disk space for active work, job result files and completed jobs should be removed/archived on a regular basis. Job result files may be removed through the GDC client, or a system operator can set up scripts to remove or archive the files.

GDC Dæmon Processes

GDC dæmon processes include:

- GDC server

The GDC client communicates with this process.

- Job daemon

The GDC server communicates with this process.

Record Set Data (Server)

Record set data is stored on the server in the database in the RECORD_SET_RECORDS table. This is true of all methods for creating record sets:

- Scan
- Search
- Addition of individual/specific records

GDC record sets only contain record IDs that identify the bibliographic, authority, or MFHD records to be processed by GDC.

IMPORTANT:

Since the record set only contains the record ID for bibliographic, authority, and MFHD records, not the contents of those records, scheduling cataloger changes in coordination with your GDC processing is key to achieving your intended results. See **IMPORTANT - Before You Begin** on page 15 for best practices and planning suggestions.

The RECORD_SET contains the:

- Record set name
- Type of record in the record set (bibliographic, MFHD, or authority)
- Number of records in the record set

Data Change Job Processing (Server)

When a data change job is submitted for execution with the update database option selected, the:

- Job is placed in the job queue
- GDC server checks the job daemon to determine when the job is to start which is entered in the submit data change job

See the description for Run Job in [Table 4](#) on page 107 for more details regarding a job start time.

- Record IDs (such as bibliographic record IDs) in the record set are exported from the RECORD_SET_RECORDS table and placed into the /gdc directory with the name:

gdc.<job #>.<job name>.yyyymmddhhmmss.marc_ids.<bulk number>

NOTE:

Large jobs are divided into bulks of a maximum of 1,000 records. The <bulk number> identifies a particular grouping of 1,000 records.

- Records are exported using the existing MARC export functionality and placed into the /gdc directory with the name:
`gdc.<job #>.<job name>.yyyymmddhhmmss.marc_before.<bulk number>`
- Change is processed and the changed records are stored in the /gdc directory with the name:
`gdc.<job #>.<job name>.yyyymmddhhmmss.marc_after.<bulk number>`
Records not changed are stored in the file named:
`<etc>.marc_unchanged.<bulk number> file`
Records to be deleted are stored in the file named:
`<etc>.marc_deleted.<bulknumber> file`
- Records in the `gdc.<job #>.<job name>.yyyymmddhhmmss.marc_after.<bulk number>` file are imported and replaced using the existing bulk import functionality and the GDC bulk import profiles:
 - GDC_B_AU
 - GDC_MHFDThe regular log files for bulk import such as `log.imp.yyyymmdd.hhmm`, `replace.imp.yyyymmdd.hhmm` are placed in the /rpt directory.
- Log of the change job is placed in the /gdc directory and is named:
`gdc.<job #>.<job name>.
yyyymmddhhmmss.log`
See [View Log](#) on page 137 for details regarding what is included in the log file and how you can view the log file via the GDC client.

9

Troubleshooting

This section includes:

- [Error Handling/Prevention](#) on page 173

Error Handling/Prevention

For error handling and prevention suggestions, see:

- [Avoidance](#)
- [Roll Back](#)
- [List of Record IDs](#)
- [Search Timeout](#)

Avoidance

Avoid errors by:

- Using simple rules
- Completing a thorough review using Preview
- Running preview batch jobs and examining the job result files thoroughly before committing changes to the database.
- Use job queue scheduling to permit time between jobs to check your work

Roll Back

If you find a mistake after committing a data change to the database or realize that the change you have made does not serve the purpose for which you made it, you have the option to back out the data change (if no additional data change jobs have been executed).

IMPORTANT:

Backing out your data change by this method overwrites any changes made to the record subsequent to the data change that you are backing out.

When you commit a change to the database with a data change job, the job leaves two copies of your records on the server, one original (prior to change) copy and one changed copy.

To back out the data change, you need to run bulk import to import the `marc_before` file, located in the `/m1/voyager/xxxdb/gdc` directory. The complete file name for the `marc_before` file is:

```
gdc.<job #>.<job name>.YYYYMMDDhhmmss.marc_before.<bulk #>
```

You can use the GDC bulk import rules to do this. For bibliographic or authority record changes, use the `GDC_B_AU` rule code. For MFHD changes, use the `GDC_MFHD` rule code.

Refer to the Bulk Import, Replace, and Merge of MARC Records chapter in the *Technical User's Guide* and the Cataloging chapter in the *Voyager System Administration User's Guide* for more information regarding bulk import.

If you have questions or need help determining next steps, open a support case via the Ex Libris Salesforce Support Portal.

Refer to the *GDC Support Policy* located in the Documentation Center regarding the policy on what to do if you no longer have the `marc_before` file.

List of Record IDs

If importing a list of record IDs to a record set fails, verify that the file is in the correct format. It must be a text file (editable with Notepad or equivalent) with one record ID per line.

Search Timeout

If you encounter a search time-out situation when using the search function to build record sets, you may need to use the alternative approach of scanning to build the intended record set.

The GDC client provides the flexibility for results greater than the 10,000 record limit that is imposed with the search function in the non-GDC clients. However, when a Voyager database is large (3,000,000 records and greater) and a search results in hundreds of thousands of records, you may encounter a search time-out condition that exceeds the 100-minute search time-out setting for GDC.

A

Usage Example 1

This section includes:

- **Overview** on page 175
- **Create a Set of Records to Change** on page 176
- **Define the Data Change Rules to Update the Records** on page 182
- **Preview the Data Change Rules Using the Record Set You Created** on page 186
- **Execute the Data Change Job** on page 189
- **Review Your Results** on page 190

Overview

In this usage example, the existing base URL string in the 856u in a set of MFHD records is replaced with a new base URL string. In this instance, all or part of a URL in the mfhd 856u is being replaced to keep the link active.

Plan

As you begin, determine the changes you need to make and the GDC workflow steps to accomplish your goal.

Determine:

- What needs to be changed, bibliographic, holdings (MFHD), or authority records?
- What field/subfield needs to change?
- Why? What is the purpose of your change?

Workflow

With a clear understanding of what you want to accomplish, you are ready to begin with the following GDC workflow:

- 1 **Create a Set of Records to Change**
- 2 **Define the Data Change Rules to Update the Records**
- 3 **Preview the Data Change Rules Using the Record Set You Created**
- 4 **Execute the Data Change Job**
- 5 **Review Your Results**

Either a) accept the changes or b) recover the original records and try again.

Create a Set of Records to Change

GDC provides the following options for creating a record set:

- Search
- Scan
- Specific record ID

Since this usage example applies to MFHDs, use the scan option to create your record set. Search is only for bibliographic records; and entering specific record IDs is less efficient than scanning for this usage example.

See **Record Selection** on page 21 for more information regarding these options.

To create your set of records:

- 1 Identify the common characteristic(s).
For this usage example, all of the records have the same base URL string to be changed in subfield u of the 856 field in the MFHD.
- 2 Create your scan rules.
 - a Click **Scan Rule Sets** on the **Rules** listbar.
 - b Click **New** and enter a name and description.

Create new rule set:

Name: 856u

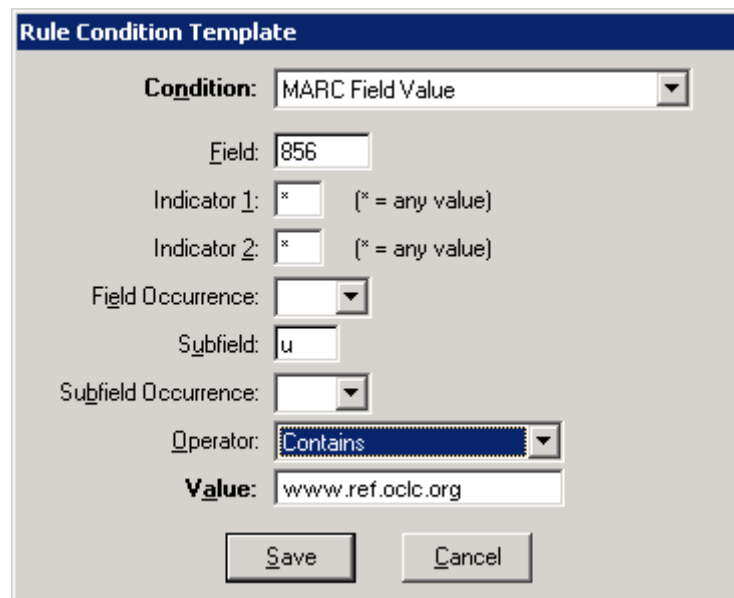
Description: Find proxy server string

Rule Name	Condition
-----------	-----------

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 102: Create New 856u Scan Rule

- c Click **Add** to create a scan rule for the scan rule set.
The Edit Rule dialog box displays.
- d Click **Add**, again, to create a rule condition for the change you identified in step 1.
Select the MARC Field Value as the condition since you are scanning for records with a specific value in the 856u (www.ref.oclc.org) and specify **Contains** for the operator.

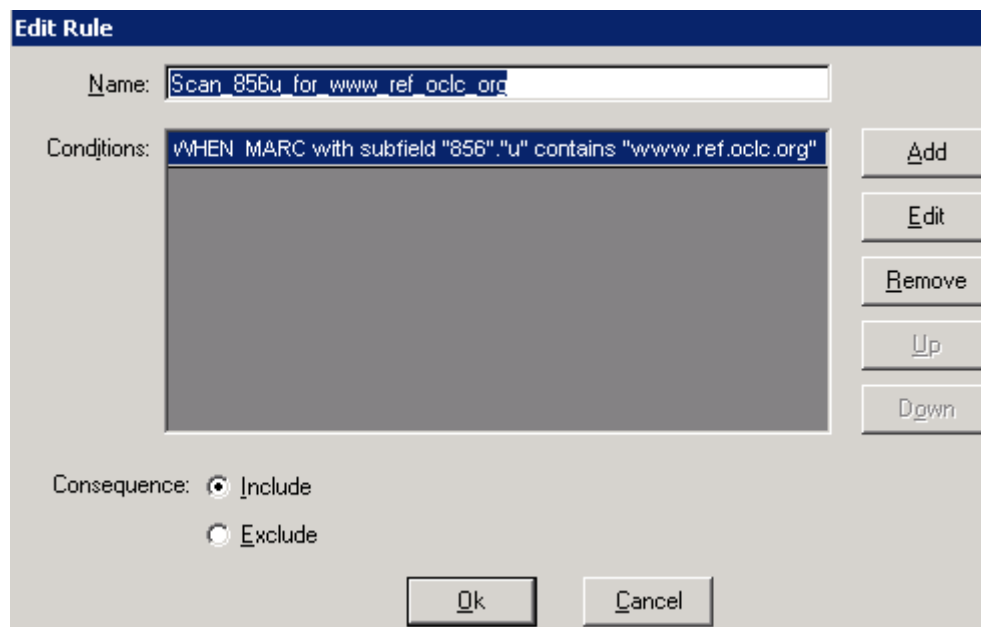


The 'Rule Condition Template' dialog box is used to define a condition for a rule. It contains the following fields and controls:

- Condition:** A dropdown menu set to 'MARC Field Value'.
- Field:** A text input field containing '856'.
- Indicator 1:** A text input field containing '*', with a tooltip that says '(* = any value)'.
- Indicator 2:** A text input field containing '*', with a tooltip that says '(* = any value)'.
- Field Occurrence:** A dropdown menu.
- Subfield:** A text input field containing 'u'.
- Subfield Occurrence:** A dropdown menu.
- Operator:** A dropdown menu set to 'Contains'.
- Value:** A text input field containing 'www.ref.oclc.org'.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

Figure 103: 856±u Condition

- e Click **Save** to save the rule condition.
- f Select **Include** for the consequence.
- g Specify a rule name and click **Ok** to save the rule.



The 'Edit Rule' dialog box is used to edit an existing rule. It contains the following fields and controls:

- Name:** A text input field containing 'Scan_856u_for_www_ref_oclc_org'.
- Conditions:** A list box containing the condition 'WHEN MARC with subfield "856"."u" contains "www.ref.oclc.org"'. To the right of the list box are buttons: 'Add', 'Edit', 'Remove', 'Up', and 'Down'.
- Consequence:** Two radio buttons: 'Include' (selected) and 'Exclude'.
- Buttons:** 'Ok' and 'Cancel' buttons at the bottom.

Figure 104: Save Scan Rule with Include (Click Ok)

- h** Click **Save** to save the rule set.

Create new rule set:

Name: 856u

Description: Find proxy server string

Rule Name	Condition
Scan_856u_for_www_ref_oclc_org	When MARC with subfield "856"."u" contains "www.ref.oclc.

Save Cancel

Figure 105: Save Scan Rule Set

- 3** Create the scan rule set group.
 - a** Click **Scan Rule Set Groups** on the Rules listbar.
 - b** Click **New** and enter a name and description.
 - c** Move the 856u rule set, that you created in step 2, to the Rule Sets in Groups column.

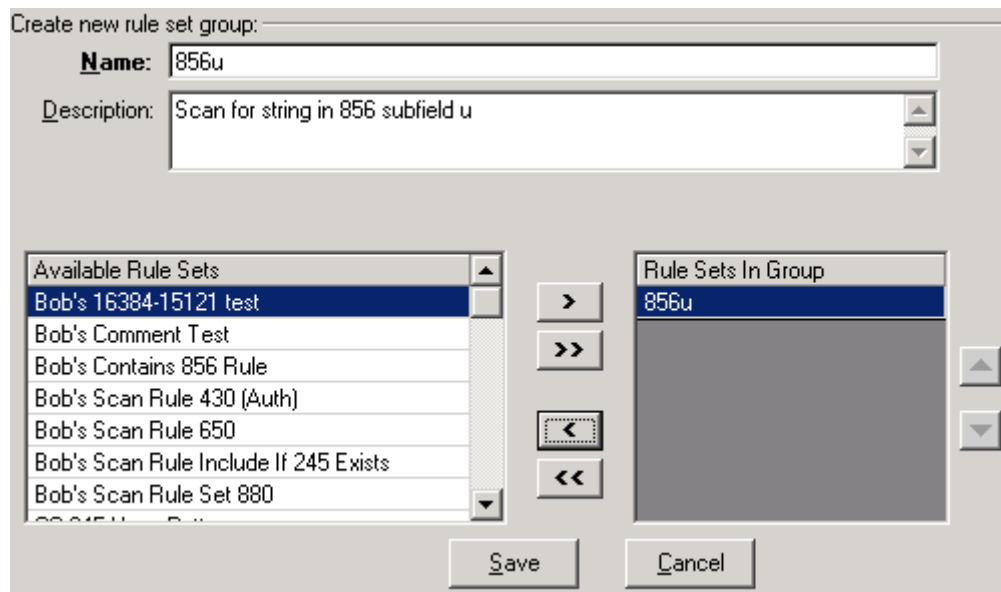


Figure 106: New Rule Set Group

- d Click **Save**.

You have completed the preparatory steps to run a scan job.
- 4 Run a scan job to collect the records in a set.
 - a Click **Job Management** on the listbar and click **Submit Scan Job**.
 - b Enter:
 - The job name
 - The scan rule set group name from step 3
 - The record type of Mfhd
 - When you want the job to run

For this usage example, select **Now**.
 - c Decide how you want to scan the database.

You can scan the entire database, or you can schedule several smaller jobs that scan record ranges in the database.

If you have a large database, it is better to run several smaller jobs (see best practices and other information in **IMPORTANT - Before You Begin** on page 15).
- d Decide if you want to create a new set of records from this scan job, or add records to an existing set.

NOTE:

If you create separate smaller record sets, you have the flexibility to perform any subsequent data change in smaller increments, too.

If you run several smaller jobs on record ranges, you can put the results of all jobs into the same record set. If you decide to combine the records into a set, you'll need to create a new record set for the first scan job, and put the records from subsequent scans into the new record set you created for the first of the smaller jobs.

Job Management - Submit Scan Job

Job Parameters

Job Name: 856 Link Scan Job

Rule Set Group Name: 856u

Record Type: Mfhd

Run Job: ☒ Now ☐ Later: 6/13/2011 06:05 PM

Scan

☒ Entire Database

☐ Existing Set:

☐ Range of Records: to:

Save Records Into

☐ Existing Set:

☒ New Set: 856u with ref.oclc.org

Figure 107: New 856u Job Management Scan Job

- e Click **Submit** to add the scan job to the queue.

Repeat the submit process if you have decided to run several smaller jobs.

The job is added to the job queue and runs the next time the Job Dæmon checks for a job in the queue (see the notation for Run Job in [Table 4](#) on

page 107, [View the Job Queue](#) on page 130, and [View the Running/Completed Jobs](#) on page 132).

When scanning is finished, the record set you created contains the record IDs for the MFHD records you want to change. The next few steps guide you in setting up the data change rules to use your record set to modify the actual records in your MARC 21 database.

Define the Data Change Rules to Update the Records

Creating data change rules is similar to setting up a scan job.

To create data change rules:

- 1 Create your data change rule set.
 - a Click **Rules** on the GDC listbar, and click **Data Change Rule Sets**.
 - b Click **New** and enter a rule name and description.

Create new rule set:

Name: 856u Change URL

Description: Change URL in the 856 u from www.ref.oclc.org to firstsearch.oclc.org

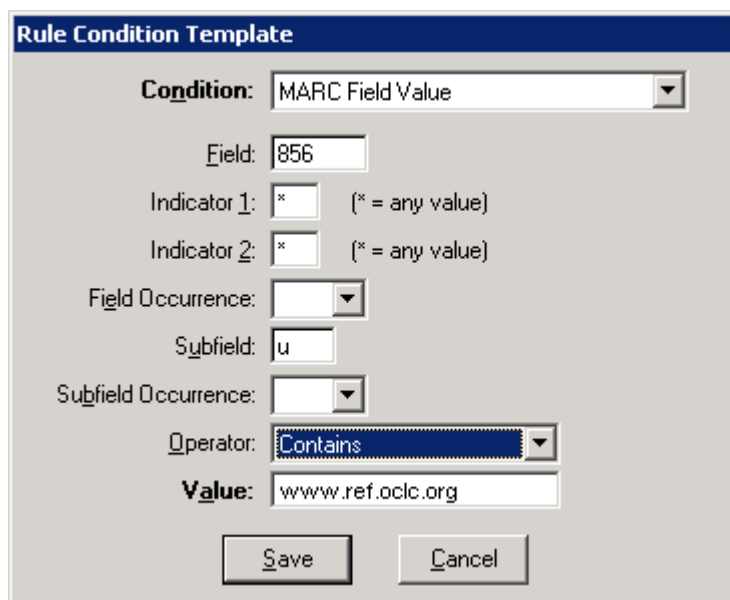
Rule Name	Condition
-----------	-----------

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 108: New 856u Data Change Rule

- c Click **Add** to create a new rule.
 - d Click **Add** in the Conditions area and create the rule condition.

For this usage example, the conditions for the data change are identical to the conditions used in the scan job.



The image shows a 'Rule Condition Template' dialog box. It contains the following fields and controls:

- Condition:** A dropdown menu with 'MARC Field Value' selected.
- Field:** A text box containing '856'.
- Indicator 1:** A text box containing '*', with a note '(* = any value)' to its right.
- Indicator 2:** A text box containing '*', with a note '(* = any value)' to its right.
- Field Occurrence:** A dropdown menu.
- Subfield:** A text box containing 'u'.
- Subfield Occurrence:** A dropdown menu.
- Operator:** A dropdown menu with 'Contains' selected.
- Value:** A text box containing 'www.ref.oclc.org'.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

Figure 109: New 856u Data Change Rule Condition

- e Click **Save**.
- f Click **Add** in the Consequences area and create the consequence
This consequence is the change you want to have executed when the condition is met.
For this usage example, the change is to replace a specific text string with another one.
- g Select **Replace String With String** for the consequence, enter the MARC tag and subfield to be updated, and enter the appropriate base URL strings in the **Replace string** and **With string** fields.

Rule Consequence Template

Consequence: Replace String With String

Select field:

☐ Control Field

☒ Field 856 Subfield: u

Replace string: www.ref.oclc.org

With string: firstsearch.oclc.org

☐ Replace string is a regular expression

Save Cancel

Figure 110: New 856u Data Change Rule Consequence

- h** Click **Save**.
- i** Enter a rule name and click **Ok** to save the rule.

Edit Rule

Name: 856u Replace String with String Data Change Rule

Conditions: WHEN MARC with subfield "856"."u" contains "www.ref.oclc.org"

Consequences: replace string by string (MARC."856"."u", "www.ref.oclc.org", "firs

Buttons: Add, Edit, Remove, Up, Down (for both Conditions and Consequences)

Buttons: Ok, Cancel

Figure 111: Click Ok to Save Conditions/Consequences

- j Click **Save** to save the rule set.

Create new rule set:

Name: 856u Change URL

Description: Change URL in the 856 u from www.ref.oclc.org to firstsearch.oclc.org

Rule Name	Condition
856u Replace String with String Data Change Rule	When MARC with subfield "856" "u" c

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 112: Save 856u Data Change Rule Set

- 2 Add your rule set to a rule set group.
 - a Click **Data Change Rule Set Groups** on the listbar.
 - b Click **New** and enter the new rule set group a name and description.
 - c Move the 856u Change URL rule set to the **Rule Sets in Group** column.
 - d Click **Save**.

Preview the Data Change Rules Using the Record Set You Created

Now that the record set is created and the data change rules have been defined, you are ready to test the rules to verify that they do what is intended. Use the GDC Preview feature to test your rules against your record set.

To preview:

- 1 Click **Preview** on the GDC listbar and click **Select Criteria**.
- 2 Select the Mfhd record type.
- 3 Select the record set and the rule set group name you created in the previous steps from the respective dropdown lists.

Preview - Select Criteria

Record Type: Mfhd

Record Source:

☐ Record Id:

☒ Record Set: 856u_with_ref_oclc_org

Rule Set Group Name: 856 URL Change

Preview Cancel

Figure 113: Enter Preview Criteria

4 Click Preview.

Changes are highlighted according to the color preferences you have set under Options > Session Preferences > Colors and Fonts.

Preview Record Set: 856u_with_ref_oclc_org

Preview Record: Holdings 19243 Using Rule Set Group: 856 URL Change

Record 1 of 2

Tag	Ind 1	Ind 2	Data (before rules applied)	Tag	Ind 1	Ind 2	Data (after rules applied)
000			00229cx a22001093 4500	000			00233cx a22001093 4500
001			19243	001			19243
004			18823	004			18823
005			20110614105353.0	005			20110614105353.0
008			9701150p 8 4001aueng0	008			9701150p 8 4001aueng0
014	1		\$a CNV01817118	014	1		\$a CNV01817118
852	0		\$b main \$h F786 \$i .L8	852	0		\$b main \$h F786 \$i .L8
856			\$u www.ref.oclc.org	856			\$u firstsearch.oclc.org

Jump ahead:

Jump

Prev Record

Next Record

Remove this record from set

Close

of records (where N is a number you specify in the Jump Ahead field) is a good way to preview a sample if you have a large record set.

If you see records that you do not want to change, you can remove them from the set using the **Remove this record from set** button.

If the change is not what you intended, return to the Rules listbar option, revise the Rule Set(s), and Preview again.

When you are satisfied that the record set and rules are what you want, you are ready to commit the changes to the database.

Execute the Data Change Job

With this component of the usage example, you are ready to submit a data change job using the rules you have defined with the record set you created.

To execute a data change job:

- 1 Click **Job Management** on the GDC listbar.
- 2 Click **Submit Data Change Job**.
- 3 Enter a job name and select your record set and data change rule set group that you created in the previous steps.
- 4 Decide when you would like to run the job.

For this usage example, select to run your job **Now**.

- 5 Decide if you want to update the database.

If you choose **Do Not Update Database**, you can preview the resulting records. This creates two sets of records on the server, one before the change and one after the change. (The one set of records created after the change may include unchanged records.)

If you are ready to commit the change to the database, select **Update Database** and your keyword indexing option (see [Table 9](#) on page 114 for more information).

Job Management - Submit Data Change Job

Job Parameters

Job Name: Change 856 u

Record Set Name: 856u_with_ref_oclc_org

Rule Set Group Name: 856 URL Change

Run Job: ☒ Now ☐ Later: 6/14/2011 ... 02:50 PM

Update Database

☒ Update database

☐ Do not update database (preview)

Submit **Cancel**

Figure 115: Data Change Job Settings

- 6 When all options are chosen, click **Submit**.
The job is added to the job queue.
Once the job completes, review the results.

Review Your Results

Review the files generated by the GDC job.

To review:

- 1 When the job is complete, click **View Running/Completed** on the Job Management listbar.
- 2 Select the row of the job that you ran, and click **Get Result Files**.

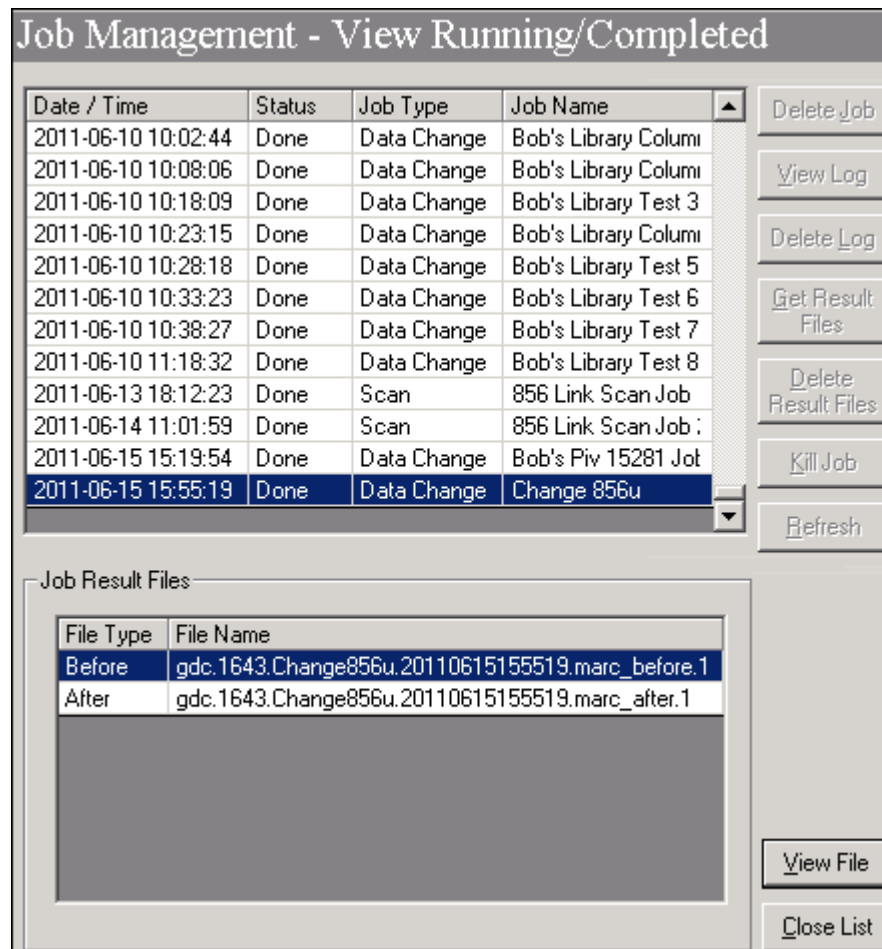


Figure 116: Get Result Files Display

- 3 Select the after file, and click **View File**.
- 4 Review the changed records.

Review some or all of the records (depending on the size of the record set) in Cataloging to ensure records display as expected.

If the changes were made as you expected, you don't need to do anything more to accept the results. The changes have been made to your database, and you have successfully completed your data change.

If you need to back out a change, see [Troubleshooting](#) on page 173 and open a case with Ex Libris Support via the Salesforce Support Portal to review next steps.

B

Usage Example 2

This section includes:

- **Overview** on page 193
- **Create a Set of Records to Change** on page 194
- **Define the Data Change Rules to Update the Records** on page 197
- **Preview the Data Change Rules Using the Record Set You Created** on page 202
- **Execute the Data Change Job** on page 205
- **Review Your Results** on page 206

Overview

In this usage example, the entire bibliographic 035 tag is deleted if a subfield 9 starting with the number 0 exists.

Plan

As you begin, determine the changes you need to make and the GDC workflow steps to accomplish your goal.

Determine:

- What needs to be changed, bibliographic, holdings (MFHD), or authority records?
- What field/subfield needs to change?
- Why? What is the purpose of your change?

Workflow

With a clear understanding of what you want to accomplish, you are ready to begin with the following GDC workflow:

- 1 **Create a Set of Records to Change**
- 2 **Define the Data Change Rules to Update the Records**
- 3 **Preview the Data Change Rules Using the Record Set You Created**
- 4 **Execute the Data Change Job**
- 5 **Review Your Results**

Either a) accept the changes or b) recover the original records and try again.

Create a Set of Records to Change

GDC provides the following options for creating a record set:

- Search
- Scan
- Specific record ID

See **Record Selection** on page 21 for more information regarding these options.

Since this usage example applies to bibliographic records, you may use the search option to create your set of records.

To create your set of records:

- 1 Identify the common characteristic(s).
For this usage example, the common characteristics are the bibliographic records that contain a subfield 9 that begin with the number 0.
- 2 Complete a search using the 0359 index.
 - a Click **Search** on the **Record Sets** listbar.
 - b On the **Index Selection** tab, select the 0359 index (Original System Number 0359).
 - c Enter 0 in the **Search for** field or 0?, if you do not have the **Automatic truncation for nonkeyword searches** option set in Session Defaults and Preferences.
 - d Click **Do Search**.

The result is a list of records in the Titles Index.

The image shows a 'Search' dialog box with a dark blue title bar. Below the title bar are five tabs: 'Keyword', 'Index Selection', 'Builder', 'History', and 'Saved Searches'. The 'Keyword' tab is active. Inside the dialog, there is a 'Search by' section with three radio buttons: 'Find' (selected), 'Browse', and 'Keyword'. To the right of these is a dropdown menu currently showing 'Original System Number (0359)'. Below this are two filter sections: 'Heading Types Filter' and 'Locations Filter', both displaying '< Not applicable >'. A 'Search for:' text field contains the text '0?'. Below the text field are two buttons: 'Default Tab' and 'Save Settings'. At the very bottom of the dialog are four buttons: 'Do Search', 'Cancel', 'Clear', and 'Limit...'.

Figure 117: Search

- e Enter a new record set name, and click **Save to New Set** to save these records (record IDs only) to a record set.

Titles Index

Font: Sort By:

Original System Number (0359)	Title	/Author	Date
04-AAA-1003	Accent. An Artist's Montmartre / Public Affairs presentation of CBS News ; producer, Don Kellerman, Bill Kobin ; director, James MacAllen.		1961
04-AAA-1003	Accent. An Artist's Montmartre / Public Affairs presentation of CBS News ; producer, Don Kellerman, Bill Kobin ; director, James MacAllen.		1961
04-AAA-1003	Accent. An Artist's Montmartre / Public Affairs presentation of CBS		1961

Save to New Set Save to Existing Set

34 Records Found Search: Original System Number (0359)=0?

Figure 118: Titles Index

- f** Click **OK** when the save confirmation message displays.

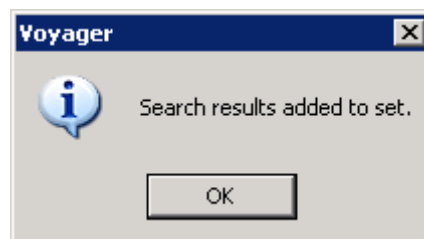


Figure 119: Save Confirmation Message

- g** Click **Cancel** to exit the Titles Index display.
- h** Click **View/Edit** on the **Record Sets** listbar and verify that the record set that you saved displays in the list of record sets.

Define the Data Change Rules to Update the Records

To create the data change rules to update your records:

- 1 Create your data change rule set.
 - a Click **Rules** on the GDC listbar, and click **Data Change Rule Sets**.
 - b Click **New** and enter a rule name and description.

Create new rule set:

Name: 0359 Delete

Description: Delete 0359

Rule Name	Condition
-----------	-----------

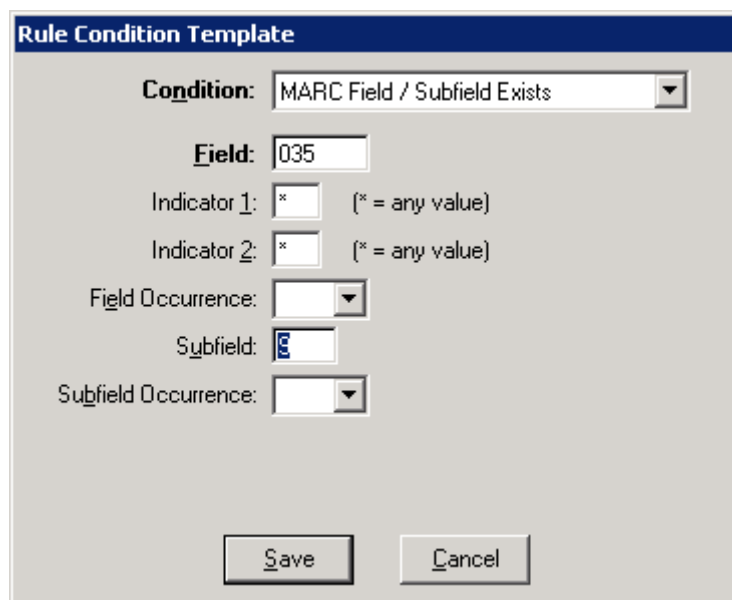
Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 120: New 0359 Data Change Rule

- c Click **Add** to create a new rule.
- d Click **Add** in the Conditions area and create the rule condition.

For this usage example, specify:

Condition:	MARC Field / Subfield Exists
Field:	035
Subfield:	9

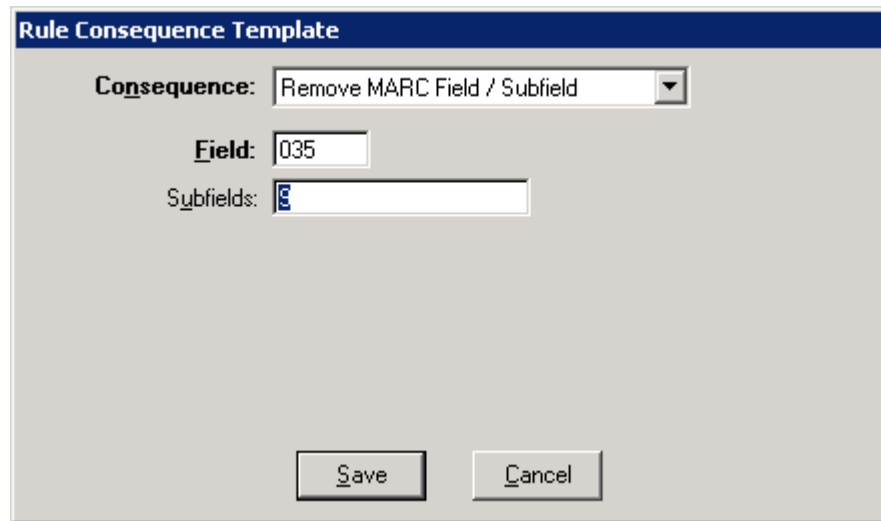


The image shows a 'Rule Condition Template' dialog box. It has a title bar with the text 'Rule Condition Template'. Inside, there are several fields and dropdown menus. The 'Condition' field is a dropdown menu with 'MARC Field / Subfield Exists' selected. The 'Field' field is a text box containing '035'. The 'Indicator 1' field is a text box containing '*', with a note '(* = any value)' to its right. The 'Indicator 2' field is a text box containing '*', with a note '(* = any value)' to its right. The 'Field Occurrence' field is a dropdown menu. The 'Subfield' field is a text box containing '9'. The 'Subfield Occurrence' field is a dropdown menu. At the bottom, there are two buttons: 'Save' and 'Cancel'.

Figure 121: New 0359 Delete Data Change Rule Condition

- e Click **Save**.
- f Click **Add** in the Consequences area and create the consequence
This consequence is the change you want to have executed when the condition is met.
For this usage example, specify:

Consequence:	Remove MARC Field / Subfield
Field:	035
Subfields:	9



The image shows a dialog box titled "Rule Consequence Template". It has a blue header bar with the title. Below the header, there are three input fields: "Consequence:" with a dropdown menu showing "Remove MARC Field / Subfield", "Field:" with a text box containing "035", and "Subfields:" with a text box containing "E". At the bottom of the dialog, there are two buttons: "Save" and "Cancel".

Figure 122: New 0359 Data Change Rule Consequence

- g** Click **Save**.
- h** Enter a rule name and click **Ok** to save the rule.

Edit Rule

Name:

Conditions:

WHEN MARC is "035"."9"

Consequences:

remove MARC."035"."9"

Buttons: Add, Edit, Remove, Up, Down (for both Conditions and Consequences)

Buttons: Ok, Cancel

Figure 123: Click Ok to Save Conditions/Consequences

- i** Click **Save** to save the rule set.

Create new rule set:

Name: 0359 Delete

Description: Delete 0359

Rule Name	Condition
0359	When MARC is "035": "9"

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 124: Save 0359 Delete Data Change Rule Set

- 2 Add your rule set to a rule set group.
 - a Click **Data Change Rule Set Groups** on the listbar.
 - b Click **New** and enter the new rule set group a name and description.
 - c Move the 0359 Delete rule set to the **Rule Sets in Group** column.

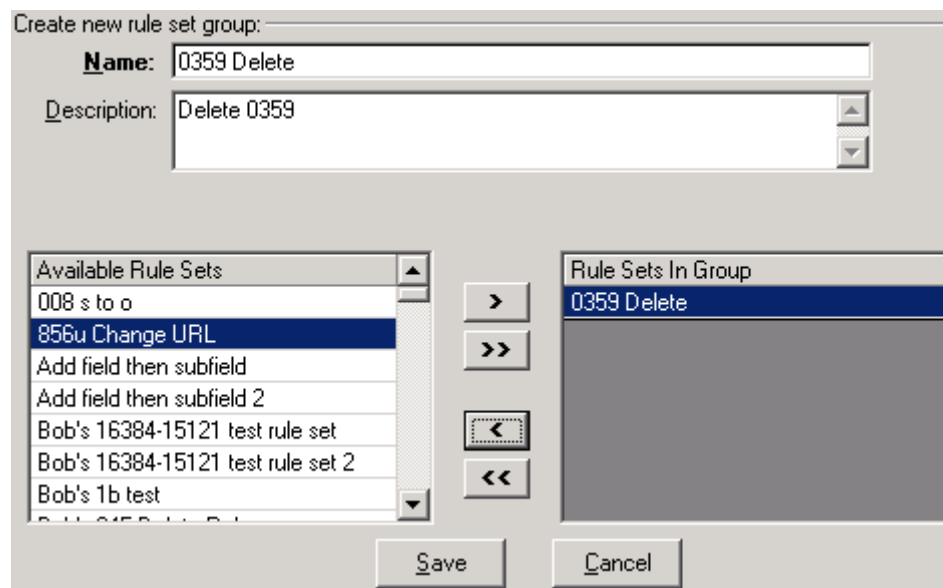


Figure 125: New Rule Set Group

- d Click **Save**.

Preview the Data Change Rules Using the Record Set You Created

Now that the record set is created and the data change rules have been defined, you are ready to test the rules to verify that they do what is intended. Use the GDC Preview feature to test your rules against your record set.

To preview:

- 1 Click **Preview** on the GDC listbar and click **Select Criteria**.
- 2 Select the Bib record type.
- 3 Select the record set and the rule set group name you created in the previous steps from the respective dropdown lists.

Preview - Select Criteria

Record Type: Bib

Record Source:

☐ Record Id:

☒ Record Set: 0359 start with 0

Rule Set Group Name: 0359 Delete

Preview Cancel

Figure 126: Enter Preview Criteria

4 Click Preview.

Changes are highlighted according to the color preferences you have set under Options > Session Preferences > Colors and Fonts.

Preview Record Set: 0359 start with							
Preview Record: Bibliographic 54585				Using Rule Set Group: 0359 Delete			
Record				Record			
Tag	Ind 1	Ind 2	Data (before rules applied)	Tag	Ind 1	Ind 2	Data (after rules applied)
000			01017nam a22003131a 4500	000			00992nam a22003011a 45
001			54585	001			54585
005			19970908163047.0	005			19970908163047.0
008			970908s1929 nyu b 000 1	008			970908s1929 nyu b
010			\$a 29022808	010			\$a 29022808
019			\$a 986829	019			\$a 986829
035			\$a ocm00832269	035			\$a ocm00832269
035			\$9 00225858				
035			\$a 191315	035			\$a 191315
040			\$a DLC \$c HEI \$d m.c. \$d XBM \$d REC	040			\$a DLC \$c HEI \$d m.c. \$d > REC
041	1		\$a engnor	041	1		\$a engnor
050			\$a PZ3.R6275 \$b Gi6 \$a PT9150.F	050			\$a PZ3.R6275 \$b Gi6 \$a P'
090			\$a PT9150.R55 \$b I213 1929	090			\$a PT9150.R55 \$b I213 19:
099			\$a PT9150.R55 I213 1929	099			\$a PT9150.R55 I213 1929
100	1		\$a Rølvaag, O. E. \$q (Ole Edvart),	100	1		\$a Rølvaag, O. E. \$q (Ole E
240	0	0	\$a I de dage. \$l English	240	0	0	\$a I de dage. \$l English
245	1	0	\$a Giants in the earth, \$c by O.E. introd. by Vernon L. Parrington.	245	1	0	\$a Giants in the earth, \$c k introd. by Vernon L. Parrin
260			\$a New York, \$a London, \$b Harp [c1929]	260			\$a New York, \$a London, : [c1929]
300			\$a xxxiv, 468 p. \$c 20 cm.	300			\$a xxxiv, 468 p. \$c 20 cm.
490	0		\$a Harper's modern classics	490	0		\$a Harper's modern classik
500			\$a Translation of: I de dage.	500			\$a Translation of: I de dage
500			\$a Introduction signed: Lincoln Co	500			\$a Introduction signed: Lin
504			\$a Bibliography: p. 467-468.	504			\$a Bibliography: p. 467-46
700	1		\$a Parrington, Vernon Louis, \$d 1	700	1		\$a Parrington, Vernon Loui
700	1		\$a Colcord, Lincoln, \$d 1883-1947	700	1		\$a Colcord, Lincoln, \$d 18

Jump ahead:

Figure 127: Preview Records

5 Review the change in each record thoroughly.

Use the **Prev Record** and **Next Records** buttons to review the records.

NOTE:

You can jump through the record by entering a positive number to jump ahead or a negative number to jump back. Jumping ahead every N number

of records (where N is a number you specify in the Jump Ahead field) is a good way to preview a sample if you have a large record set.

If you see records that you do not want to change, you can remove them from the set using the **Remove this record from set** button.

If the change is not what you intended, return to the Rules listbar option, revise the Rule Set(s), and Preview again.

When you are satisfied that the record set and rules are what you want, you are ready to commit the changes to the database.

Execute the Data Change Job

With this component of the usage example, you are ready to submit a data change job using the rules you have defined with the record set you created.

To execute your data change job:

- 1 Click **Job Management** on the GDC listbar.
- 2 Click **Submit Data Change Job**.
- 3 Enter a job name and select your record set and data change rule set group that you created in the previous steps.
- 4 Decide when you would like to run the job.

For this usage example, select to run your job **Now**.

- 5 Decide if you want to update the database.

If you choose **Do Not Update Database**, you can preview the resulting records. This creates a file of records on the server, one changed and one unchanged.

If you are ready to commit the change to the database, select **Update Database** and your keyword indexing option (see [Table 9](#) on page 114 for more information).

Job Management - Submit Data Change Job

Job Parameters

Job Name: 0359 Delete Bibs Start With 0

Record Set Name: 0359 start with 0

Rule Set Group Name: 0359 Delete

Run Job: ☒ Now ☐ Later: 6/17/2011 06:01 PM

Update Database

☒ Update database

☐ Do not update database (preview)

Submit **Cancel**

Figure 128: Data Change Job Settings

- 6 When all options are chosen, click **Submit**.
The job is added to the job queue.
Once the job completes, review the results.

Review Your Results

Review the files generated by the GDC job.

To review:

- 1 When the job is complete, click **View Running/Completed** on the Job Management listbar.
- 2 Select the row of the job that you ran, and click **Get Result Files**.
- 3 Select the after file, and click **View File**.

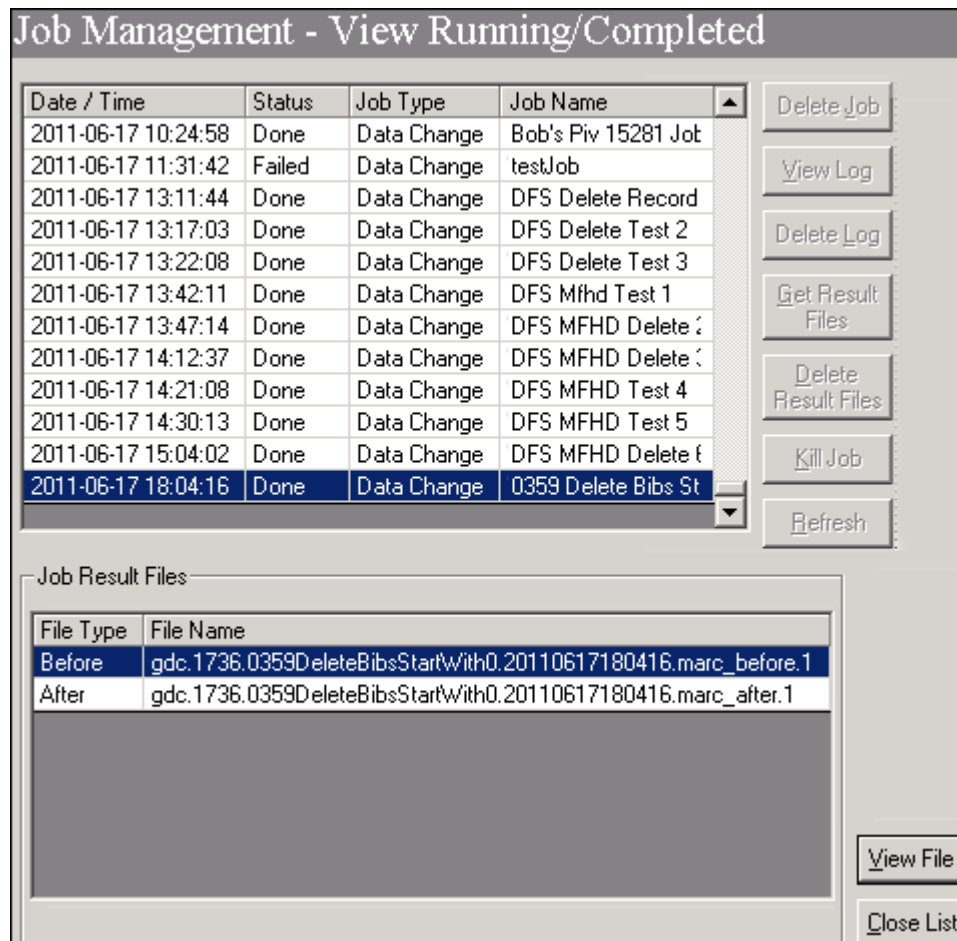


Figure 129: Get Result Files Display

4 Review the changed records.

Review some or all of the records (depending on the size of the record set) in Cataloging to ensure records display as expected.

If the changes were made as you expected, you don't need to do anything more to accept the results. The changes have been made to your database, and you have successfully completed your data change.

If you need to back out a change, see [Troubleshooting](#) on page 173 and open a case with Ex Libris Support via the Salesforce Support Portal to review next steps.

C

Usage Example 3

This section includes:

- [Overview](#) on page 209
- [Create a Set of Records to Change](#) on page 210
- [Define the Data Change Rules to Update the Records](#) on page 216
- [Preview the Data Change Rules Using the Record Set You Created](#) on page 221
- [Execute the Data Change Job](#) on page 222
- [Review Your Results](#) on page 224

Overview

In this usage example, the Form of Item is being changed from s to o in the 008 field. In this instance, the value of position 23 is changing from s to o to change the Form of Item from Electronic to Online in the 008 field.

Plan

As you begin, determine the changes you need to make and the GDC workflow steps to accomplish your goal.

Determine:

- What needs to be changed, bibliographic, holdings (MFHD), or authority records?
- What field/subfield needs to change?
- Why? What is the purpose of your change?

Workflow

With a clear understanding of what you want to accomplish, you are ready to begin with the following GDC workflow:

- 1 **Create a Set of Records to Change**
- 2 **Define the Data Change Rules to Update the Records**
- 3 **Preview the Data Change Rules Using the Record Set You Created**
- 4 **Execute the Data Change Job**
- 5 **Review Your Results**

Either a) accept the changes or b) recover the original records and try again.

Create a Set of Records to Change

GDC provides the following options for creating a record set:

- Search
- Scan
- Specific record ID

This usage example uses the scan option to create your record set.

See **Record Selection** on page 21 for more information regarding your other options to create a record set.

To create your set of records:

- 1 Identify the common characteristic(s).
For this usage example, you need to retrieve bibliographic records where the 008 field contains s (Electronic) for Form of Item.
- 2 Create your scan rules.
 - a Click **Scan Rule Sets** on the Rules listbar.
 - b Click **New** and enter a name and description.

Create new rule set:

Name: 008 s

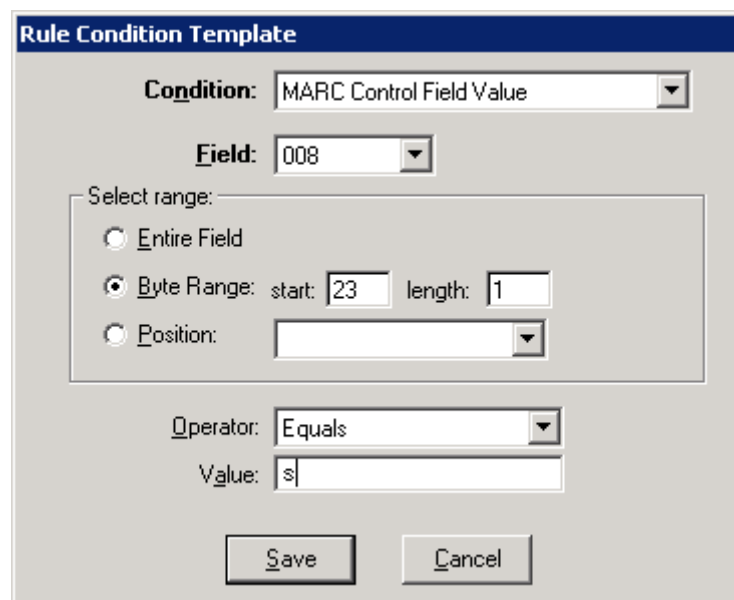
Description: Find bibliographic records with 008 Form of Item s

Rule Name	Condition
-----------	-----------

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 130: Create New Scan Rule for 008 Form of Item with s

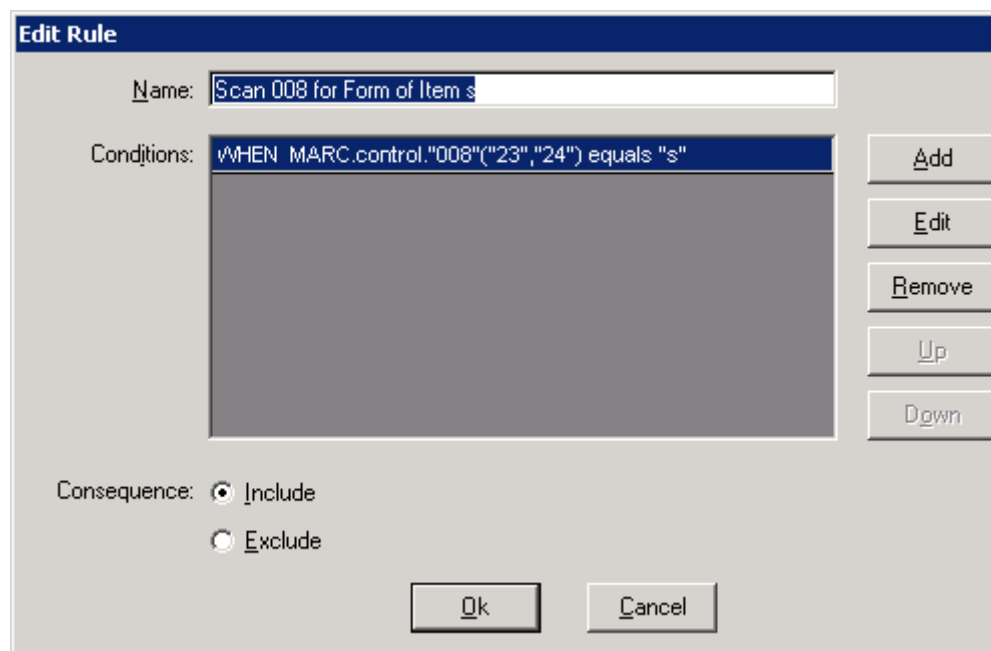
- c** Click **Add** to create a scan rule for the scan rule set.
The Edit Rule dialog box displays.
- d** Click **Add**, again, to create a rule condition for the change you identified in step 1.
- e** Select the **MARC Control Field Value** as the condition.
- f** Select **008** from the **Field** dropdown list.
- g** For the range, select **Byte Range** and enter 23 for the **start** value and 1 for the **length** value.
- h** Select **Equals** for the **Operator** value and enter s for the **Value**.



The 'Rule Condition Template' dialog box is shown. It has a title bar 'Rule Condition Template'. Inside, there is a 'Condition:' dropdown menu set to 'MARC Control Field Value'. Below it is a 'Field:' dropdown menu set to '008'. A section titled 'Select range:' contains three radio buttons: 'Entire Field' (unselected), 'Byte Range:' (selected), and 'Position:' (unselected). The 'Byte Range:' section has 'start:' set to '23' and 'length:' set to '1'. Below this is an 'Operator:' dropdown menu set to 'Equals' and a 'Value:' text box containing 's'. At the bottom are 'Save' and 'Cancel' buttons.

Figure 131: 008 Form of Item s Condition

- i Click **Save** to save the rule condition.
- j Select **Include** for the consequence.
- k Specify a rule name and click **Ok** to save the rule.



The 'Edit Rule' dialog box is shown. It has a title bar 'Edit Rule'. Inside, there is a 'Name:' text box containing 'Scan 008 for Form of Item s'. Below it is a 'Conditions:' list box containing 'WHEN MARC.control."008"("23","24") equals "s"'. To the right of the list box are buttons: 'Add', 'Edit', 'Remove', 'Up', and 'Down'. Below the list box is a 'Consequence:' section with two radio buttons: 'Include' (selected) and 'Exclude' (unselected). At the bottom are 'Ok' and 'Cancel' buttons.

Figure 132: Save Scan Rule with Include (Click Ok)

- 1 Click **Save** to save the rule set.

Create new rule set:

Name: 008 s

Description: Find bibliographic records with 008 Form of Item s

Rule Name	Condition
Scan 008 for Form of Item s	When MARC.control."008"("23","24") equals "s"

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 133: Save Scan Rule Set

- 3 Create the scan rule set group.
 - a Click **Scan Rule Set Groups** on the Rules listbar.
 - b Click **New** and enter a name and description.
 - c Move the 008 s rule set, that you created in step 2, to the Rule Sets in Groups column.

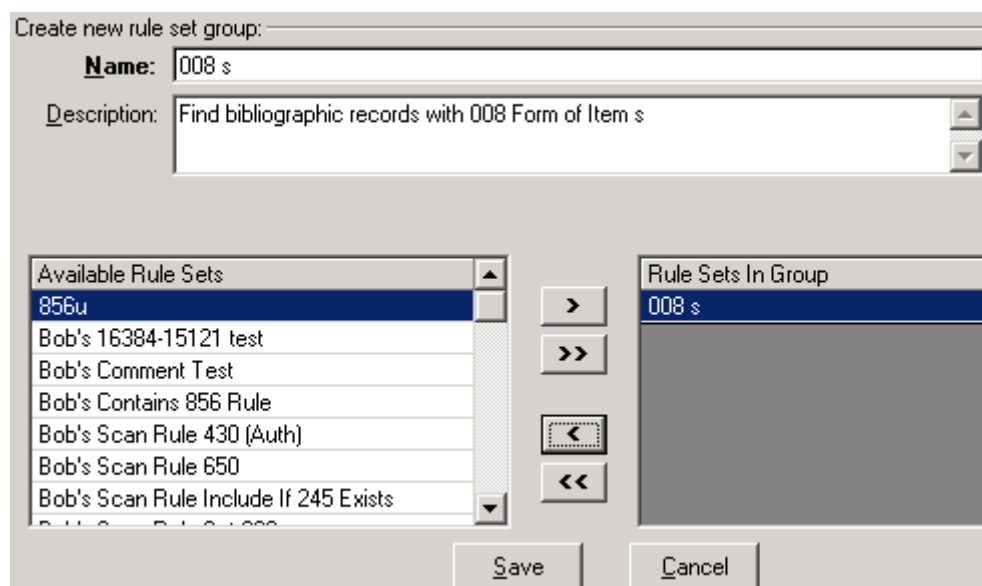


Figure 134: New Rule Set Group

- d Click **Save**.

You have completed the preparatory steps to run a scan job.

- 4 Run a scan job to collect the records in a set.

- a Click **Job Management** on the listbar and click **Submit Scan Job**.

- b Enter:

- The job name
- The scan rule set group name from step 3
- The record type of Bib
- When you want the job to run

For this usage example, select **Now**.

- c Decide how you want to scan the database.

You can scan the entire database, or you can schedule several smaller jobs that scan record ranges in the database.

If you have a large database, it is better to run several smaller jobs (see best practices and other information in **IMPORTANT - Before You Begin** on page 15).

- d Decide if you want to create a new set of records from this scan job, or add records to an existing set.

If you run several smaller jobs on record ranges, you can put the results of all jobs into the same record set. If you decide to combine the records

into a set, you'll need to create a new record set for the first scan job, and put the records from subsequent scans into the new record set you created for the first of the smaller jobs.

The screenshot shows a web-based interface for submitting a scan job. The title is "Job Management - Submit Scan Job". It is divided into three main sections: "Job Parameters", "Scan", and "Save Records Into".
- In "Job Parameters", "Job Name" is "008 s Scan Job", "Rule Set Group Name" is "008 s", "Record Type" is "Bib", and "Run Job" is set to "Now".
- In "Scan", "Entire Database" is selected.
- In "Save Records Into", "New Set" is selected, and the text field contains "Bibs with 008 s".
At the bottom are "Submit" and "Cancel" buttons.

Figure 135: New 008 s Job Management Scan Job

- e Click **Submit** to add the scan job to the queue.

Repeat the submit process if you have decided to run several smaller jobs.

The job is added to the job queue and runs the next time the Job Dæmon checks for a job in the queue (see the notation for Run Job in [Table 4](#) on page 107, [View the Job Queue](#) on page 130, and [View the Running/Completed Jobs](#) on page 132).

When scanning is finished, the record set you created contains the record IDs for the MFHD records you want to change. The next few steps guide you in setting up the data change rules to use your record set to modify the actual records in your MARC 21 database.

Define the Data Change Rules to Update the Records

Creating data change rules is similar to setting up a scan job.

To create the data change rules:

- 1 Create your data change rule set.
 - a Click **Rules** on the GDC listbar, and click **Data Change Rule Sets**.
 - b Click **New** and enter a rule name and description.

Create new rule set:

Name: 008 s to o

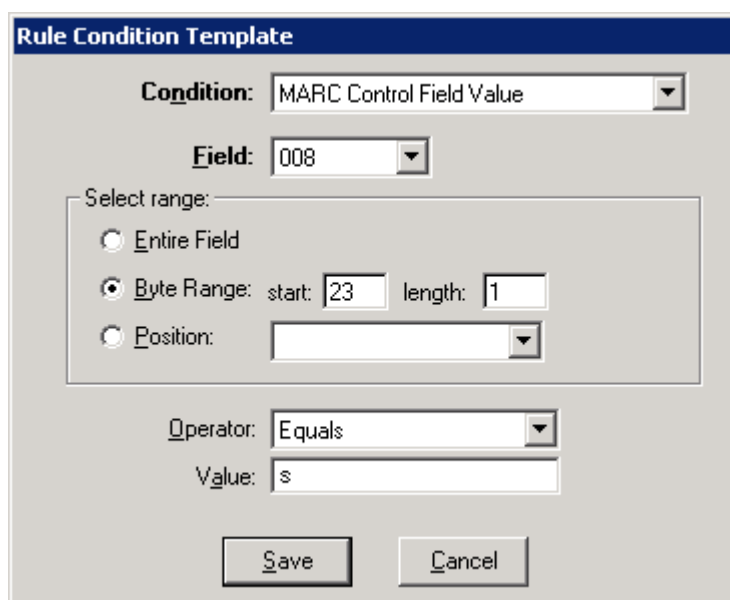
Description: Change the 008 Form of Item from s to o

Rule Name	Condition
-----------	-----------

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 136: New 008 s to o Data Change Rule

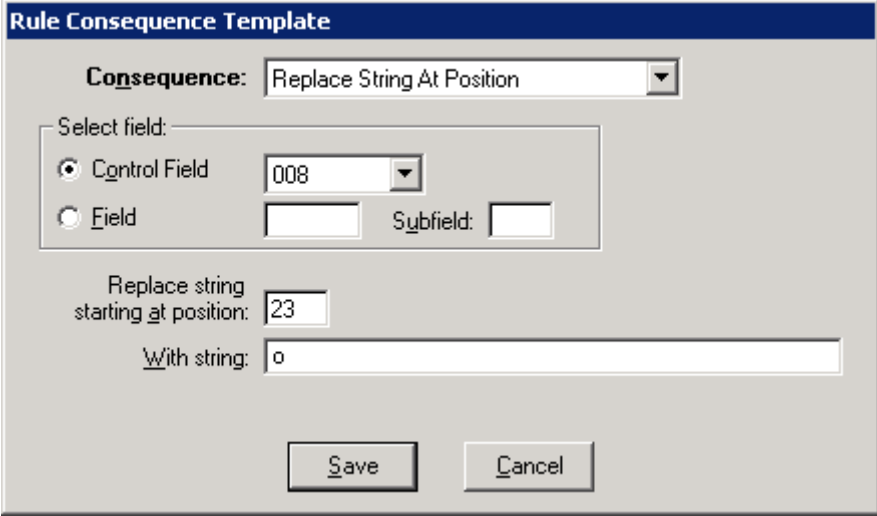
- c Click **Add** to create a new rule.
 - d Click **Add** in the Conditions area and create the rule condition.
- For this usage example, the conditions for the data change are identical to the conditions used in the scan job.



The image shows a 'Rule Condition Template' dialog box. It has a title bar with the text 'Rule Condition Template'. Inside, there are several fields and buttons. At the top, there is a 'Condition:' label followed by a dropdown menu showing 'MARC Control Field Value'. Below that is a 'Field:' label followed by a dropdown menu showing '008'. Underneath is a section titled 'Select range:' containing three radio buttons: 'Entire Field', 'Byte Range:', and 'Position:'. The 'Byte Range:' radio button is selected. To the right of 'Byte Range:' are two input fields: 'start:' with the value '23' and 'length:' with the value '1'. Below the 'Select range:' section is an 'Operator:' label followed by a dropdown menu showing 'Equals'. Below that is a 'Value:' label followed by an input field containing the character 's'. At the bottom of the dialog are two buttons: 'Save' and 'Cancel'.

Figure 137: New 008 s to o Data Change Rule Condition

- e Click **Save**.
- f Click **Add** in the Consequences area and create the consequence
This consequence is the change you want to have executed when the condition is met.
For this usage example, the change is to replace a specific text string with another text string in a specific position in the 008 field.
- g Select **Replace String At Position** for the consequence and enter the following consequence settings:
 - 008 for the Control Field value
 - Replace string starting at position 23
 - o as the value for With string



The image shows a 'Rule Consequence Template' dialog box. At the top, there is a dropdown menu labeled 'Consequence:' with 'Replace String At Position' selected. Below this, a 'Select field:' section contains two radio buttons: 'Control Field' (which is selected) and 'Field'. The 'Control Field' option has a dropdown menu showing '008'. The 'Field' option has an empty text box, and next to it is a 'Subfield:' label with an empty text box. Below the 'Select field:' section, there are two text boxes: 'Replace string starting at position:' with the value '23', and 'With string:' with the value 'o'. At the bottom of the dialog are two buttons: 'Save' and 'Cancel'.

Figure 138: New 008 s to o Data Change Rule Consequence

- h** Click **Save**.
- i** Enter a rule name and click **Ok** to save the rule.

Edit Rule

Name: 008 s to o

Conditions: WHEN MARC.control."008"("23","24") equals "s"

Consequences: replace string by position (MARC.control."008", "o", "23")

Buttons: Add, Edit, Remove, Up, Down (for both Conditions and Consequences)

Buttons: Ok, Cancel

Figure 139: Click Ok to Save Conditions/Consequences

- j Click **Save** to save the rule set.

Create new rule set:

Name: 008 s to o

Description: Change the 008 Form of Item from s to o

Rule Name	Condition
008 s to o	When MARC.control."008"("23","24") equals "s"

Buttons: Add, Edit, Remove, Up, Down, Save, Cancel

Figure 140: Save 008 s to o Data Change Rule Set

- 2 Add your rule set to a rule set group.
 - a Click **Data Change Rule Set Groups** on the listbar.
 - b Click **New** and enter the new rule set group a name and description.
 - c Move the 008 s to o rule set to the **Rule Sets in Group** column.

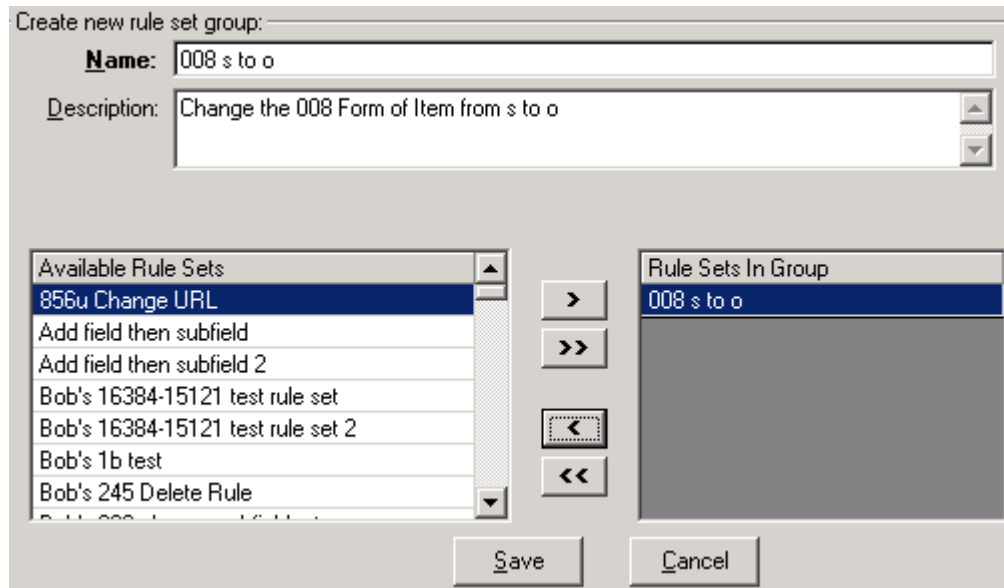


Figure 141: New Rule Set Group

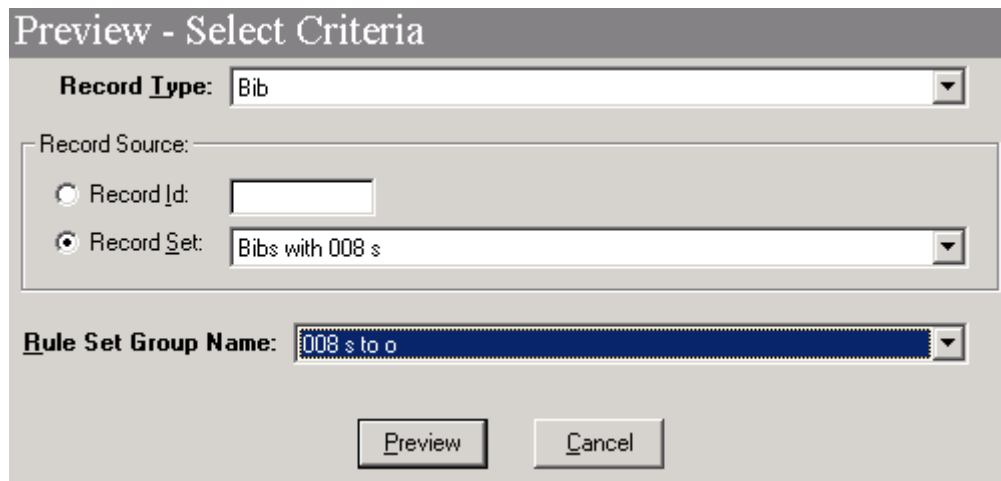
- d Click **Save**.

Preview the Data Change Rules Using the Record Set You Created

Now that the record set is created and the data change rules have been defined, you are ready to test the rules to verify that they do what is intended. Use the GDC Preview feature to test your rules against your record set.

To preview:

- 1 Click **Preview** on the GDC listbar and click **Select Criteria**.
- 2 Select the Bib record type.
- 3 Select the record set and the rule set group name you created in the previous steps from the respective dropdown lists.



The screenshot shows a dialog box titled "Preview - Select Criteria". It contains three main sections: "Record Type" with a dropdown menu showing "Bib"; "Record Source" with two radio buttons, "Record Id" (unselected) and "Record Set" (selected), and a dropdown menu for "Record Set" showing "Bibs with 008 \$"; and "Rule Set Group Name" with a dropdown menu showing "008 \$ to o". At the bottom of the dialog are two buttons: "Preview" and "Cancel".

Figure 142: Enter Preview Criteria

4 Click **Preview**.

Changes are highlighted according to the color preferences you have set under Options > Session Preferences > Colors and Fonts.

5 Review the change in each record thoroughly.

Use the **Prev Record** and **Next Records** buttons to review the records.

NOTE:

You can jump through the record by entering a positive number to jump ahead or a negative number to jump back. Jumping ahead every N number of records (where N is a number you specify in the Jump Ahead field) is a good way to preview a sample if you have a large record set.

If you see records that you do not want to change, you can remove them from the set using the **Remove this record from set** button.

If the change is not what you intended, return to the Rules listbar option, revise the Rule Set(s), and Preview again.

When you are satisfied that the record set and rules are what you want, you are ready to commit the changes to the database.

Execute the Data Change Job

With this component of the usage example, you are ready to submit a data change job using the rules you have defined with the record set you created.

To execute your data change job:

- 1 Click **Job Management** on the GDC listbar.
- 2 Click **Submit Data Change Job**.
- 3 Enter a job name and select your record set and data change rule set group that you created in the previous steps.
- 4 Decide when you would like to run the job.
For this usage example, select to run your job **Now**.
- 5 Decide if you want to update the database.

If you choose **Do Not Update Database**, you can preview the resulting records. This creates a file of records on the server, one changed and one unchanged.

If you are ready to commit the change to the database, select **Update Database** and your keyword indexing option (see [Table 9](#) on page 114 for more information).

The screenshot shows a dialog box titled "Job Management - Submit Data Change Job". It is divided into two main sections: "Job Parameters" and "Update Database".

Job Parameters:

- Job Name:** 008 s to o
- Record Set Name:** Bibs with 008 s
- Rule Set Group Name:** 008 s to o
- Run Job:** ☒ Now ☐ Later: 6/15/2011 10:23 PM

Update Database:

- ☒ Update database
- ☐ Do not update database (preview)

At the bottom are two buttons: **Submit** and **Cancel**.

Figure 143: Data Change Job Settings

- 6 When all options are chosen, click **Submit**.
The job is added to the job queue.
Once the job completes, review the results.

Review Your Results

Review the files generated by the GDC job.

To review:

- 1 When the job is complete, click **View Running/Completed** on the Job Management listbar.
- 2 Select the row of the job that you ran, and click **Get Result Files**.

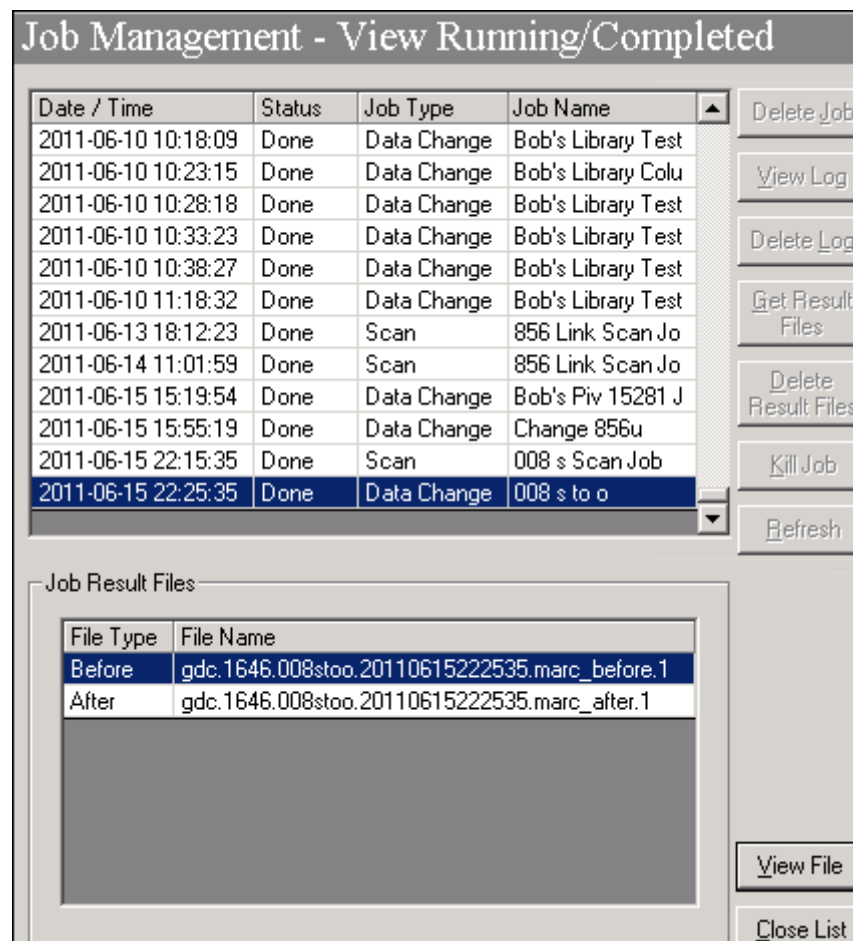


Figure 144: Get Result Files Display

- 3 Select the after file, and click **View File**.

4 Review the changed records.

Review some or all of the records (depending on the size of the record set) in Cataloging to ensure records display as expected.

If the changes were made as you expected, you don't need to do anything more to accept the results. The changes have been made to your database, and you have successfully completed your data change.

If you need to back out a change, see [Troubleshooting](#) on page [173](#) and open a case with Ex Libris Support via the Salesforce Support Portal to review next steps.

D

Usage Example 4 – MARC Field Exists And Does Not Have

This section includes:

- [Overview](#) on page 227
- [Create the Rule Conditions and Consequences to Address the Requirements of Example 4](#) on page 227

Overview

Example 4 demonstrates the use of the MARC Field Exists And Does Not Have condition. For the use case in this example, the consequence is to change the 655 indicator 2 to a new value and add a subfield 2 with specific text when the record contains the following and has no subfield 2:

655 # 0 ‡a *any text in this subfield*

See the explanation for the **MARC Field Exists And Does Not Have** condition in the table [Data Change and Scan Rule Condition Options](#) on page 70 for more information.

Create the Rule Conditions and Consequences to Address the Requirements of Example 4

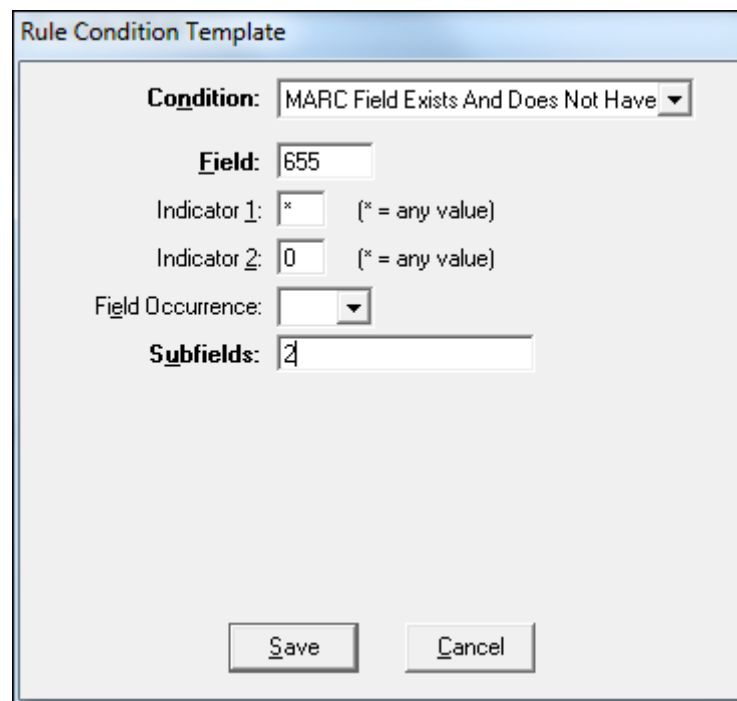
For example 4, you need to create a data change rule set that contains the conditions shown below.

IMPORTANT:

When you use multiple conditions, as in the following example, that refer to the same instance of a field (the 655), checking for specific values in the

indicators should be done in the first condition only. Failure to do so, will not yield the expected results.

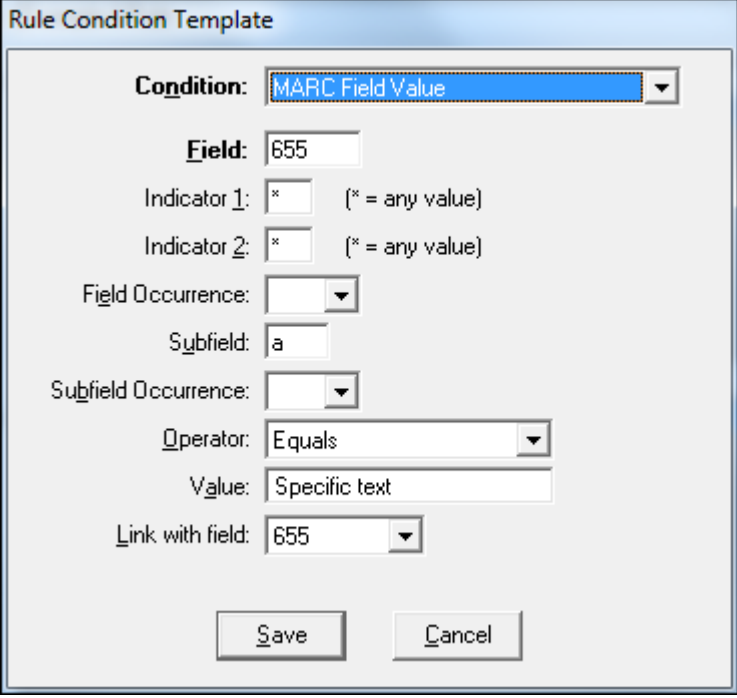
■ MARC Field Exists And Does Not Have



The screenshot shows a dialog box titled "Rule Condition Template". Inside, the "Condition:" dropdown is set to "MARC Field Exists And Does Not Have". Below it, the "Field:" text box contains "655". "Indicator 1:" is set to "*" with a note "(* = any value)". "Indicator 2:" is set to "0" with a note "(* = any value)". "Field Occurrence:" is a dropdown menu. "Subfields:" is a text box containing "2". At the bottom are "Save" and "Cancel" buttons.

Figure 145: MARC Field Exists And Does Not Have Condition for Example 4

■ MARC Field Value



The image shows a 'Rule Condition Template' dialog box. It contains the following fields and controls:

- Condition:** A dropdown menu with 'MARC Field Value' selected.
- Field:** A text input field containing '655'.
- Indicator 1:** A text input field containing '*', with a note '(* = any value)' to its right.
- Indicator 2:** A text input field containing '*', with a note '(* = any value)' to its right.
- Field Occurrence:** A dropdown menu.
- Subfield:** A text input field containing 'a'.
- Subfield Occurrence:** A dropdown menu.
- Operator:** A dropdown menu with 'Equals' selected.
- Value:** A text input field containing 'Specific text'.
- Link with field:** A dropdown menu with '655' selected.
- At the bottom are two buttons: 'Save' and 'Cancel'.

Figure 146: MARC Field Value Condition for Example 4

For example 4, the data change rule set that you create needs to contain the following consequences:

■ Add MARC Subfield

Rule Consequence Template

Consequence: Add MARC Subfield ▼

Field: 655 ☒ Link to condition field

Subfield: 2

Value: Specific text added to subfield

Figure 147: Add MARC Subfield Consequence for Example 4

■ Change MARC

The image shows a 'Rule Consequence Template' dialog box. At the top, the title is 'Rule Consequence Template'. Below the title, there is a 'Consequence:' label followed by a dropdown menu showing 'Change MARC'. Underneath, there is a 'Field:' label followed by a text box containing '655'. Below that, there are three radio button options: 'To New Field:', 'Subfield:', and 'Indicator:'. The 'Indicator:' option is selected. To the right of 'Indicator:' is a dropdown menu showing '2', followed by 'to new value:' and a text box containing '7'. At the bottom of the dialog box, there are two buttons: 'Save' and 'Cancel'.

Figure 148: Change MARC 655 Indicator 2 Consequence Example 4

When you save the change data rule set with the following edit rule conditions and consequences, the appropriate logic is created for example 4.

The screenshot shows a dialog box titled "Edit Rule". At the top, there is a "Name:" field containing "Example 4 Rule". Below this, the "Conditions:" section contains a list of two conditions: "MARC."655"("#","0") does not have any "2"" and "MARC."655"."a" equals "Specific text" from MARC."655"". The second condition is highlighted in blue. To the right of the conditions list are buttons for "Add", "Edit", "Remove", "Up", and "Down". Below the conditions is the "Consequences:" section, which contains a list of two consequences: "create MARC."655" subfield "2" with "Specific text added to subfield"" and "Set MARC indicator "655" "2" to "7"". The second consequence is highlighted in blue. To the right of the consequences list are buttons for "Add", "Edit", "Remove", "Up", and "Down". At the bottom of the dialog are "Ok" and "Cancel" buttons.

Edit Rule

Name: Example 4 Rule

Conditions:

- MARC."655"("#","0") does not have any "2"
- MARC."655"."a" equals "Specific text" from MARC."655"

Consequences:

- create MARC."655" subfield "2" with "Specific text added to subfield"
- Set MARC indicator "655" "2" to "7"

Ok Cancel

Figure 149: Edit Rule Conditions and Consequences Summary for Example 4

Name:	Example 4		
Description:	Example Using MARC Field Exists And Does Not Have Condition		
Last Modified:	2/28/2018	Modified By:	demo
Set:	rule "Example 4 Rule"		
	<pre>#priority n when MARC."655"("#","0") does not have any "2" MARC."655"."a" equals "Specific text" from MARC."655" then create MARC."655" subfield "2" with "Specific text added to subfield" Set MARC indicator "655" "2" to "7" CHANGED end</pre>		

Figure 150: Data Change Rule Set Logic for Example 4

E

Usage Example 5 – Scan to Exclude

This section includes:

- [Overview](#) on page 235
- [Create the Rule Conditions and Consequences to Address the Requirements of Example 5](#) on page 236

Overview

Example 5 demonstrates scanning to exclude records.

In order to exclude records, the system needs to know what to exclude them from. In other words, you must first build an include set and then identify what should be excluded from that set.

In the context of GDC, the Exclude consequence means that records that meet the criteria for a rule with a consequence of Exclude are excluded (that is, not included) in the resulting record set.

The purpose of the Exclude consequence is to use it in a rule set that creates an original record set and then excludes some records that otherwise would be included in the results. Think of this as a method to filter a record set and create a new smaller record set by first constructing a rule set using a rule that defines the records to include (using the Include consequence) in a new record set and then a rule that defines what to exclude from that set.

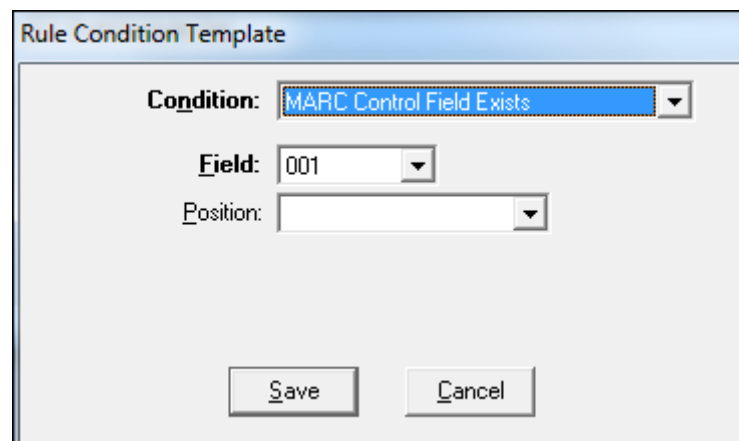
Essentially, in order to Exclude a record, it must first be Included in a set from which it can subsequently be excluded.

In example 5, all records with *trees* in the title are excluded from the bibliographic records in the range of 1000 to 5000.

Create the Rule Conditions and Consequences to Address the Requirements of Example 5

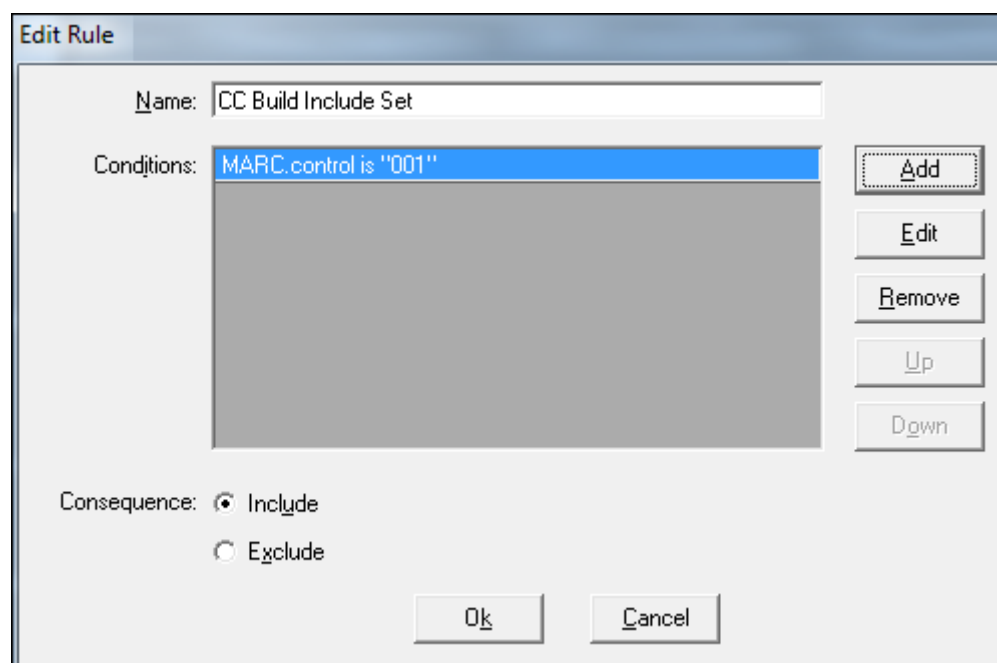
For this example, create the following scan rules:

- Include



The 'Rule Condition Template' dialog box is shown. It has a title bar 'Rule Condition Template'. Inside, there are three fields: 'Condition:' with a dropdown menu showing 'MARC Control Field Exists', 'Field:' with a dropdown menu showing '001', and 'Position:' with an empty dropdown menu. At the bottom, there are two buttons: 'Save' and 'Cancel'.

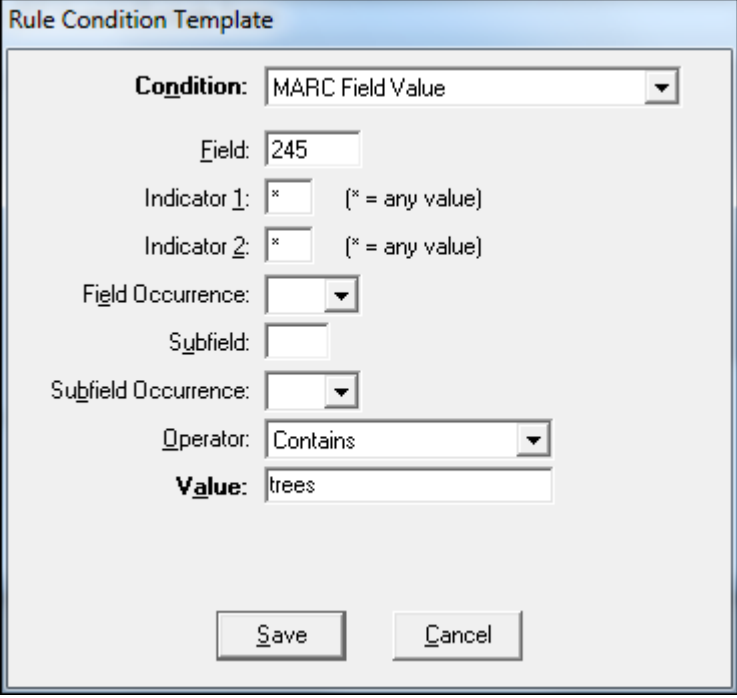
Figure 151: Include Rule Condition



The 'Edit Rule' dialog box is shown. It has a title bar 'Edit Rule'. Inside, there is a 'Name:' field with the text 'CC Build Include Set'. Below it, there is a 'Conditions:' section with a list box containing 'MARC.control is "001"'. To the right of the list box are five buttons: 'Add', 'Edit', 'Remove', 'Up', and 'Down'. Below the list box, there is a 'Consequence:' section with two radio buttons: 'Include' (which is selected) and 'Exclude'. At the bottom, there are two buttons: 'Ok' and 'Cancel'.

Figure 152: Include Rule Consequence

■ Exclude



The image shows a 'Rule Condition Template' dialog box. It contains the following fields and controls:

- Condition:** A dropdown menu with 'MARC Field Value' selected.
- Field:** A text input field containing '245'.
- Indicator 1:** A text input field containing '*', with a note '(* = any value)' to its right.
- Indicator 2:** A text input field containing '*', with a note '(* = any value)' to its right.
- Field Occurrence:** A dropdown menu.
- Subfield:** A text input field.
- Subfield Occurrence:** A dropdown menu.
- Operator:** A dropdown menu with 'Contains' selected.
- Value:** A text input field containing 'trees'.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

Figure 153: Exclude Rule Condition for Contains Trees

The 'Edit Rule' dialog box is shown. The 'Name' field contains 'CC Scan to Exclude Trees'. The 'Conditions' list contains one item: 'MARC with "245" contains "trees"'. To the right of the conditions list are buttons: 'Add', 'Edit', 'Remove', 'Up', and 'Down'. The 'Consequence' section has two radio buttons: 'Include' (unselected) and 'Exclude' (selected). At the bottom are 'Ok' and 'Cancel' buttons.

Figure 154: Exclude Rule Consequence

Place these scan rules in a Scan Rule Set Group.

The 'Rules - Scan Rule Set Groups' dialog box is shown. It has a table with two columns: 'Name' and 'Description'. The table contains the following rows:

Name	Description
auth delete	
Bad indicator	
bib suppress	
Bobs Suppressed Test	
CC Build Include Set with 001	CC Build Include Set with 001
CC Scan to Exclude	Build set using 001 (range of 1000 to 5000) and sca

To the right of the table are buttons: 'New', 'Edit', 'Copy', and 'Delete'. Below the table, the 'Name' field contains 'CC Scan to Exclude'. The 'Description' field contains 'Build set using 001 (range of 1000 to 5000) and scan to exclude 245 \$a that contains trees'. The 'Last Modified' field contains '3/2/2018' and the 'Modified By' field contains 'demo'. The 'Rules' section contains a list of rule sets in the group: 'Rule Sets In Group', 'CC Build Include Set', and 'CC Scan to Exclude Trees'.

Figure 155: Scan Rule Set Group for Exclude

Run the scan job using the Scan Rule Set Group that you created.

Job Management - Submit Scan Job

Job Parameters

Job Name: CC Scan to Exclude Job

Rule Set Group Name: CC Scan to Exclude

Record Type: Bib

Run Job: ☒ Now ☐ Later: 3/2/2018 ... 01:08 PM

Scan

☐ Entire Database

☐ Existing Set:

☒ Range of Records: 1000 to: 5000

Save Records Into

☐ Existing Set:

☒ New Set: CC Scan to Exclude 245 \$a trees from 1000 through 5000

Submit **Cancel**

Figure 156: Scan to Exclude Job

Review the log created for the scan to exclude job that you ran and specifically note the Total Scanned Records Added.

```
INFO - Job Started...
      Job Name = CC Scan to Exclude Job
      Job ID = 17982
      Job Operator = demo
      Job Type = ScanJob
      Job Scheduled Start Date = 2018-03-02 13:06:05.0
      Job Actual Start Date = Fri Mar 02 13:07:14 CST 2018
      Total Records = 3992
      Job Parameters =
        recordSetId =
        recordType = (1)
        recordRangeStart = (1000)
        recordRangeEnd = (5000)
        scanRuleSetId = CC Scan to Exclude (12181)
        saveRecordSetId =
        saveRecordSetName = (CC Scan to Exclude 245 $a trees from 1000 through 5000)
      Start Time = Fri Mar 02 13:07:14 CST 2018
INFO - Finished with bulk 1 of 4
INFO - Finished with bulk 2 of 4
INFO - Finished with bulk 3 of 4
INFO - Finished with bulk 4 of 4
INFO - Total Scanned Records Added :3987
INFO - Job Ended...
      End Time = Fri Mar 02 13:07:41 CST 2018
      Records Processed = 3992
      Records Matched and Deleted = 0
      Record Hierarchies with deletions by Delete All = 0
      Record Errors = 0
      Unchanged Records = 0
      Running Time = 00:00:27
```

Figure 157: Scan to Exclude Job Log

If you run the Include scan rule separately and compare the Total Scanned Records Added in the job log, you will notice that the number of records is larger than the scan to exclude job total.

```
INFO - Job Started...
      Job Name = CC Build Include Set with 001 Job
      Job ID = 17981
      Job Operator = demo
      Job Type = ScanJob
      Job Scheduled Start Date = 2018-03-02 12:26:12.0
      Job Actual Start Date = Fri Mar 02 12:26:41 CST 2018
      Total Records = 3992
      Job Parameters =
        recordSetId =
        recordType = (1)
        recordRangeStart = (1000)
        recordRangeEnd = (5000)
        scanRuleSetId = CC Build Include Set with 001 (12180)
        saveRecordSetId =
        saveRecordSetName = (CC Include Set with 001 (1000 to 5000))
      Start Time = Fri Mar 02 12:26:41 CST 2018
INFO - Finished with bulk 1 of 4
INFO - Finished with bulk 2 of 4
INFO - Finished with bulk 3 of 4
INFO - Finished with bulk 4 of 4
INFO - Total Scanned Records Added :3991
INFO - Job Ended...
      End Time = Fri Mar 02 12:27:12 CST 2018
      Records Processed = 3992
      Records Matched and Deleted = 0
      Record Hierarchies with deletions by Delete All = 0
      Record Errors = 0
      Unchanged Records = 0
      Running Time = 00:00:31
```

Figure 158: Scan to Include Job Log

Glossary

DSL	DSL is the acronym for Domain Specific Language. This provides the syntax for rules sets.
DSLr	DSLr is the acronym for DSL Rules. The GDC rule export/import function uses files with the .dslr extension. Files with the .dslr extension are text files that use the DSL syntax. The GDC rules engine uses DSLr files to: ■ Apply data change rules to records ■ Scan record sets or the database for records to store record sets
global data change (GDC)	Global Data Change (GDC) provides an integrated solution for making mass data changes to bibliographic, holdings, and authority records within the Voyager database. The user interface for the GDC function is provided through a Voyager client that runs on your PC along with the other Voyager clients such as cataloging, acquisitions, circulation, and so forth.
record set	The record set is a separate entity that is used during the GDC execution step to identify the records (by record ID number) that are to change or be scanned.
rule	A rule is a single condition and consequence statement that is created through the GDC menu interface.
rule set	A rule set is a collection of one or more rules. A rule set contains the logic (conditions/consequences) that the GDC rules engine uses to apply data changes to records or scan for records for a record set.

rule set group	A rule set group is a collection of one or more rule sets. A rule set group is used in GDC Job Management to identify the rules to be processed for a specific job. NOTE: A rule set group contains one or more rule sets, a rule set contains one or more rules, and a rule has a condition and a consequence.
scan	Scan is a GDC search function that identifies bibliographic, authority, or MFHD records (record IDs) to be stored in a record set. This GDC search function is performed through the entire contents (each field) of each record in one of the following: ■ Your entire MARC 21 database ■ An existing record set ■ A range of records in your MARC 21 database

Index

A

authority loading, [143](#)

B

best practices
GDC suggested best practices, [17](#)

C

command line processing, [167](#)
conditions, [35](#), [51](#), [70](#)
 Create Date, [70](#)
 Created By, [70](#)
 MARC Control Field Exists, [71](#)
 MARC Control Field Value, [72](#)
 MARC Field Exists And Does Not Have, [73](#)
 MARC Field Has Any, [75](#)
 MARC Field nnX Exists, [75](#)
 MARC Field nXX Exists, [75](#)
 MARC Field Value, [76](#)
 MARC Field/Subfield Exists, [74](#)
 Opac Suppress Flag is, [76](#)
 Owning Library, [76](#)
 Update Date, [76](#)
 Updated By, [77](#)
consequences, [36](#), [53](#), [80](#)
 Add MARC Control Field, [81](#)
 Add MARC Field, [81](#)
 Add MARC Subfield, [82](#)
 Change MARC, [83](#)
 Change Owning Library, [83](#)
 Copy MARC Field/Subfield, [84](#)
 Copy MARC Field/Subfield (deprecated), [84](#)
 Exclude, [89](#)
 Export Option, [85](#)
 Include, [89](#)
 Record Disposition, [85](#)
 Remove MARC Control Field, [86](#)
 Remove MARC Field/Subfield, [86](#)
 Replace String At Position, [87](#)
 Replace String With String, [88](#)
 Set Subfield To Value, [88](#)
create data change rule set groups, [65](#)
create record set
 specific records, [27](#)
create scan rule set groups, [45](#)

D

data change job
 submit, [109](#)
data change rule sets, [50](#)
data change rules
 add, [51](#)
 conditions, [51](#)
 consequences, [53](#)
 create, [50](#)
 delete, [56](#)
 edit data change rules, [55](#)
 export, [58](#)
 import, [58](#)
 sharing, [58](#)
delete data change rule set groups, [68](#)
delete data change rules, [56](#)
delete records, [90](#)
delete scan rule set, [38](#)
delete scan rule set groups, [48](#)
disk space, [169](#)
DSL, [243](#)
DSLRL, [243](#)

E

edit data change rule set groups, [67](#)
edit scan rule set groups, [47](#)
export data change rules, [58](#)
export scan rules, [40](#)
external applications, [160](#)

F

Field Order Configuration, [100](#)
file
 .dslr, [41](#), [60](#)

G

GDC, [243](#)
GDC server
 data change job processing, [170](#)
 daemon processes, [169](#)
 record set data, [170](#)
global data change, [243](#)
 components, [11](#)
 overview, [11](#)

- prerequisite system considerations, 16
- saved searches, 26
- scan, 27
- search, 23
- security, 15
- workflow, 12

glossary, 243

I

- import data change rules, 58
- import scan rules, 40

J

- job queue
 - delete job, 136
 - delete result files, 137
 - edit, 131
 - get result files, 139
 - job result files, 139
 - job summary, 131, 136
 - kill job, 142
 - refresh, 131, 137
 - remove, 131
 - view, 130

L

- load match configuration, 144
- load merge configuration, 150
- log
 - delete, 136
 - view, 137

P

- performance, 168
- preferences
 - colors and fonts, 163
 - external applications, 160
 - folders and files, 161
 - retain last search, 159
 - workflow, 159
- prerequisite system considerations, 16
- preview
 - display, 100, 101
- preview options, 100, 103
- Prulemgmt
 - a a, 167
 - a g, 168

R

- record disposition
 - delete, 90
 - suppress, 90

- unsuppress, 90
- record selection, 21
- record set, 243
 - copy, 29
 - delete, 29
 - edit, 28
 - overview, 21
 - view, 28
- record type
 - authority, 11
 - bibliographic, 11
 - holdings, 11
- Result, 139
- result files, 139
- retain last search, 159
- rule, 243
- rule set
 - definition, 243
- rule set group, 244
- rule set groups
 - create data change rule set groups, 65
 - data change, 64
 - delete data change rule set groups, 68
 - edit data change rule set groups, 67
- rule sets
 - data change, 50
 - scan, 33, 45
- rules
 - overview, 31

S

- saved searches, 26
- scan, 27, 244
- scan job
 - submit, 106
- scan rule set groups
 - create, 45
 - delete, 48
 - edit, 47
- scan rule sets, 33
 - conditions, 35
 - consequences, 36
 - create, 34
 - delete, 38
 - edit, 37
- scan rules
 - export, 40
 - import, 40
- search
 - record selection, 23
 - time out, 174
- security, 15
- session defaults, 159
- session defaults and preferences, 159

- session preferences, 159
- share scan rules, 40
- sharing data change rules, 58
- specific records, 27
- submit data change job
 - Change Owning Library, 112
 - Do not run records through keyword index, 114
 - Do not update database (preview), 113
 - Field Order Configuration, 112
 - Job Name, 111
 - Record Set Name, 112
 - Rule Set Group Name, 112
 - Run Job, 113
 - Run records through keyword index (recommended), 114
 - Update database, 113
 - Update Location, 112
- submit index records job, 114
 - Job Name, 115
 - Range of Records, 116
 - Record Set, 116
 - Run Job, 116
- submit scan job
 - Entire Database, 108
 - Existing Set (save record into), 108
 - Existing Set (scan), 108
 - Job Name, 107
 - New Set, 109
 - Range of Records, 108
 - Record Type, 107
 - Run Job, 108
 - Scan Rule Set Name, 107
- suppress records, 90

T

- troubleshooting, 173

U

- unsuppress records, 90

W

- workflow, 12
 - data change rules specification, 14
 - diagram, 13
 - execution, 14
 - preview, 14
 - record selection, 12
 - verification, 15

