Global Data Change

Version 8

CONFIDENTIAL INFORMATION

DISCLAIMER

TRADEMARKS

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1

Overview

This section includes:

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 **19**)

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 **21**

  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 **25**

  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 **25**

  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.

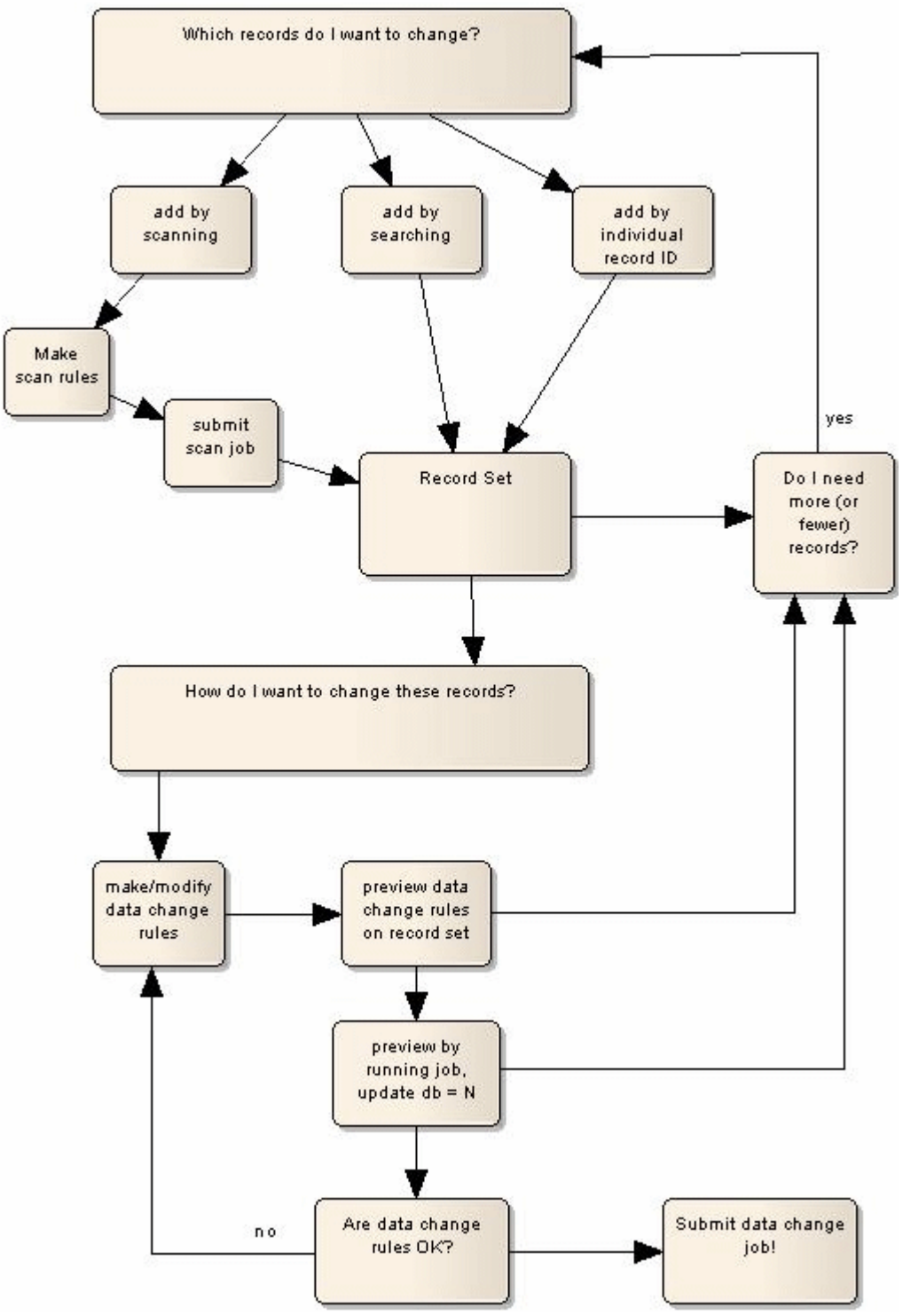

Figure 1: GDC Workflow

2 Data change rules specification (see **Rules Generation** on page **29**)

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 **83**)
- Review the record file(s) targeted for change from the Job Results Files list (see **Submit a Data Change Job** on page **91**/**Table 8** on page **93** and **Get Result Files** on page **101**) 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 **87**)

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 **14** 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 **101** for one option to use for checking your results.

Check your log files (see **Data Change Job Processing (Server)** on page **116**).

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.

To define GDC security, you:

1 Create a Global Data Change profile from Security in Voyager System Administration.

2 Identify the operators associated with this profile.

3 Define the characteristics (values/permissions) associated with the GDC security profile.

See **Figure 2** and **Figure 3**.

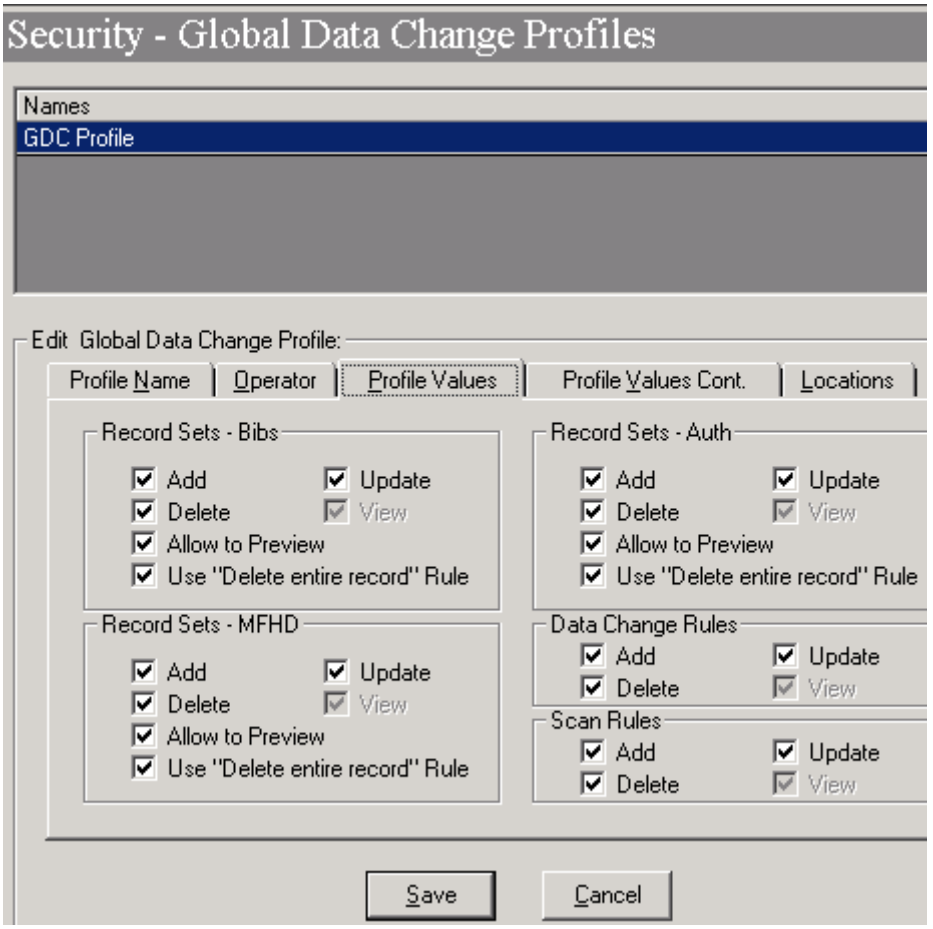

Figure 2: GDC Profile Values (Voyager System Administration)

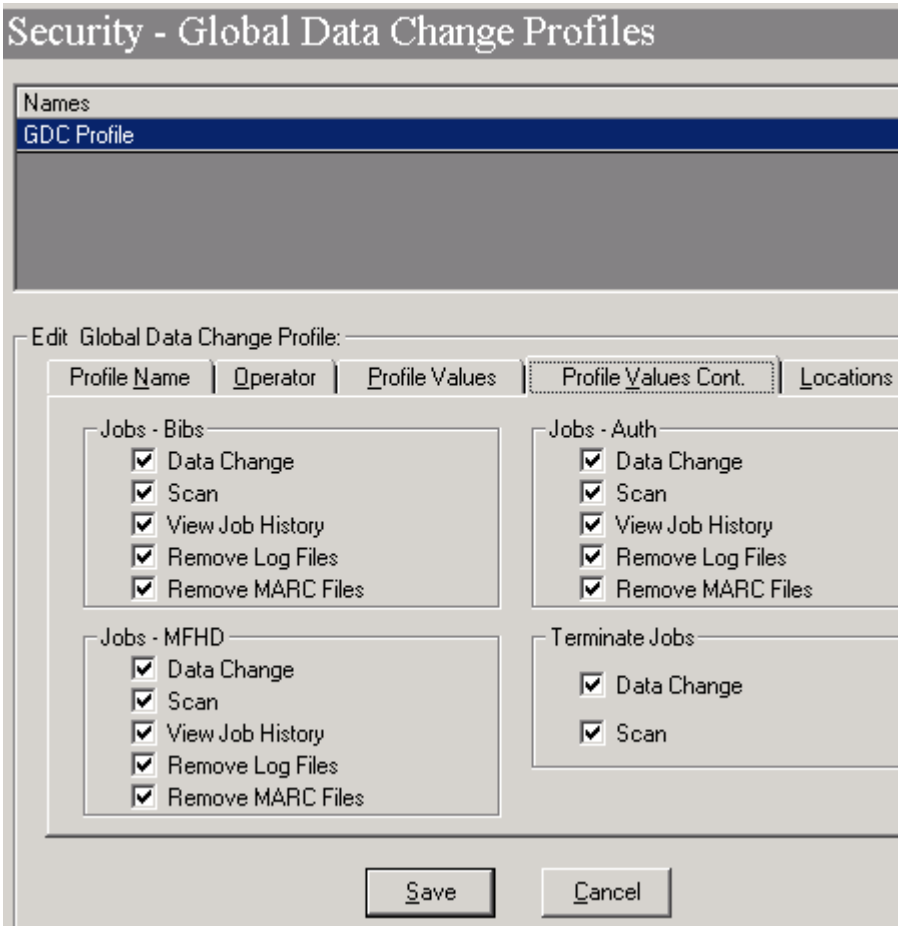

Figure 3: GDC Profile Values Cont. (Voyager System Administration)

4 Identify the locations associated with this profile.

5 Save the profile.

Refer to the *Voyager System Administration User's Guide* for more information regarding GDC security profiles.

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 **14**)
- Implement the suggested best practices for making changes with GDC (see **GDC Suggested Best Practices** on page **15**)
- Include **Other Processing Considerations** on page **16** 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 Incident via the eService 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 **115** 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 Incident via the eService

- 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.

Resources

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

- eService Knowledge Base
- EL Commons

- Support

  Open an incident via eService 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

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 **87**) that identifies the records (by record ID number) that are to change.

See the appendix 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 **21**)

- 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 **25**)

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 **25**)
- Specify the name of a file containing a list of record ID numbers (see **Specific Records** on page **25**)

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 **83**). 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:
In Preview, the behavior that displays in the instance of a deleted record from the database that remains in the record set is that the record either before or after the deleted record in the record set is displayed when the deleted record is called.

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 **14** for additional information regarding suggested best practices and processing considerations.

Search

The GDC search function uses a Search dialog box (see **Figure 4**) similar to the one used in the other Voyager clients with the addition of the Saved Searches tab.

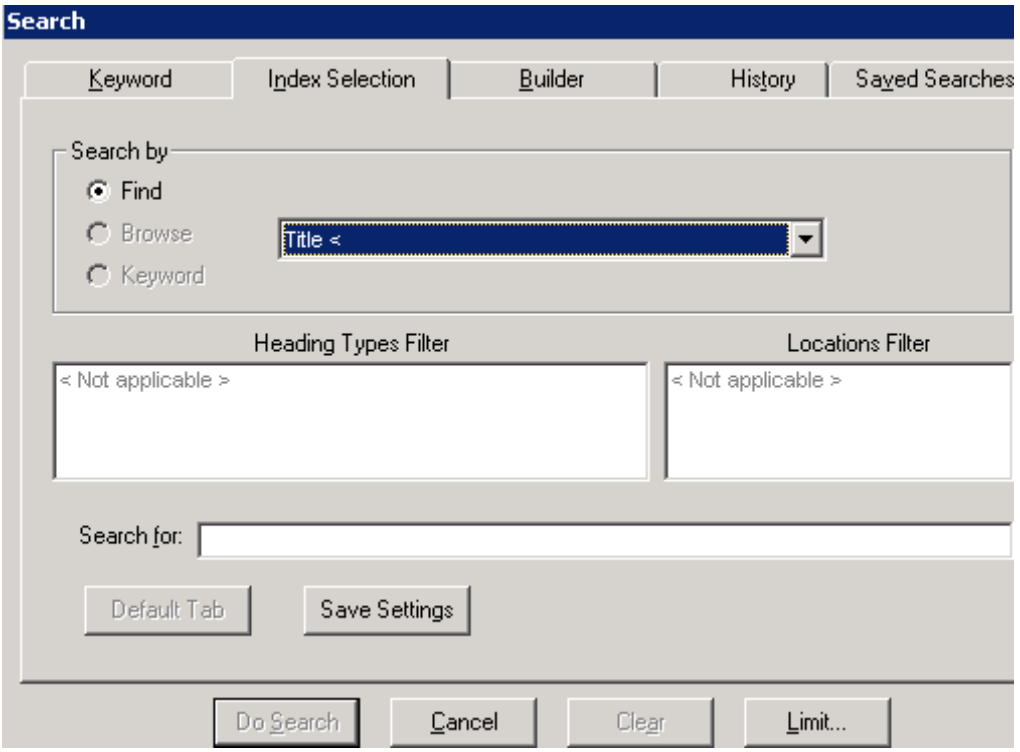

Figure 4: Search Dialog Box

The Titles Index search results display in GDC (see **Figure 5**) 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 **120** 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.

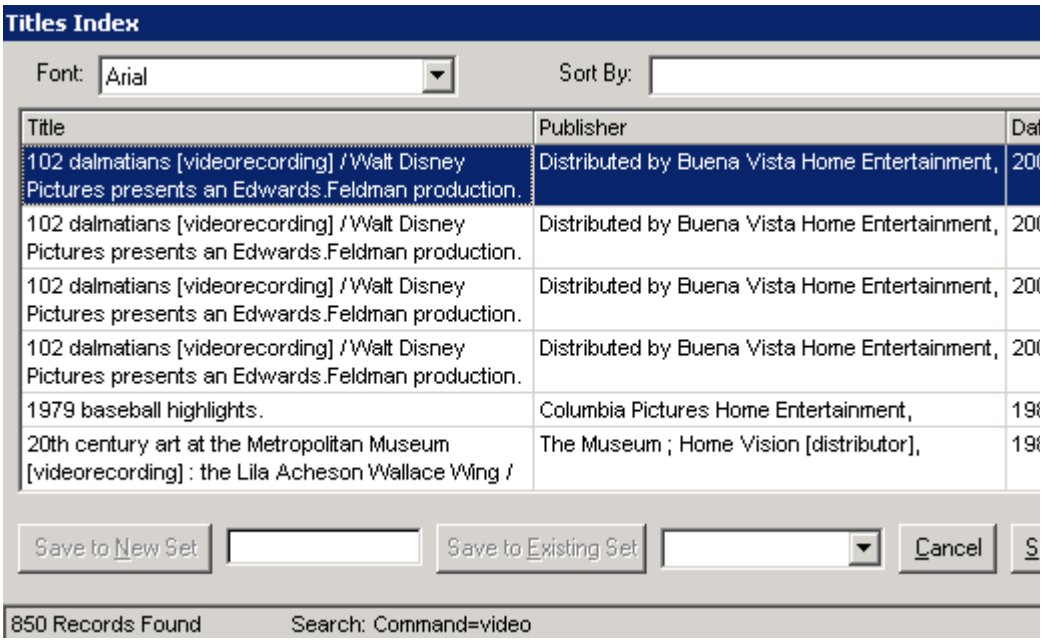

Figure 5: GDC Titles Index Display

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

1 Click **Search** in the GDC list bar.

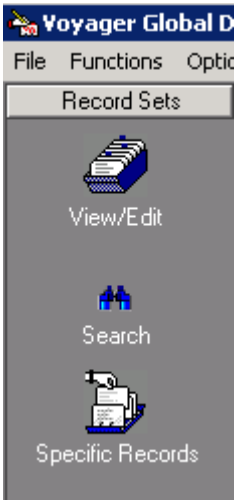

Figure 6: Search List Bar Option

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 list bar.

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 list bar.

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 Enter the record ID number to be added to the record set or specify the name of the file containing record ID numbers to be added to the record set.

If you use the 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.

HINT:
Click the ellipsis button to browse for the file name.

4 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 **31**).

2 Create a scan rule set group (see **Scan Rule Set Groups** on page **41**).

3 Submit a scan job (see **Submit a Scan Job** on page **88**).

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 **83**).

To view a specific record set:

1. Click **View/Edit** in the GDC list bar.
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 the row of the record set to edit.
2. Click **Edit**.
3. Change the Name and/or Description.
4. 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 the row of the record set to copy.
2. Click **Copy**.
3. Change the Name and/or Description.
4. Click **Save**.

Delete

To delete a record set:

1. Click the row of the record set to delete.
2. Click **Delete**.
3. Click **Yes** to confirm your delete request when prompted (Are you sure?).

3

Rules Generation

This section includes:

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 list bar component provides access to the options for identifying these rules and storing them in sets and rule set groups (see **Figure 7**). 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 7: Rules List Bar

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

- **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 list bar:

- **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 **19**, you learned how to identify bibliographic records for processing through the search dialog box (see **Search** on page **21**) 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

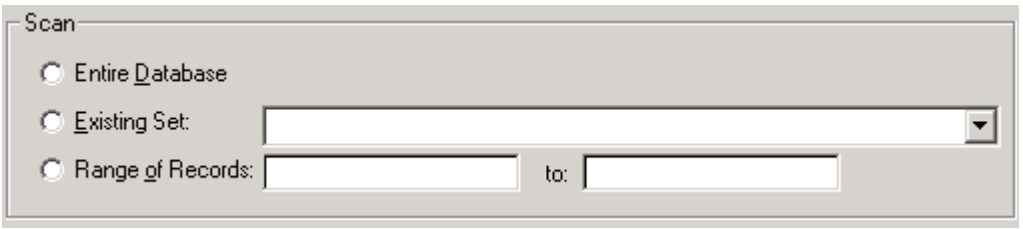

Figure 8: Job Management Scan Options

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**

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.

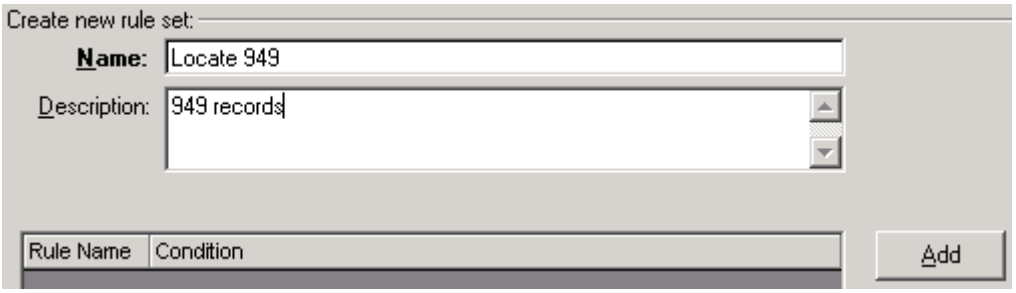

Figure 9: Add New Scan Rule

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 10: New Scan Rule Name

5 Click **Add** to define the conditions for the scan rule.

The default Rule Condition Template displays.

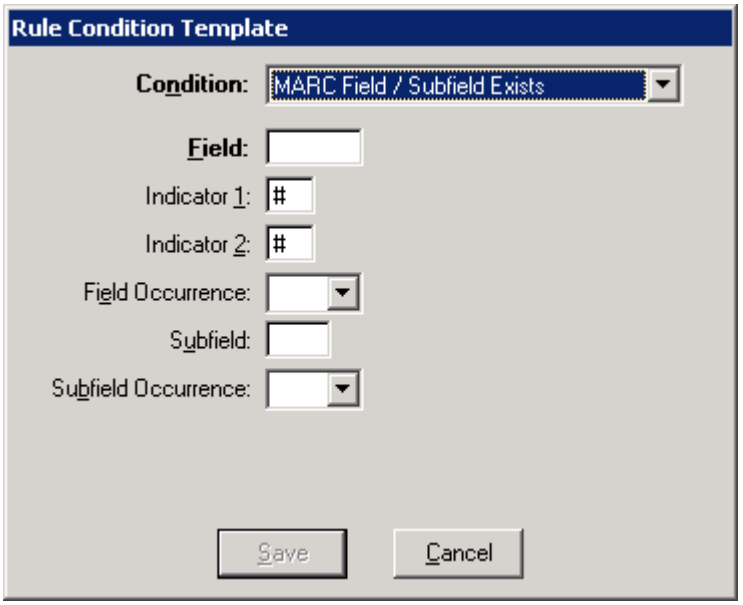

Figure 11: Rule Condition Template

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 **63** 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 **70** 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.

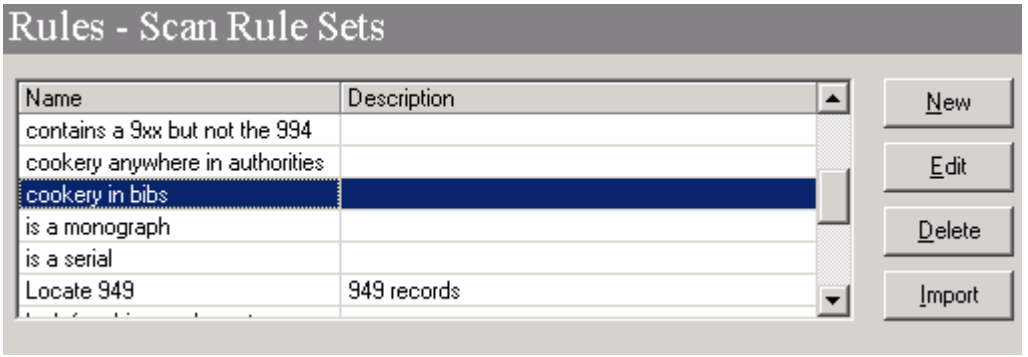

Figure 12: List of Scan Rule Sets

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**.

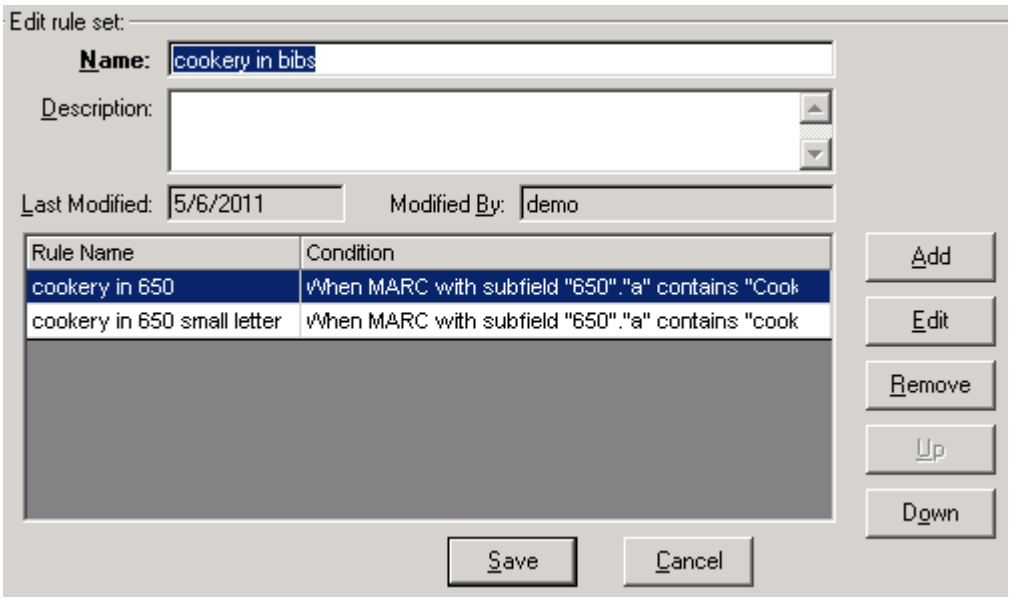

Figure 13: Edit Scan Rule

3 Change the conditions and/or consequences to meet your requirements.

See **Conditions** on page **63** and **Consequences** on page **70** 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.

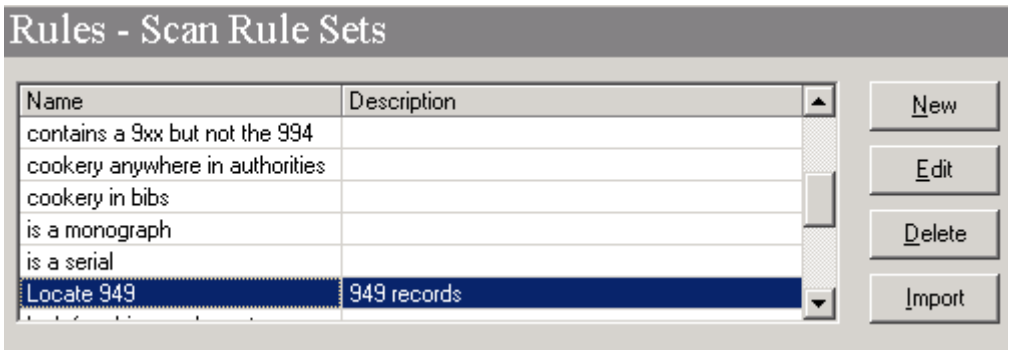

Figure 14: Delete Scan Rule Set

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.

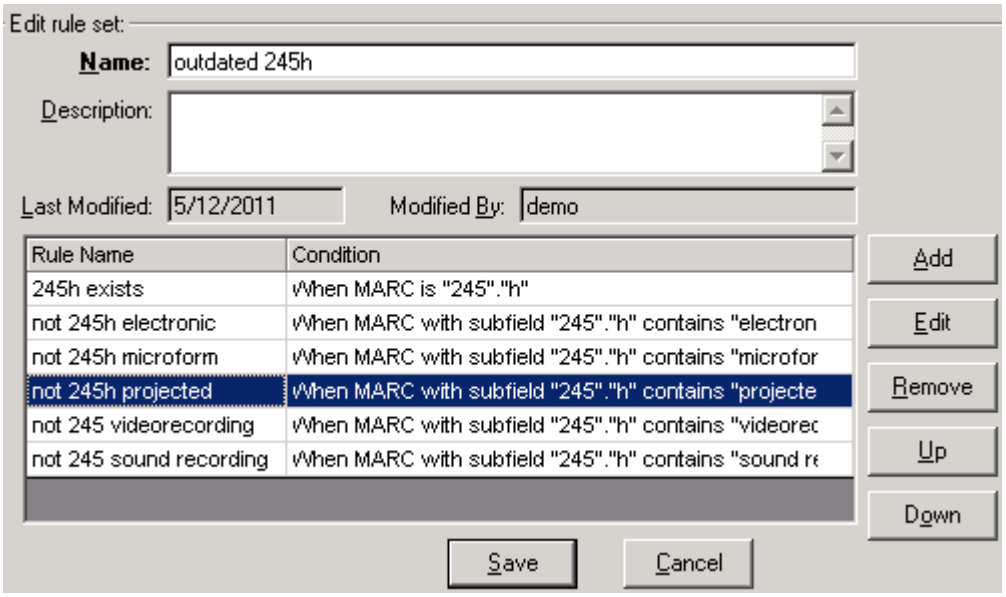

Figure 15: Remove Rule

- 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.

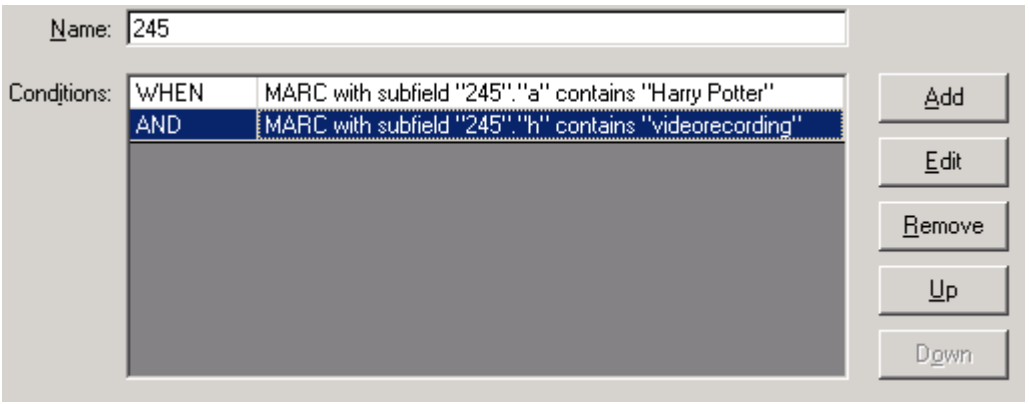

Figure 16: Remove Scan Condition

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**.

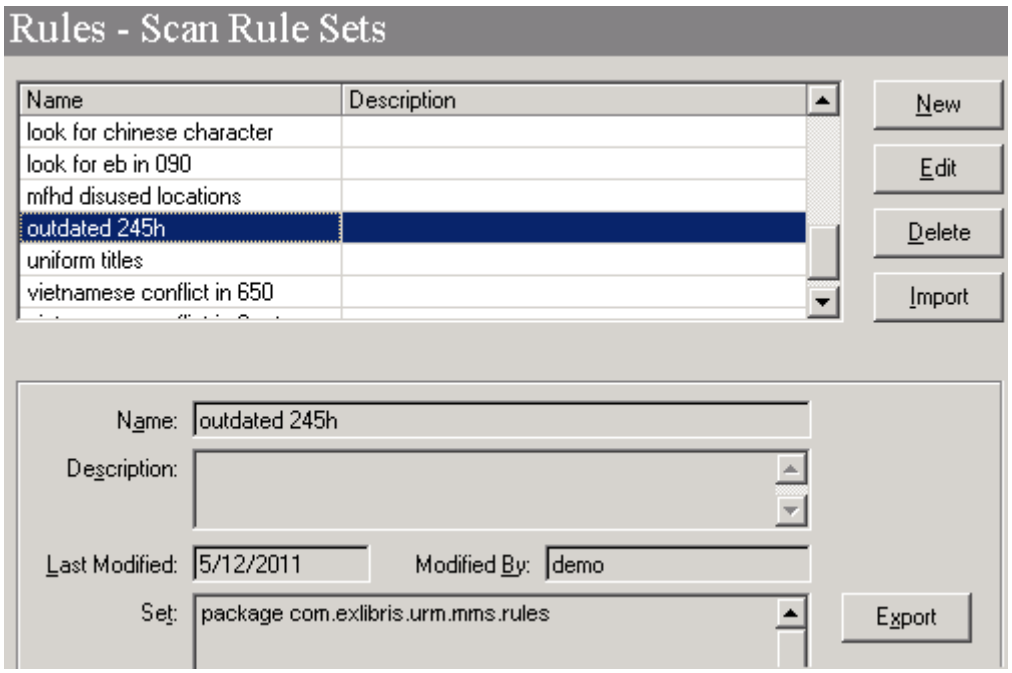

Figure 17: Select/Export Scan Rule Set

The Export Rule Set to Disk dialog box displays.

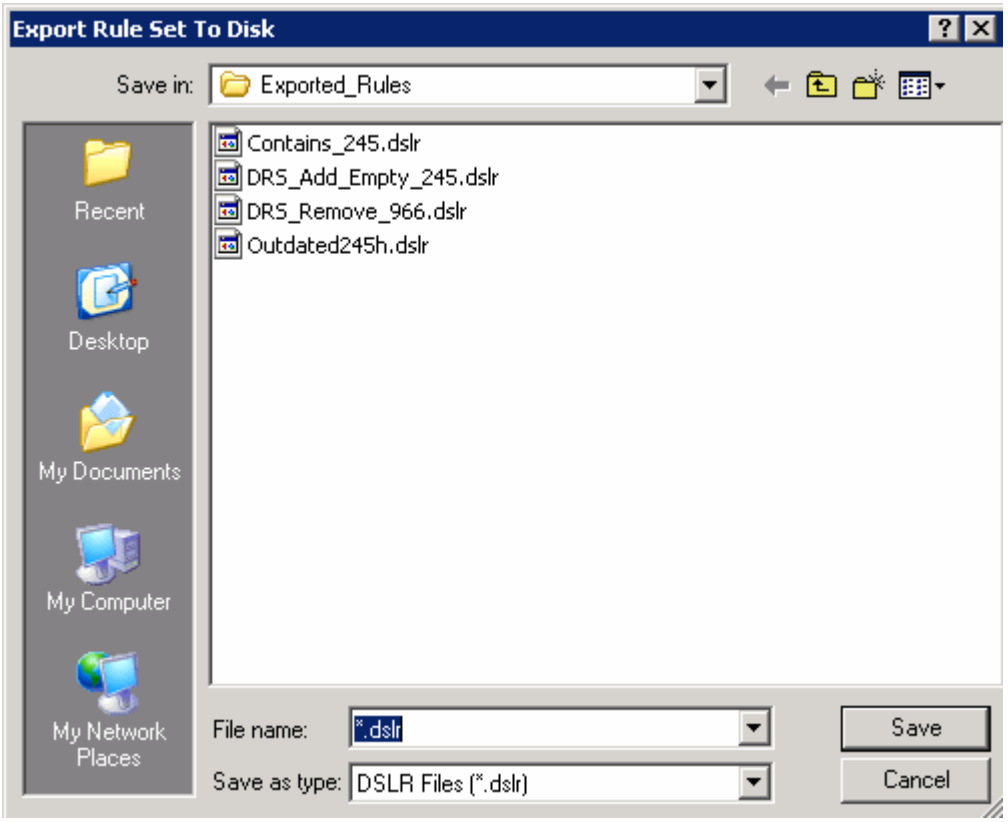

Figure 18: Export Rule Set to Disk

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 **106**), 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**.

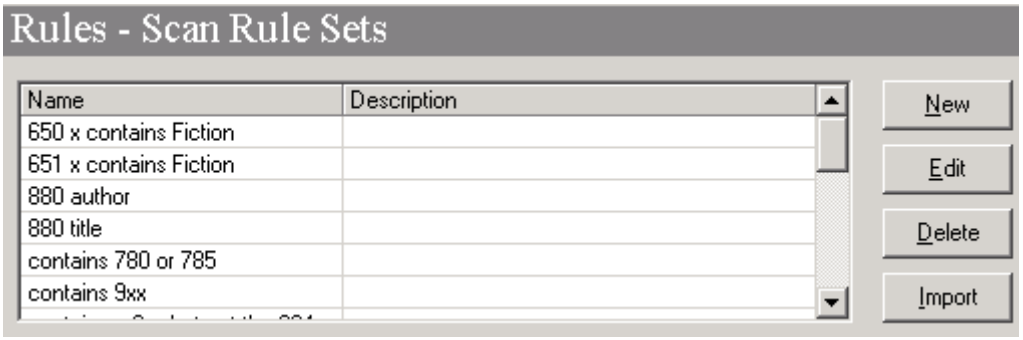

Figure 19: Import

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

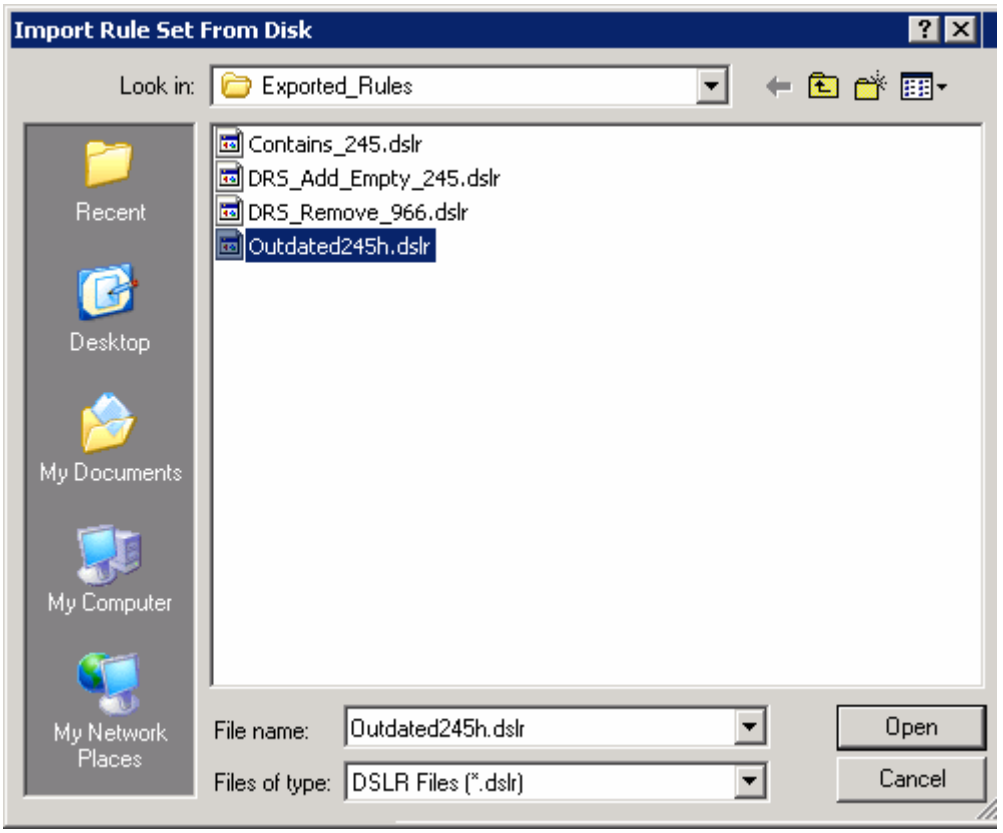

Figure 20: Import Scan Rule Set

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

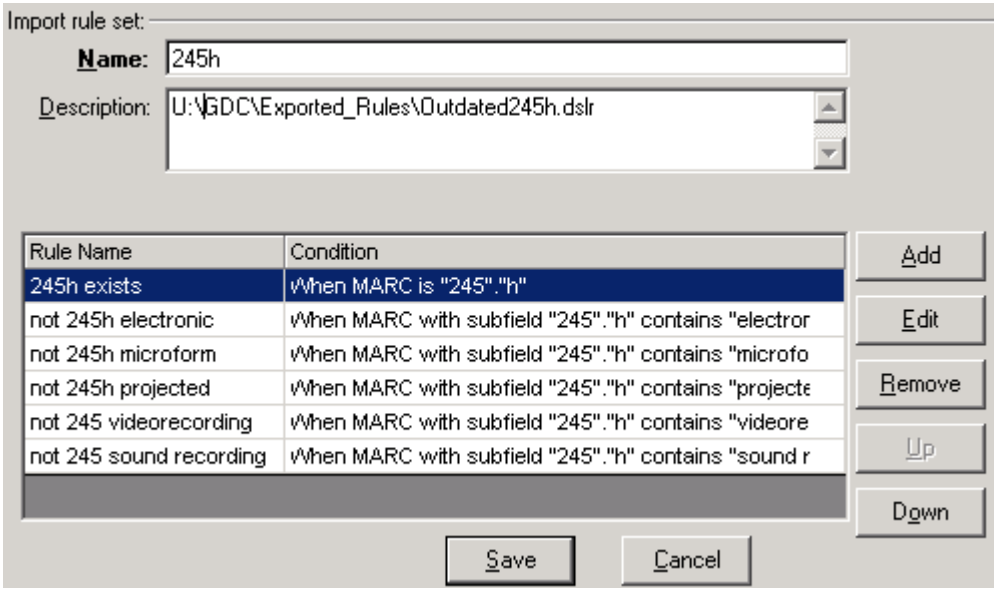

Figure 21: Name Imported Scan Rule Set

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

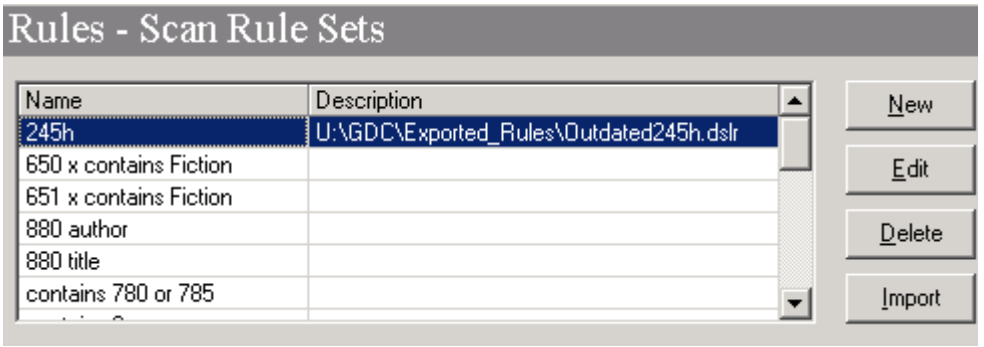

Figure 22: Imported Scan Rule Set

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.

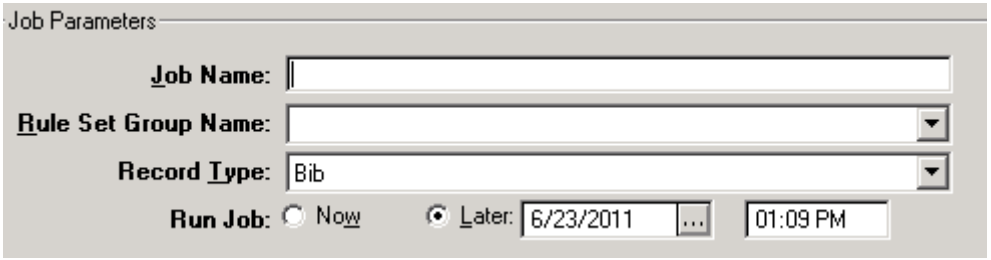

Figure 23: Scan Job Management Job Parameters

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**

Create (New) Scan Rule Set Groups

To create scan rule set groups:

1 Click **New**.

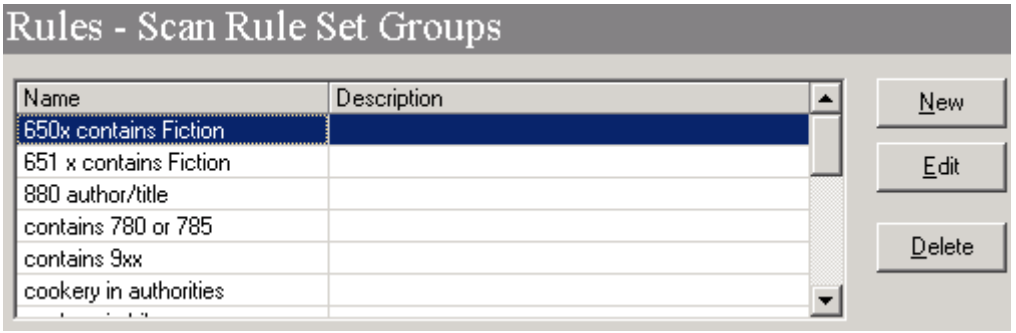

Figure 24: Click New

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.

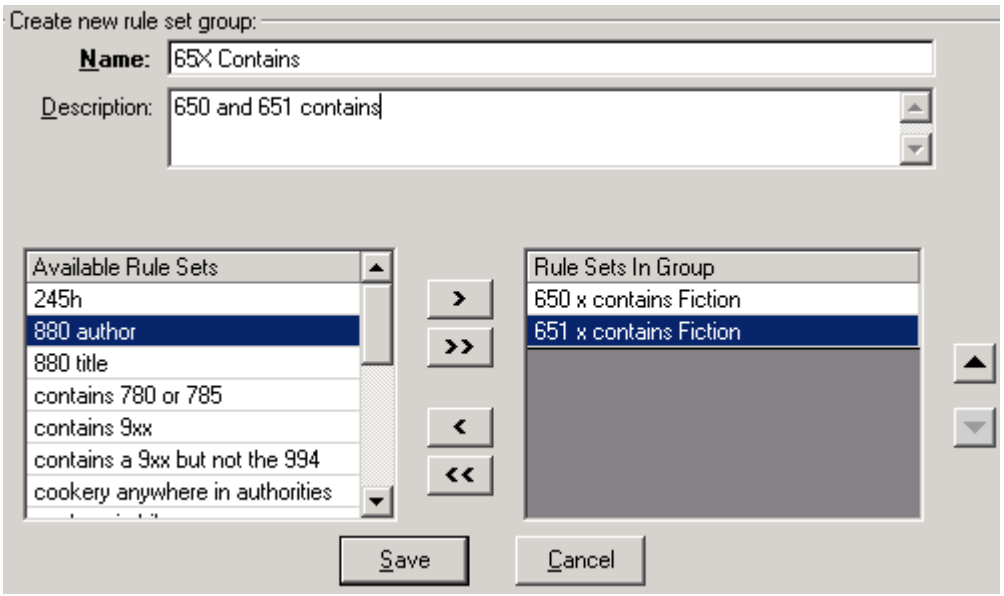

Figure 25: New Scan Rule Set Group Selections

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 **77** 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.

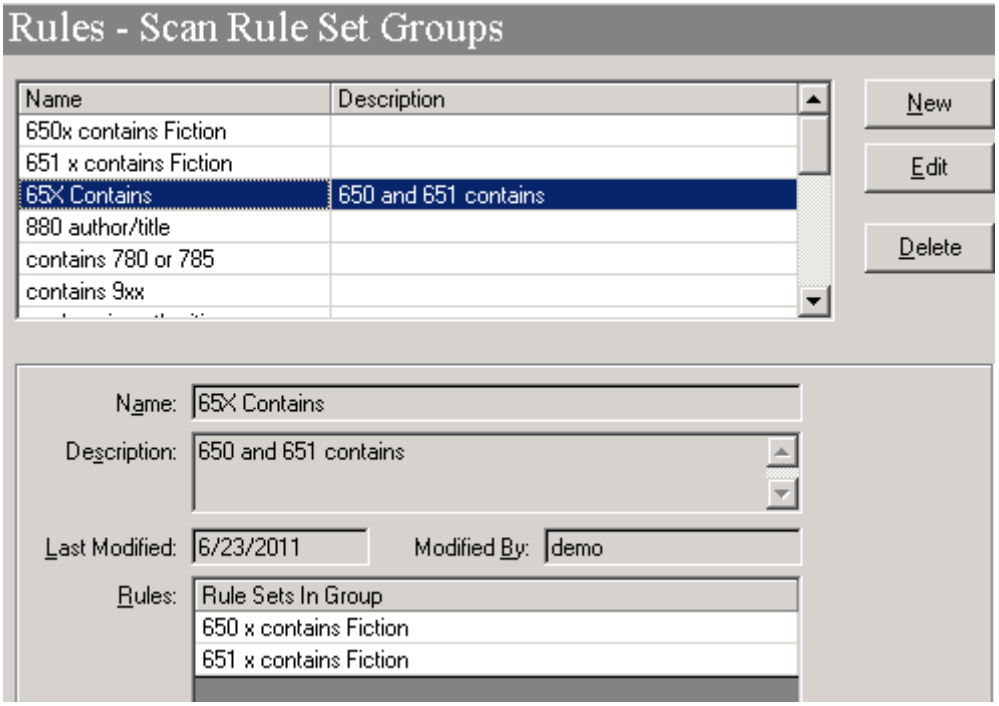

Figure 26: Saved Scan Rule Set Group

Edit Scan Rule Set Groups

To edit scan rule set groups:

1 Click **Edit**.

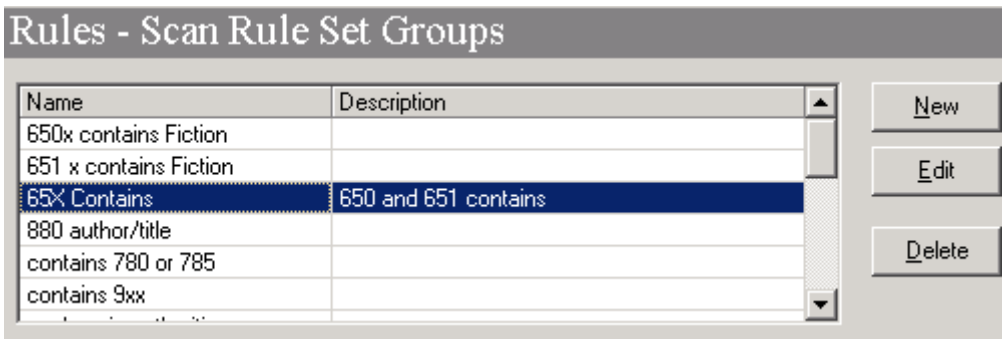

Figure 27: Edit Scan Rule Set Group

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

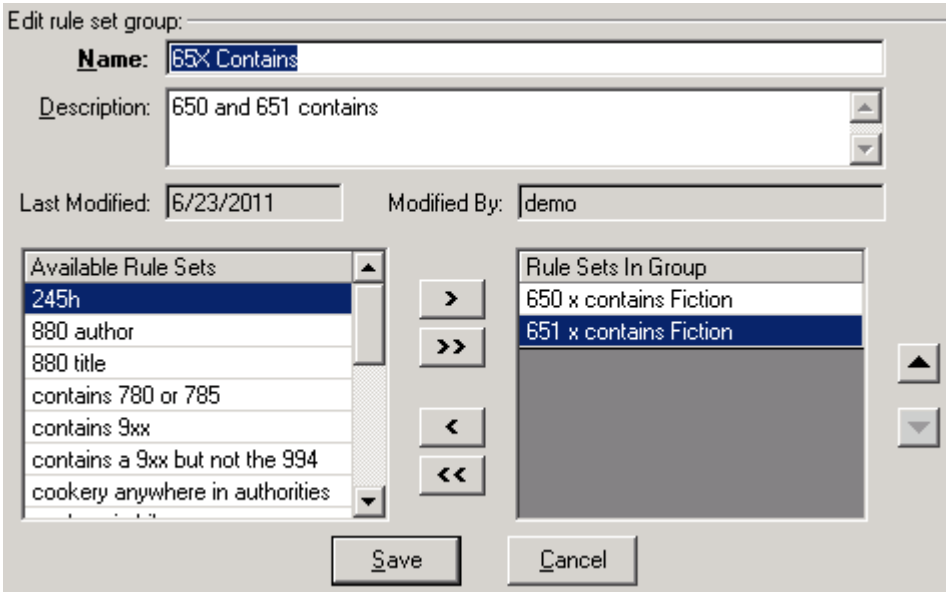

Figure 28: Edit Scan Rule Set Group Selections

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.

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 87). 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 58).

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**

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.

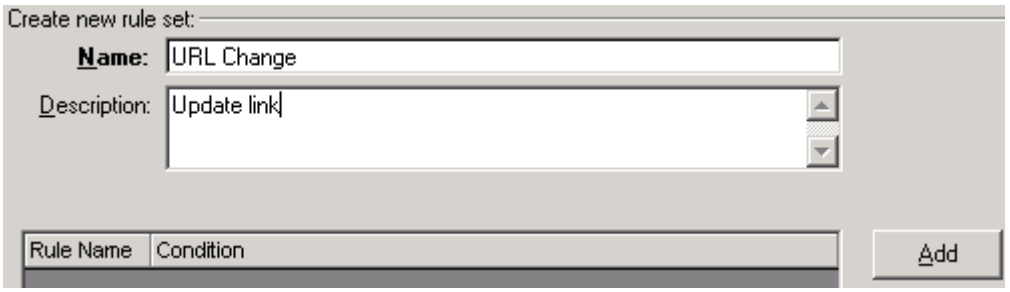

Figure 29: Add New Rule

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 30: New Rule Name

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

The default Rule Condition Template displays.

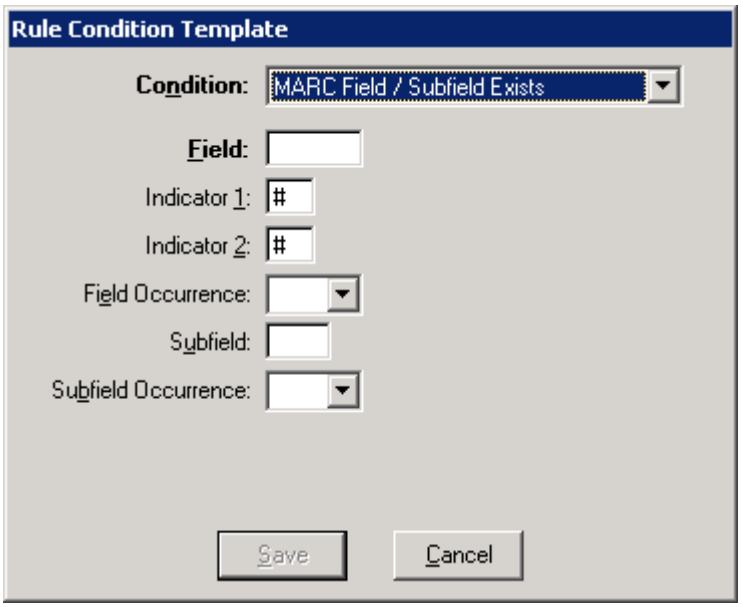

Figure 31: Rule Condition Template

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 **63** 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.

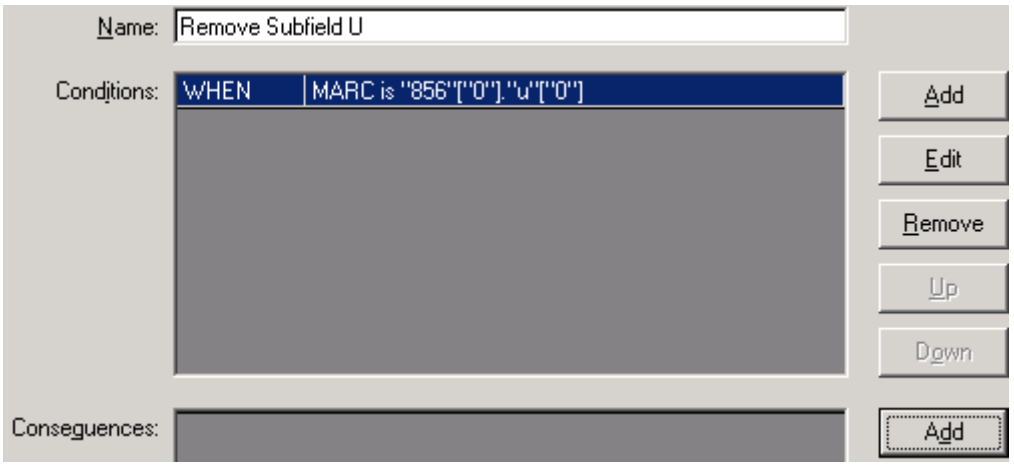

Figure 32: Consequences Add Button

The default Rule Consequence Template displays.

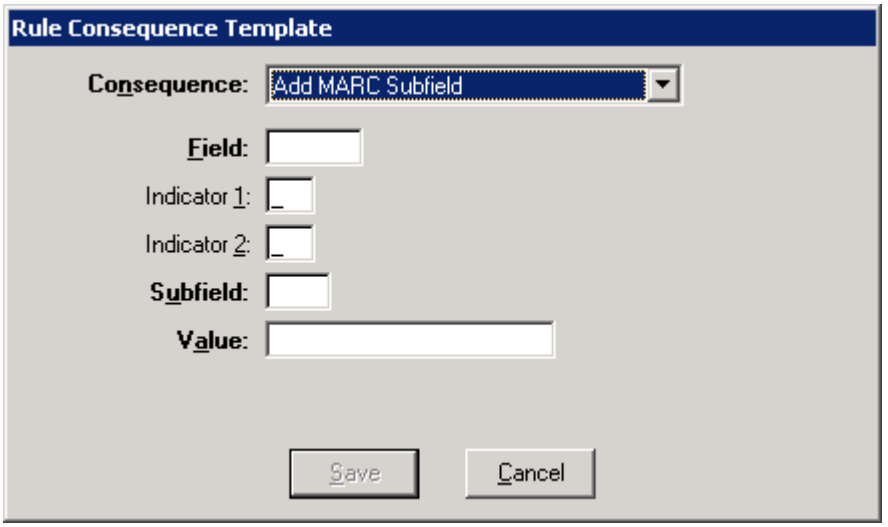

Figure 33: Rule Consequence Template

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
- Copy MARC Field/Subfield
- 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 **70** 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.

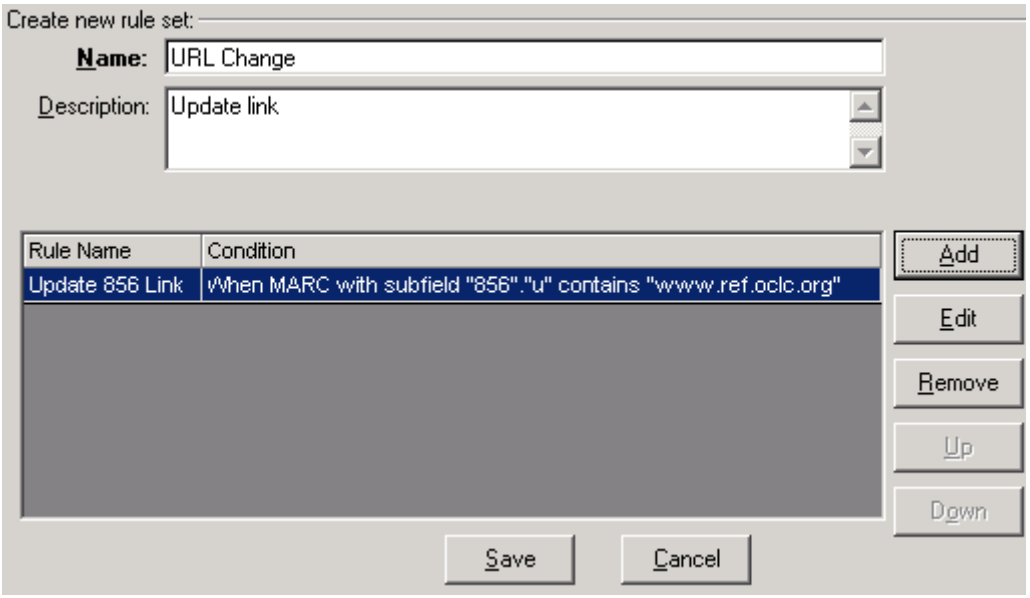

Figure 34: New Rule Row

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 77 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.

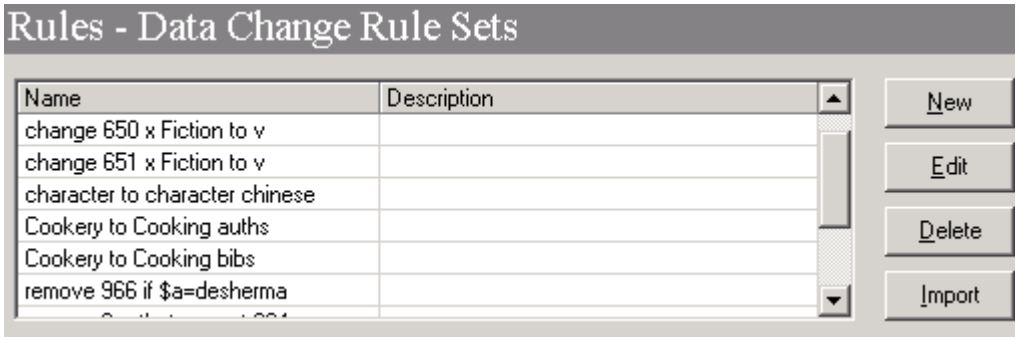

Figure 35: List of Rule Sets

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**.

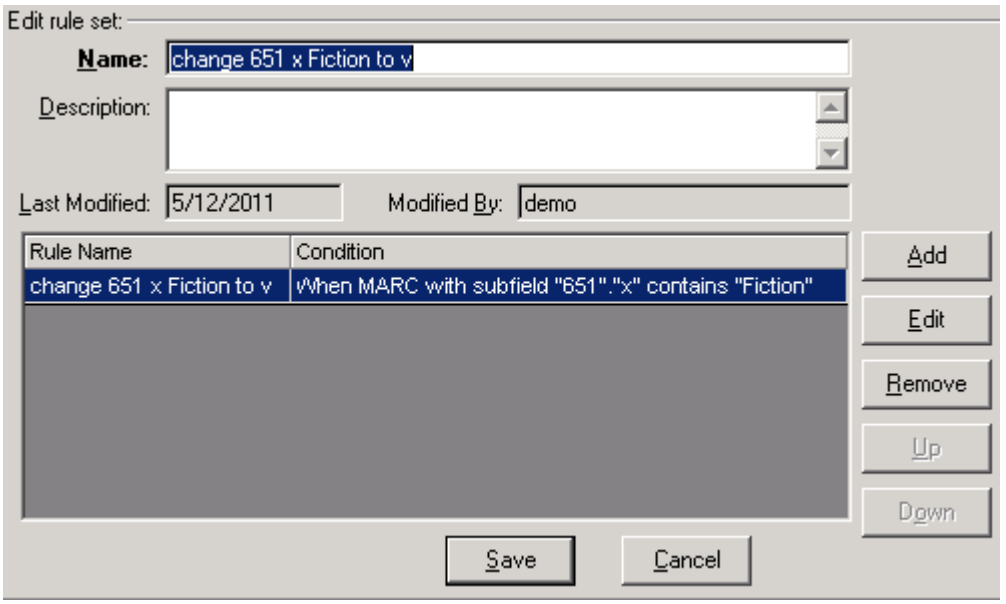

Figure 36: Edit Rule

3 Change the conditions and/or consequences to meet your requirements.

See **Conditions** on page **63** and **Consequences** on page **70** 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.

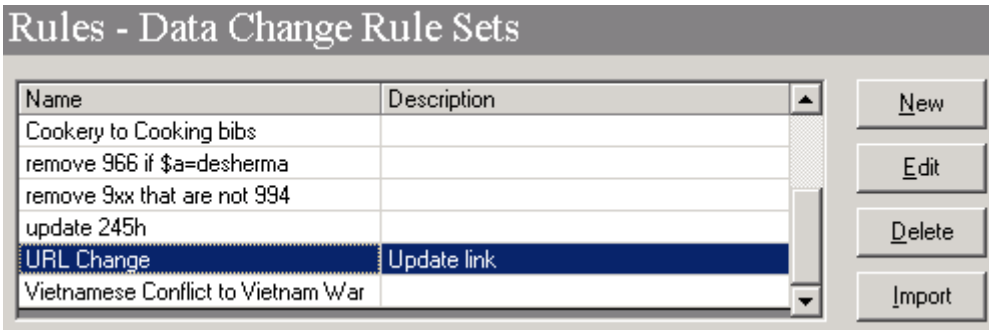

Figure 37: Delete Rule Set

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.

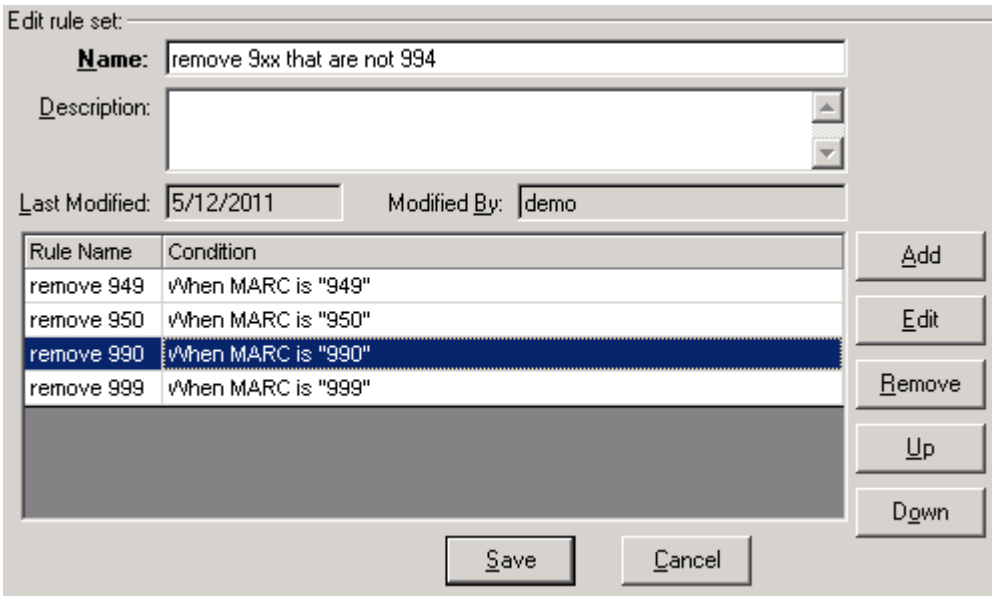

Figure 38: Remove Rule

- 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.

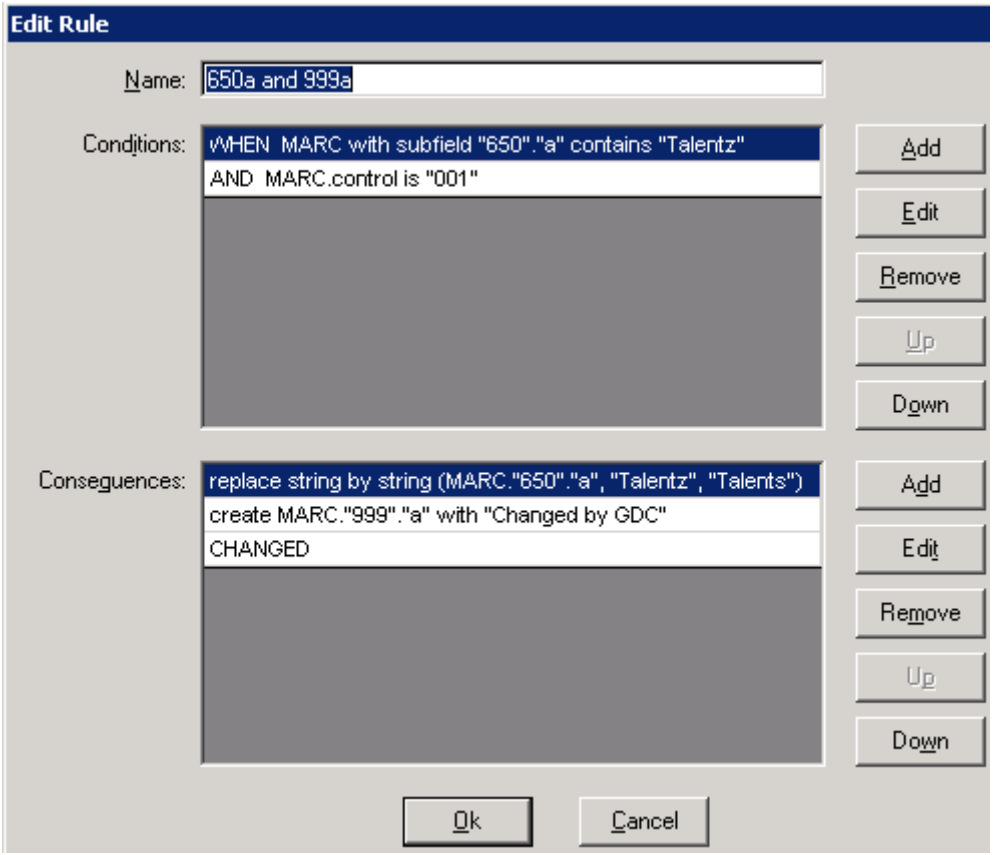

Figure 39: Remove Conditions/Consequences

NOTE:
Regarding display characteristics for the dialog box shown in **Figure 39**, 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 **108**). 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**.

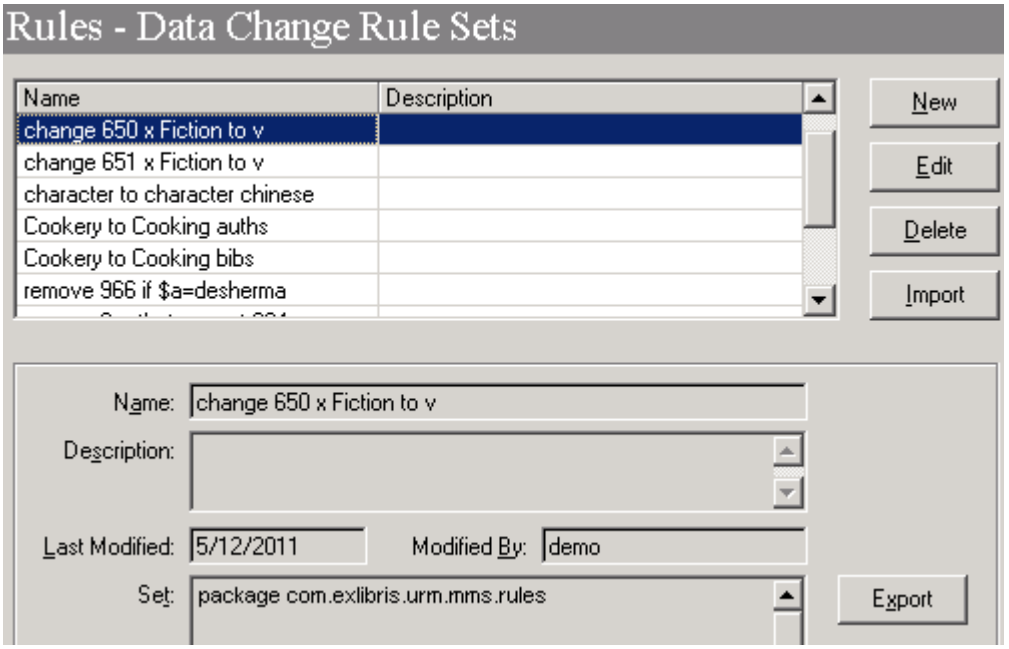

Figure 40: Select/Export Rule Set

The Export Rule Set to Disk dialog box displays.

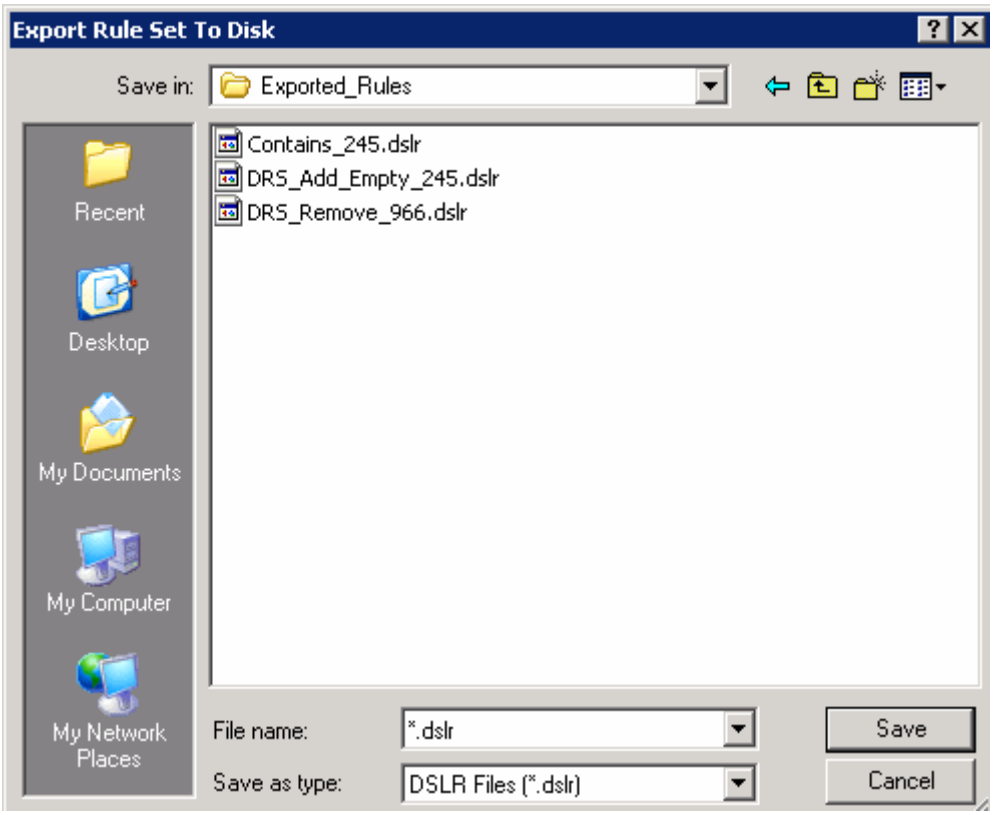

Figure 41: Export Rule Set to Disk

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 **106**), 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**.

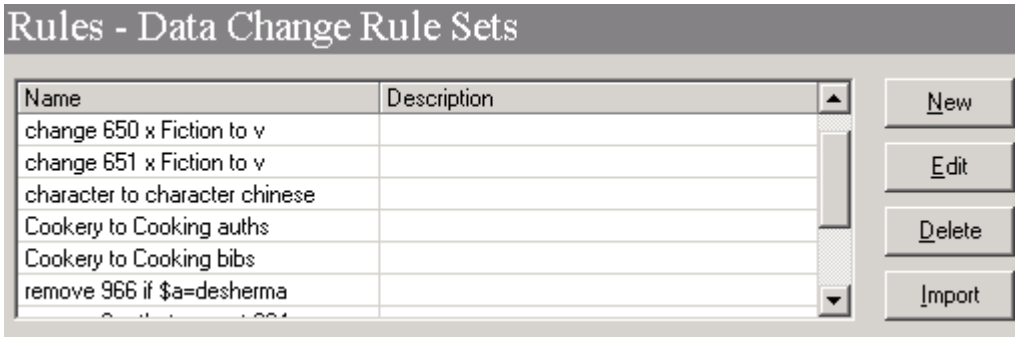

Figure 42: Import

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

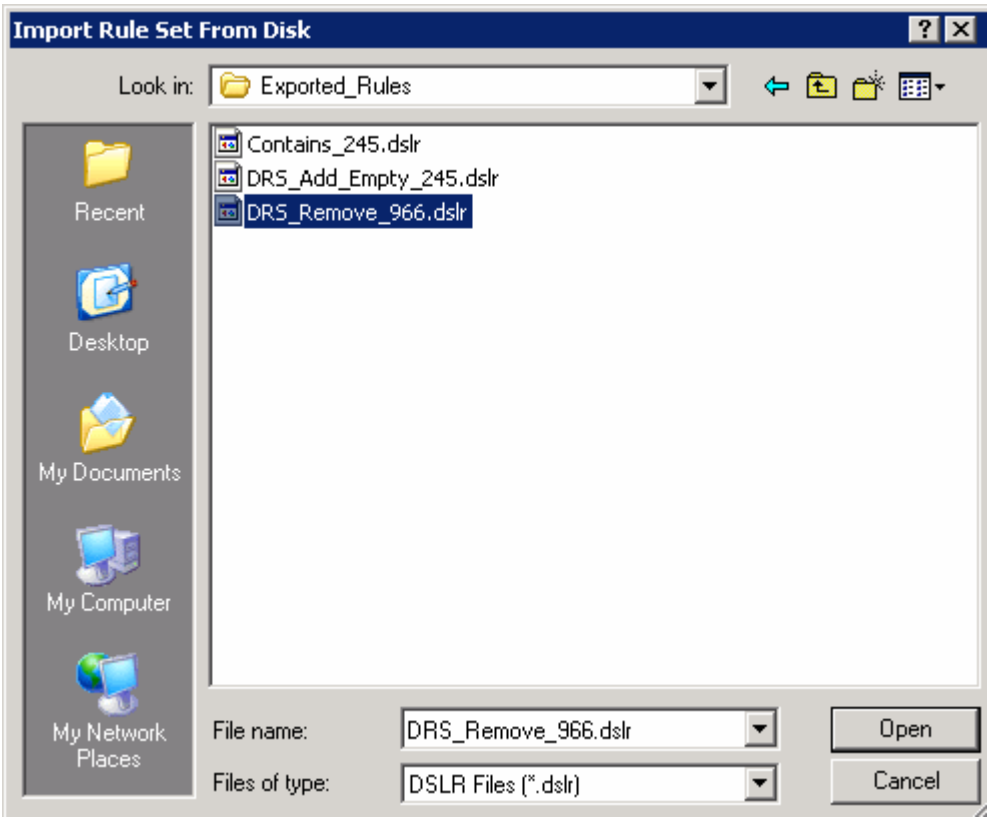

Figure 43: Import Rules

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

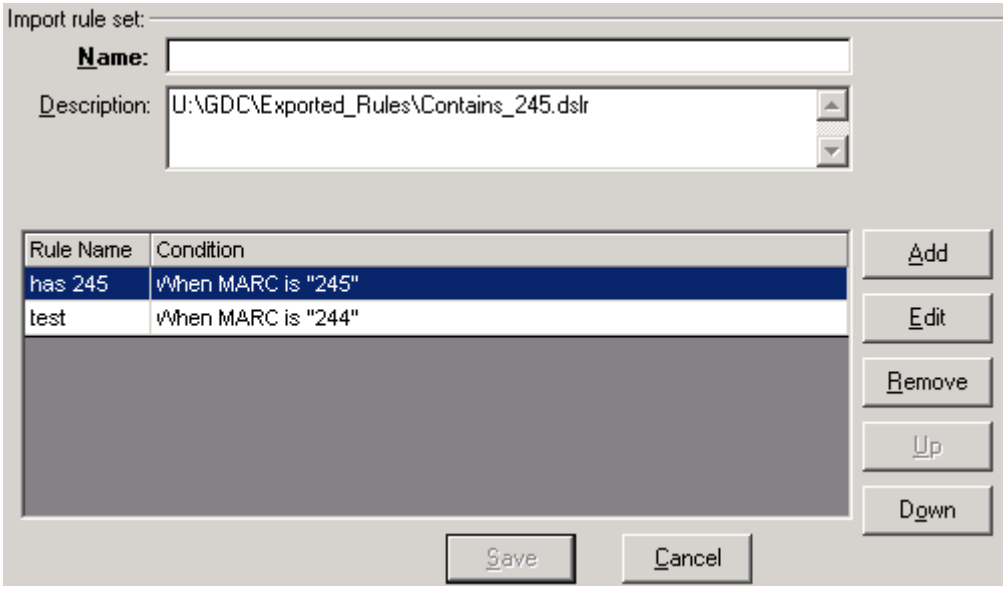

Figure 44: Name Imported Rule Set

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

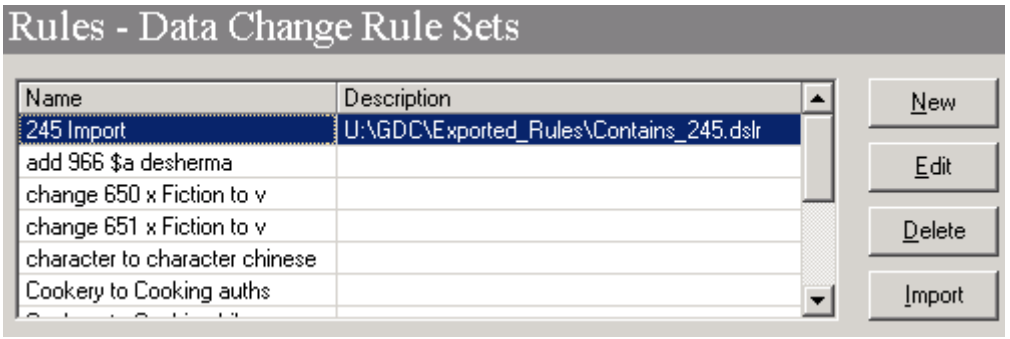

Figure 45: Imported Rule Set

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 46**) 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.

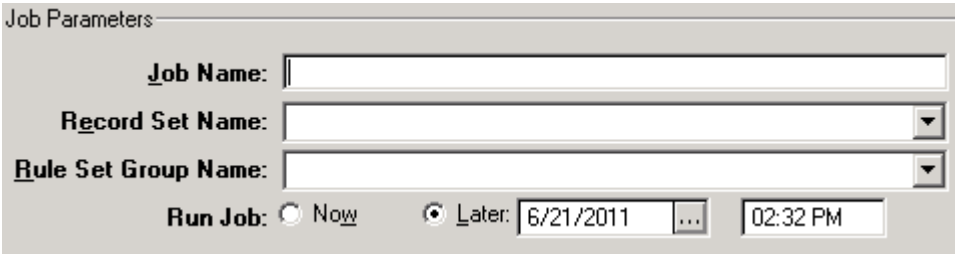

Figure 46: Data Change Job Management Job Parameters

Data change rule set groups can be used to process changes to bibliographic, holdings (MFHD), and authority records.

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**

Create (New) Data Change Rule Set Groups

To create data change rule set groups:

1 Click **New**.

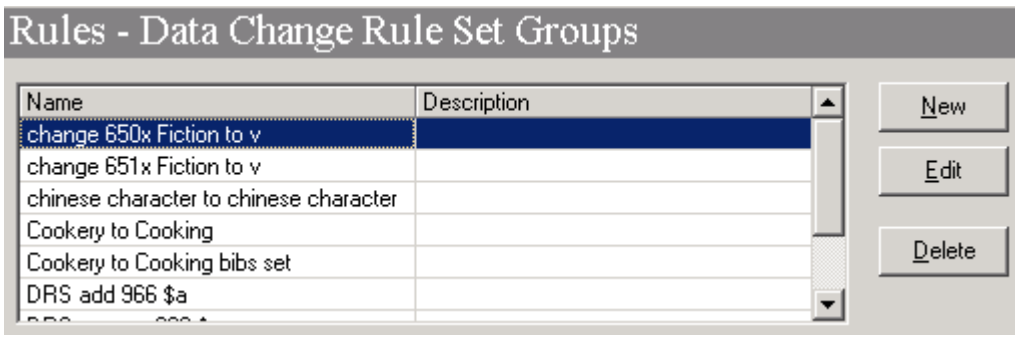

Figure 47: Click New

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.

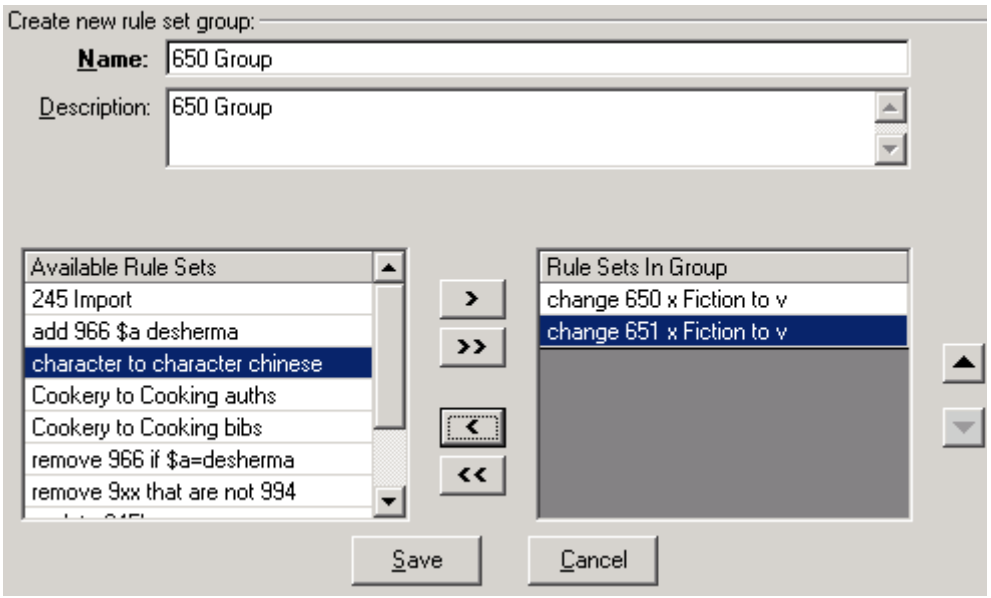

Figure 48: New Rule Set Group Selections

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 **77** 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.

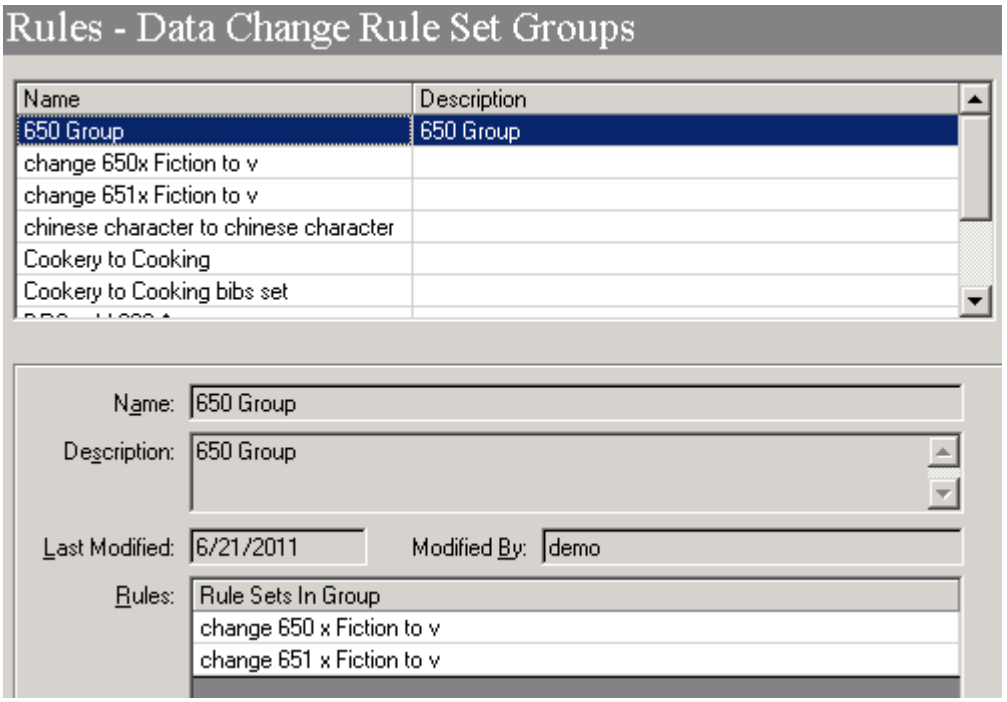

Figure 49: Saved Data Change Rule Set Group

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**.

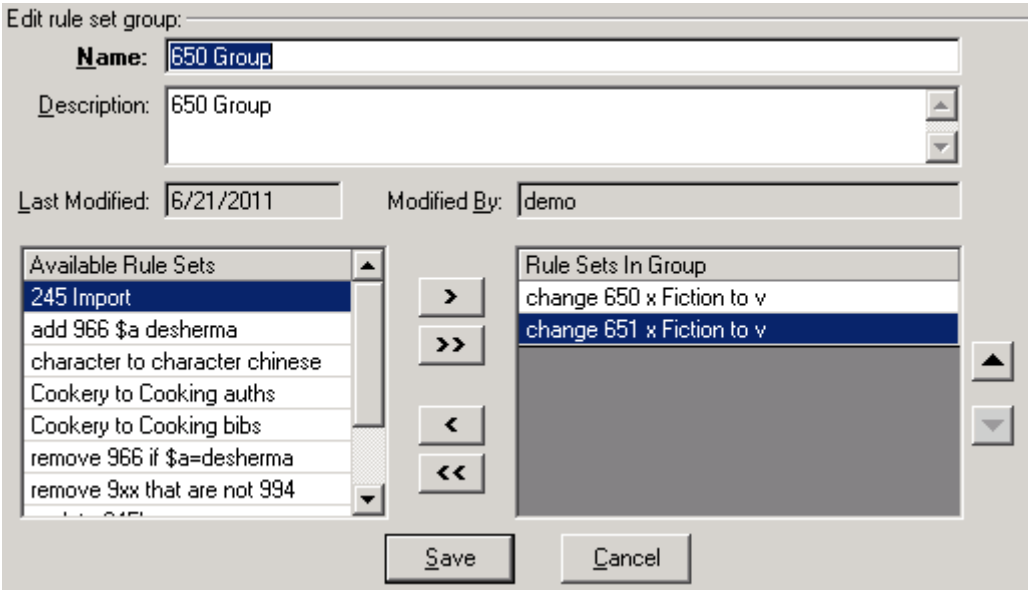

Figure 50: Edit Data Change Rule Set Group Selections

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.

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 70) 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.

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 positions 6 and 7 (material type) are defined. For the control field 008 option, only positions 00-17 and 35-39 are defined. **NOTE:** When a named position does not exist or is not selected, then the existence of the entire control field is checked for the condition. 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 ■ Position The field value (string) operators you can specify are: ■ Equals ■ Exists ■ Does Not Equal ■ Contains For example, to identify the records containing Spanish identified in 35-37 in the 008 control field, specify: ■ Field *008* ■ Byte Range start *35* length *3* ■ Operator *Equals* ■ Value *spa*

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 abcdefghijklmnopqrstuvwxyz0123456789* 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 **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 abcdefghijklmnopqrstuvwxyz0123456789* 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 *nn* 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 *n* 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 records with a specific value for a field/subfield. You can specify the following operators for this value: equals, does not equal, exists, or contains. **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 abcdefghijklmnopqrstuvwxyz0123456789* 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 *videorecording* in 245‡h.
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 (‡a) is not specified in the condition:

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

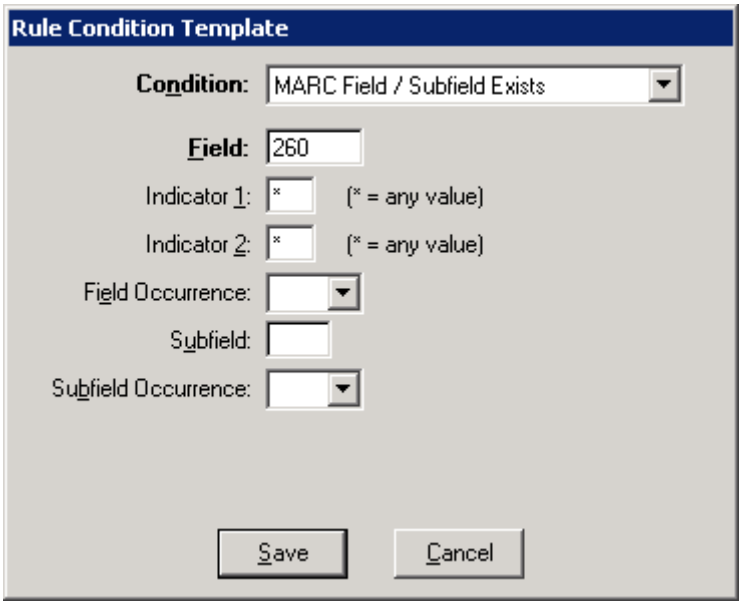

Figure 51: Subfield a Missing

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 **87**).

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.

Table 2. Data Change Rule Consequence Options

Options	Description
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 conseqeunce 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 **76**) 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 *a* ■ to new subfield *b*
Copy MARC Field/Subfield	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.
Record Disposition	Use this option to specify one of the following resulting dispositions for the record after processing: ■ Changed ■ Delete ■ Error One of the results of batch processing (see **GDC Execution/Job Management** on page **87**) 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 **76**) 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 spa, you specify: ■ Control Field *008* ■ With string *spa* ■ Replace string starting at position *35*
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 *h* ■ Replace string *[videorecording]* ■ With string *[sound recording]* **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.
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**
- **Record Disposition**

Link to Condition Field

Use the Link to condition field check box option with the Add MARC Subfield and Remove MARC Field/Subfield consequences to insure achieving your intended data change results. In this example, the intended result is to add subfield x to all records with 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
```

Record Disposition

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.

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 **77**
- **OR - Multiple Scan Rule Sets in a Scan Rule Group** on page **79**
- **AND - Run Multiple Scan Jobs** on page **80**
- **NOT - Use Exclude Consequence** on page **81**

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).

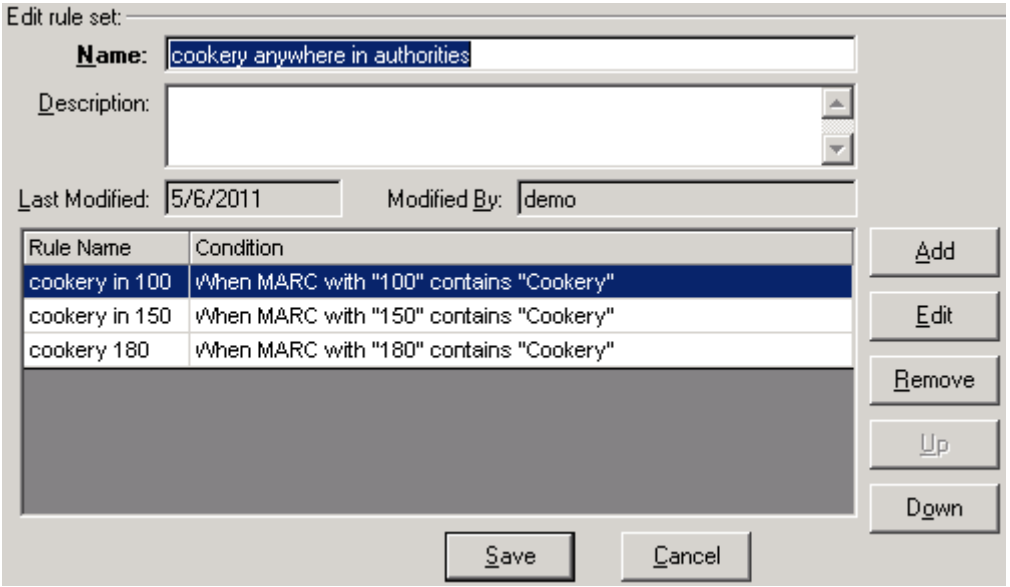

Figure 52: OR Logic in Scan Rule Sets

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).

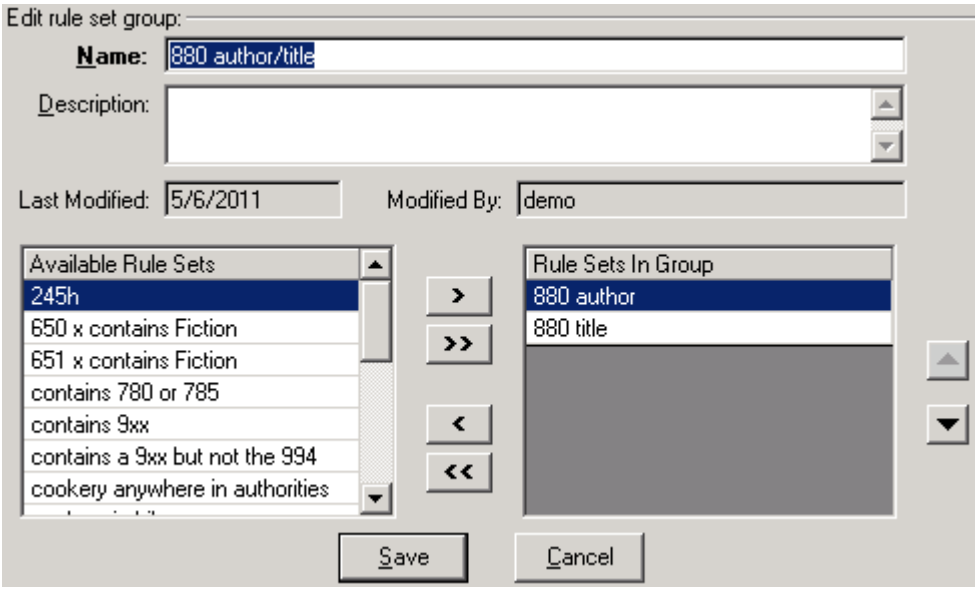

Figure 53: OR Logic in Scan Rule Groups

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).

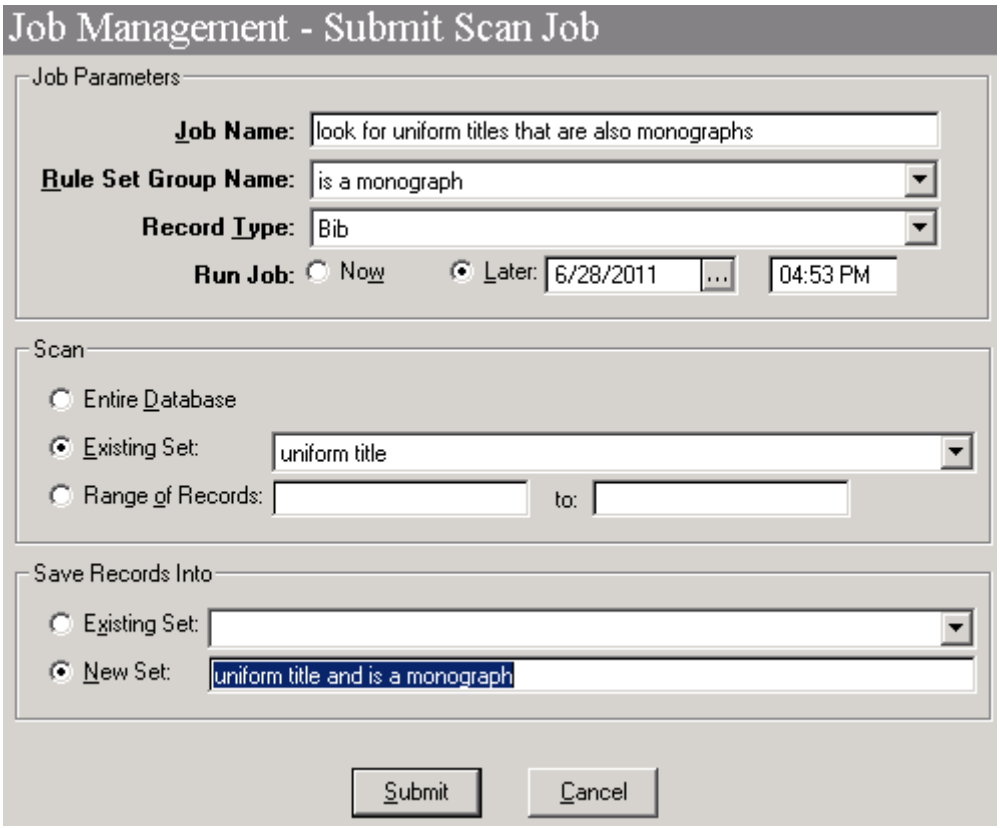

Figure 54: AND Logic with Running Multiple Scan Jobs

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).

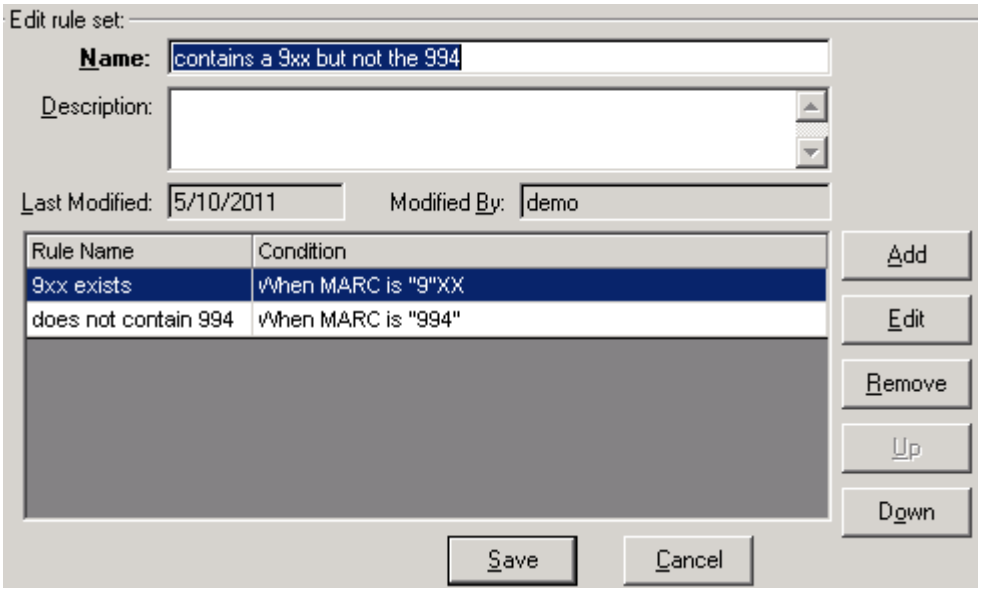

Figure 55: NOT Logic Using Exclude - Part 1

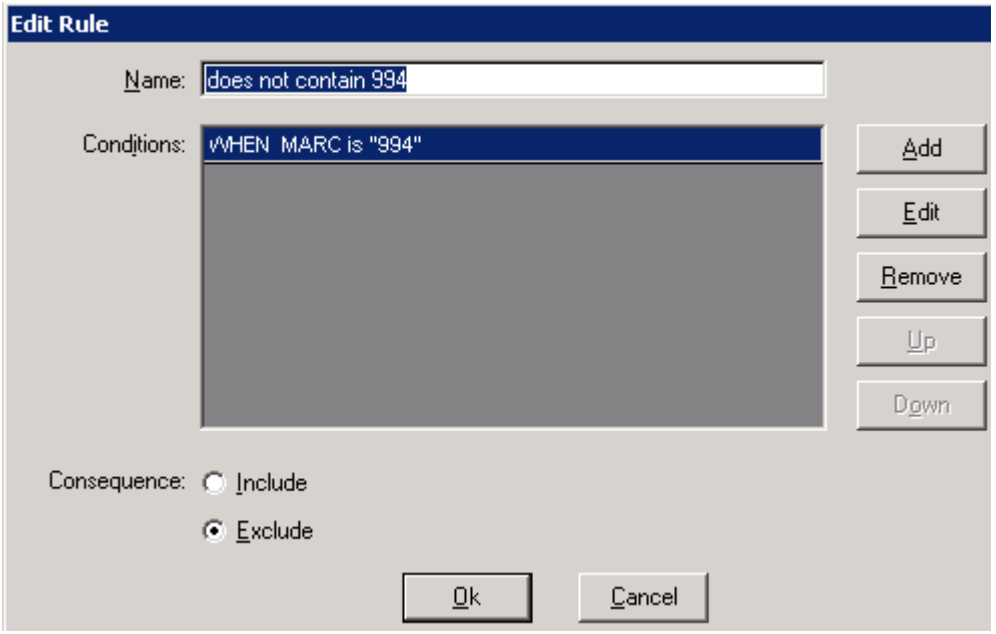

Figure 56: NOT Logic Using Exclude - Part 2

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:

- GDC does not currently handle changing suppressed records to unsuppressed records or unsuppressed records to suppressed records.
- 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

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 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 list bar 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 rule set group from the drop-down list that contains the condition/consequence logic that you want to preview.

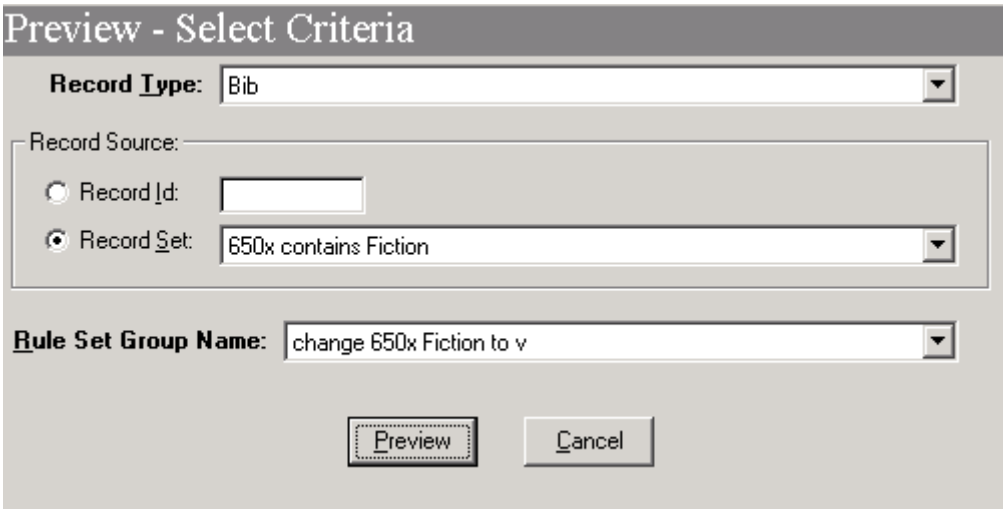

Figure 57: Preview Criteria

3 Click **Preview**.

4 View/confirm your intended changes.

The change is highlighted in color. See Session Preferences, **Colors and Fonts** on page **108** 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.

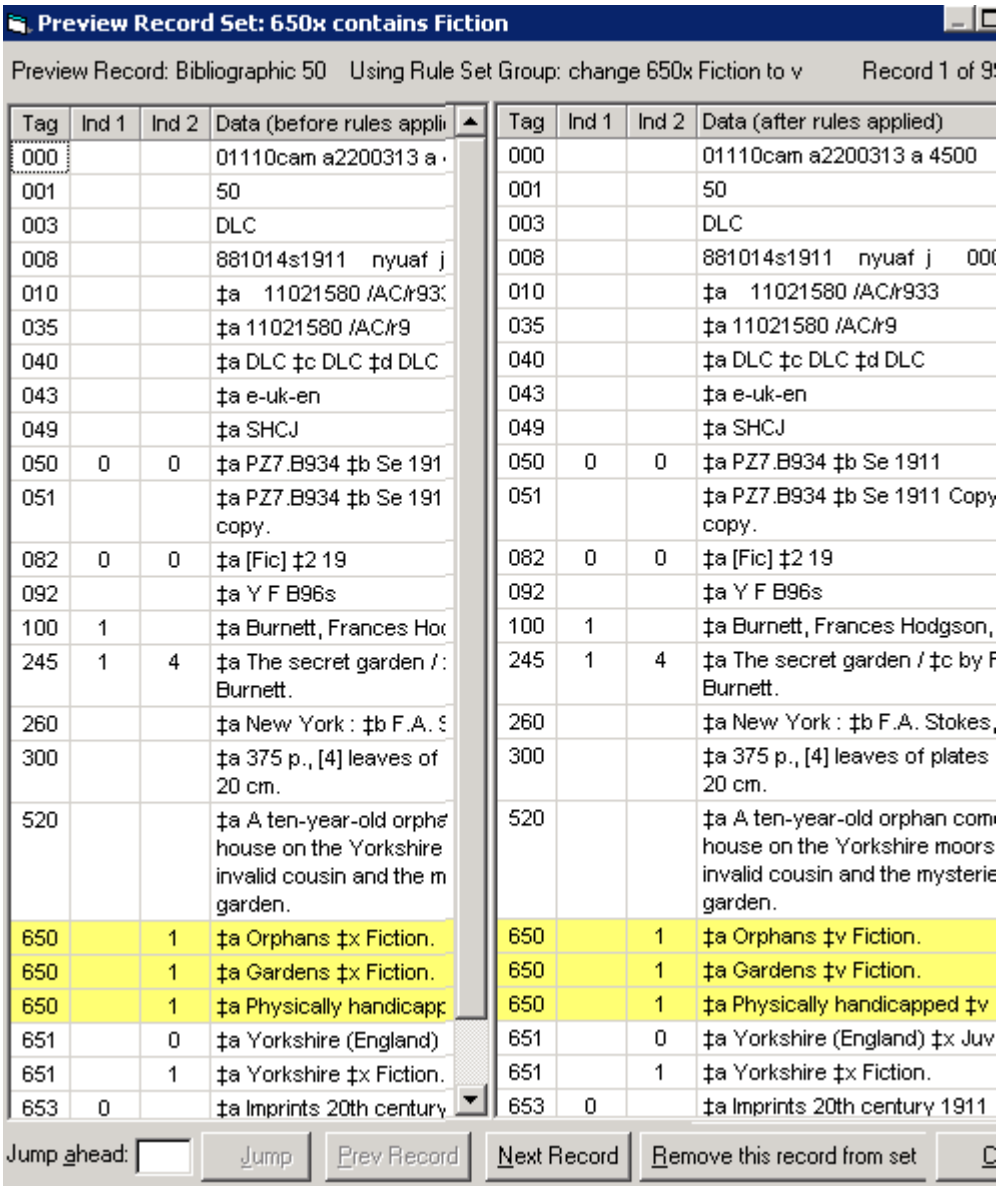

Figure 58: Change 650 Highlighted

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 59: Preview Details

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

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 **91** and **Table 8** on page **93**.

5

GDC Execution/Job Management

This section includes:

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 circlation jobs, for example.

See the appendix 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**
- **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 list bar.

The Submit Scan Job dialog box displays.

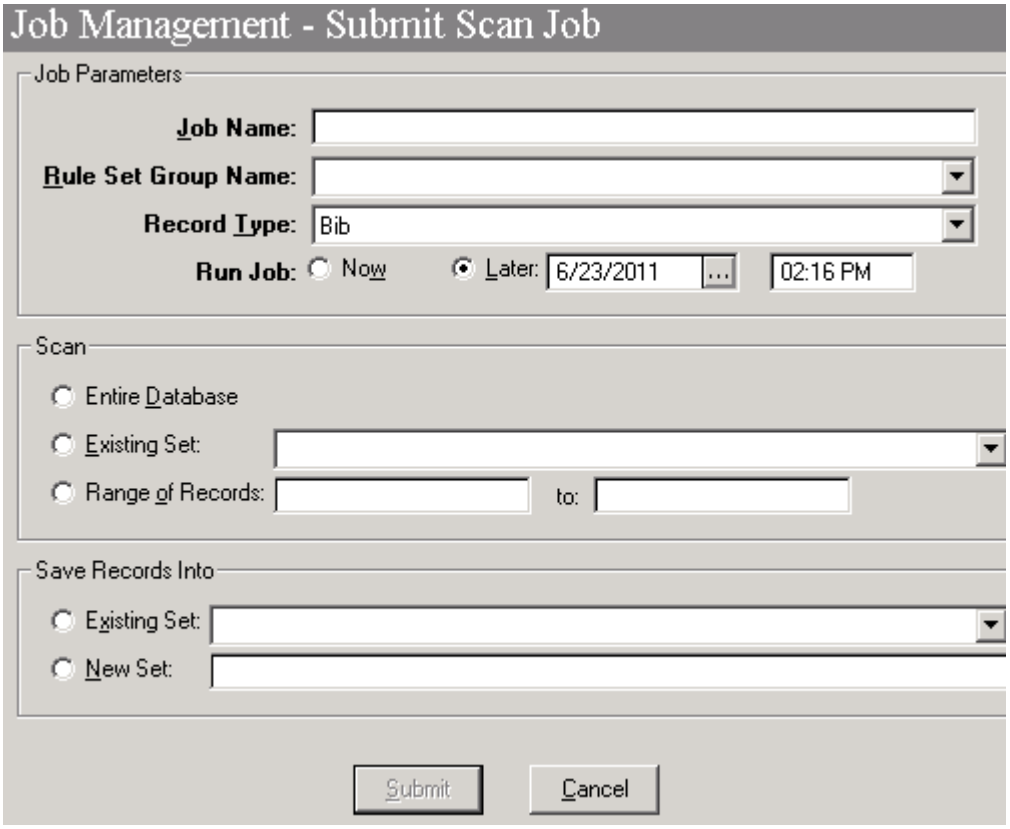

Figure 60: Submit Scan Job

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 **94**). 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 **94**).

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 record in the database

See additional details regarding this process in **Data Change Job Processing (Server)** on page **116**.

Submitting a data change job requires that you identify:

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

To submit a data change job:

1 Click **Submit Data Change Job** from the Job Management list bar.

The Submit Data Change Job dialog box displays.

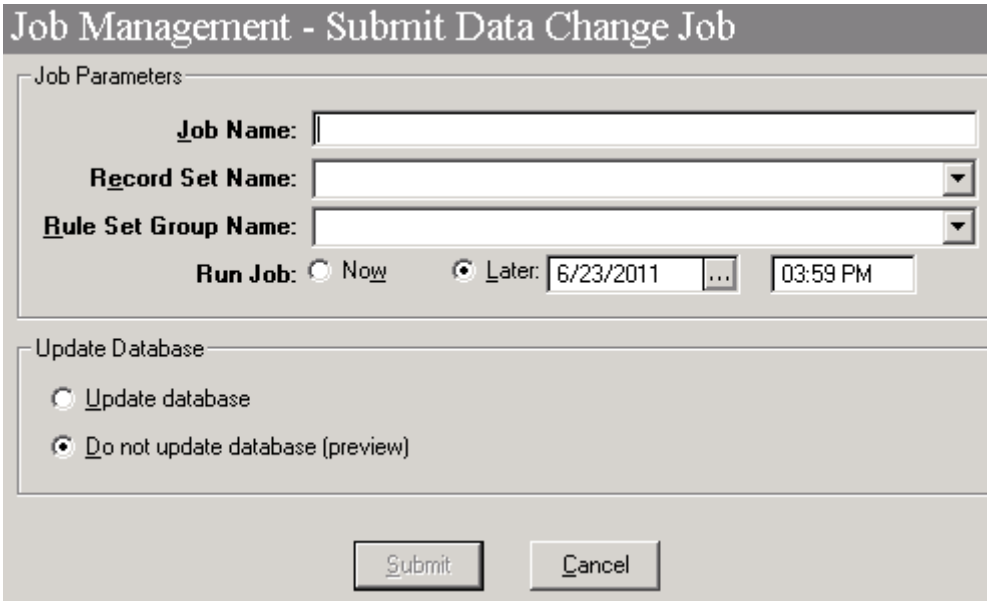

Figure 61: Submit Data Change Job

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.

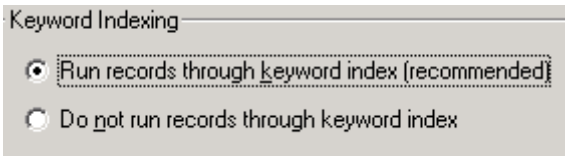

Figure 62: Keyword Indexing

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 **94**). The job name can be up to 200 characters long. The job name must be unique.
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.

Table 7. Submit Data Change Job - Job Parameters

Option	Description
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.
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 (recommended)	Use the option to specify that the new/updated records resulting from data change job should be keyword indexed. This option is recommend in most instances.

Table 9. Submit Data Change Job - Keyword Indexing Options

Option	Description
Do not run records through keyword index	Use the option to specify that the new/updated records resulting from 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 **114**.

3 Click **Submit** to send your job request to the batch queue (see **View the Job Queue** on page **94**).

View the Job Queue

To view and manage jobs in the job queue:

1 Click **View Job Queue** from the Job Management list bar.

The View Job Queue dialog box displays.

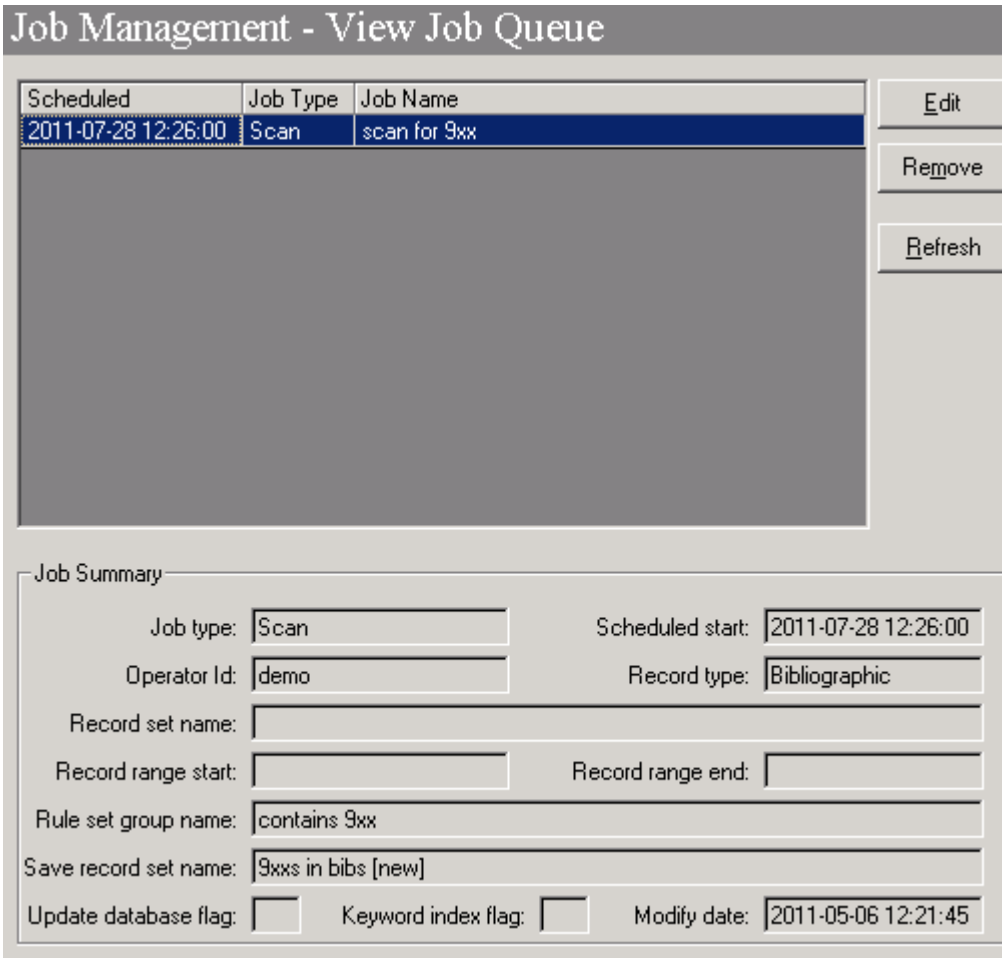

Figure 63: View Job Queue - Data Change

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

To view and manage running/completed jobs:

1 Click **View Running/Completed** from the Job Management list bar.

The View Running/Completed dialog box displays. See **Table 10** for a description of this display.

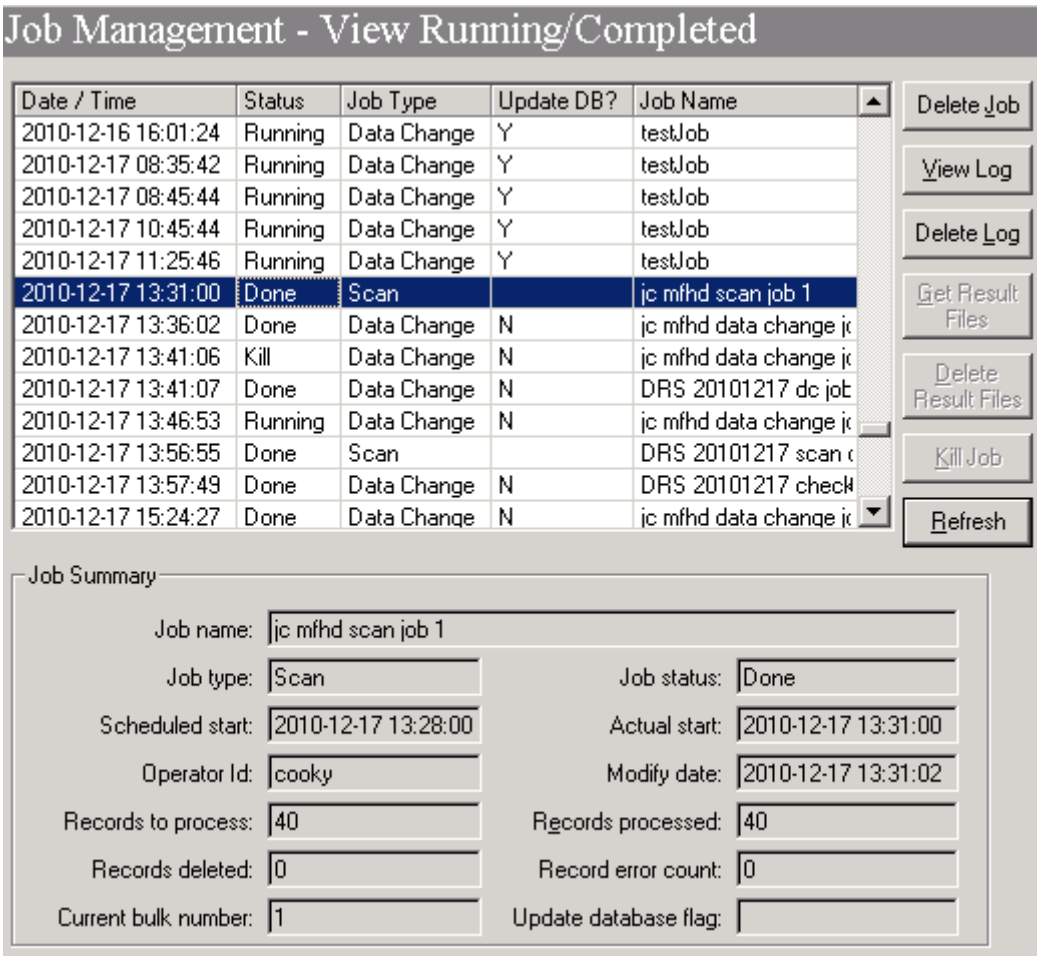

Figure 64: View Running/Completed Job Queue - Status Done

Table 10. 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.
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
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 60** (Submit Scan Job) and **Figure 61** (Submit Data Change Job).
Job Summary:	
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, either scan or data change.
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 60** (Submit Scan Job) and **Figure 61** (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.

Table 10. Job Management - View Running/Completed Display

Component	Description
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).
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.
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 **119** for more information.

- View the log (see **View Log** on page **100**)
- 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 **101**)
- 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 **119** for more information.

- Kill the job (see **Kill Job** on page **103**)

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.

```
 1 INFO  - Job Started...
 2         Job Name = CC 245 Change Small Record Set
 3         Job ID = 9199
 4         Job Operator = demo
 5         Job Type = DataChangeJob
 6         Job Scheduled Start Date = 2011-01-25 11:47:00.0
 7         Job Actual Start Date = Tue Jan 25 11:50:33 CST 2011
 8         Total Records = 8
 9         Job Parameters =
10                 recordSetId = Bob's 8 Record Set (13801)
11                 ruleSetId = CC 245 to 246 (9525)
12                 updateDatabaseFlag =  (N)
13                 keywordIndexingFlag =  (N)
14         Start Time = Tue Jan 25 11:50:33 CST 2011
15 INFO  - Worker Init
16 INFO  - Worker Running... Bulk:1
17 INFO  - Creating tempfile ID's for Export...
18 INFO  - tempfile ID's are ready for export...
19 INFO  - Start Exporting Records...
20 INFO  - Completed Exporting Records...
21 INFO  - Export 1  Elapsed Time: 00:00:01
22 INFO  - Start Transforming records...
23 INFO  - Finished bulk 1
24 INFO  - Completed Transforming records...
25 INFO  - Transform 1  Elapsed Time: 00:00:02
26 INFO  - Job Is Not Updating The Database.
27 INFO  - Finished with bulk 1 of 1  Elapsed Time: 00:00:04
28 INFO  - Job Ended...
29         End Time = Tue Jan 25 11:50:38 CST 2011
30         Records Processed = 8
31         Records Deleted = 0
32         Record Errors = 0
33         Running Time = 00:00:05
```

Figure 65: 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 **105**).

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
- 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:

- Before (exported records)

  *.marc_before

- After (changed records)

  *.marc_after

- Unchanged (unchanged records)

  *.marc_unchanged

- Deleted (records to be deleted)

  *.marc_deleted

See **Data Change Job Processing (Server)** on page **116** for more information regarding the job result files.

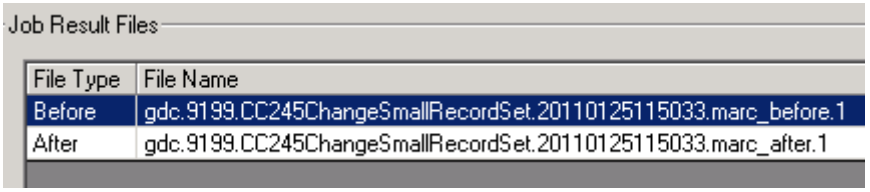

Figure 66: Job Result Files

When you select a row and click View File, the file contents display using the default editor specified in your Session Preferences (see **Workflow** on page **105**).

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$6880-01$aKinsei kangakusha denki cho:
17 246  30$6880-02$aTsuketari keifu nenpyoÌ„
18 260    $6880-03$aToÌ„kyoÌ„ :$bIda Shoten hat:
19 300    $a29, 33, 573, 100, 44 p. ;$c27 cm.
20 500    $6880-04$aOriginally published in 194
21 650   0$aChinese literature$xBio-bibliograph
22 651   0$aChina$xStudy and teaching$zJapan.
23 700  1 $6880-05$aSeki, Giichiroì„.
24 700  1 $6880-06$aSeki Yoshinao.
25 740  0 $6880-07$aKindai kangakusha chojutsu
```

Figure 67: 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

Session Defaults and Preferences

This section includes:

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 preferences

  Select Retain last search to have the system maintain the search parameters on the Search dialog box (see **Search** on page **21**).

  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 **100** and **Get Result Files** on page **101**).

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.

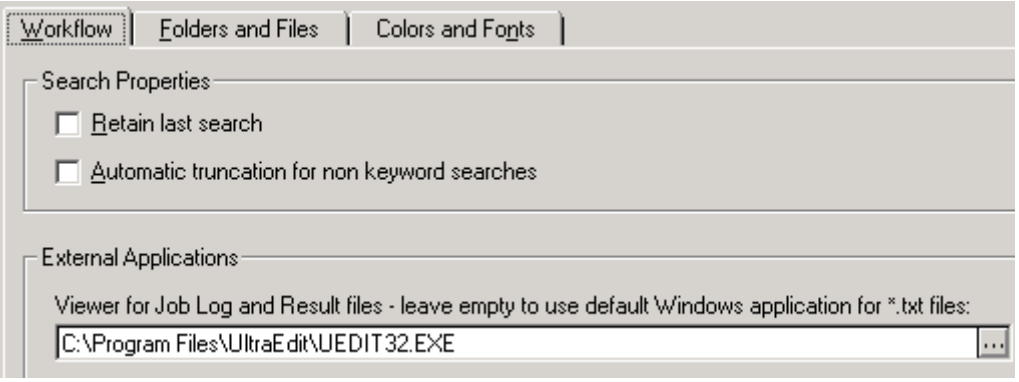

Figure 68: Workflow Tab

Examples of text editors include Notepad and UltraEdit.

NOTE:
Word processing software may not be used.

Folders and Files

From the Folders and Files tab, you can specify the default folders for the location 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.

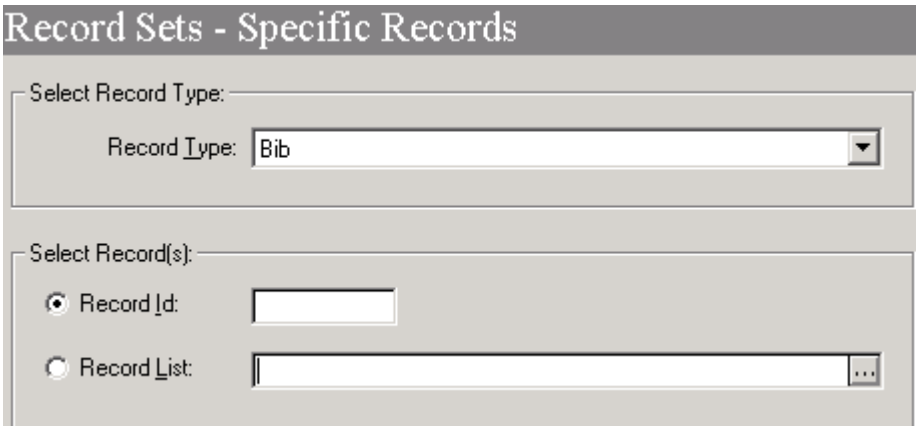

Figure 69: Record ID List Usage Example

To set your folder preferences:

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

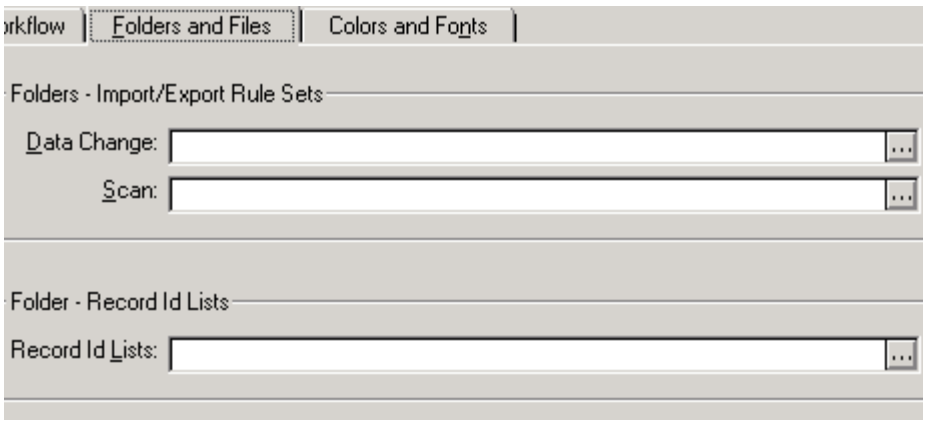

Figure 70: Folders and Files Tab

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 **83**)

  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 71**) 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.

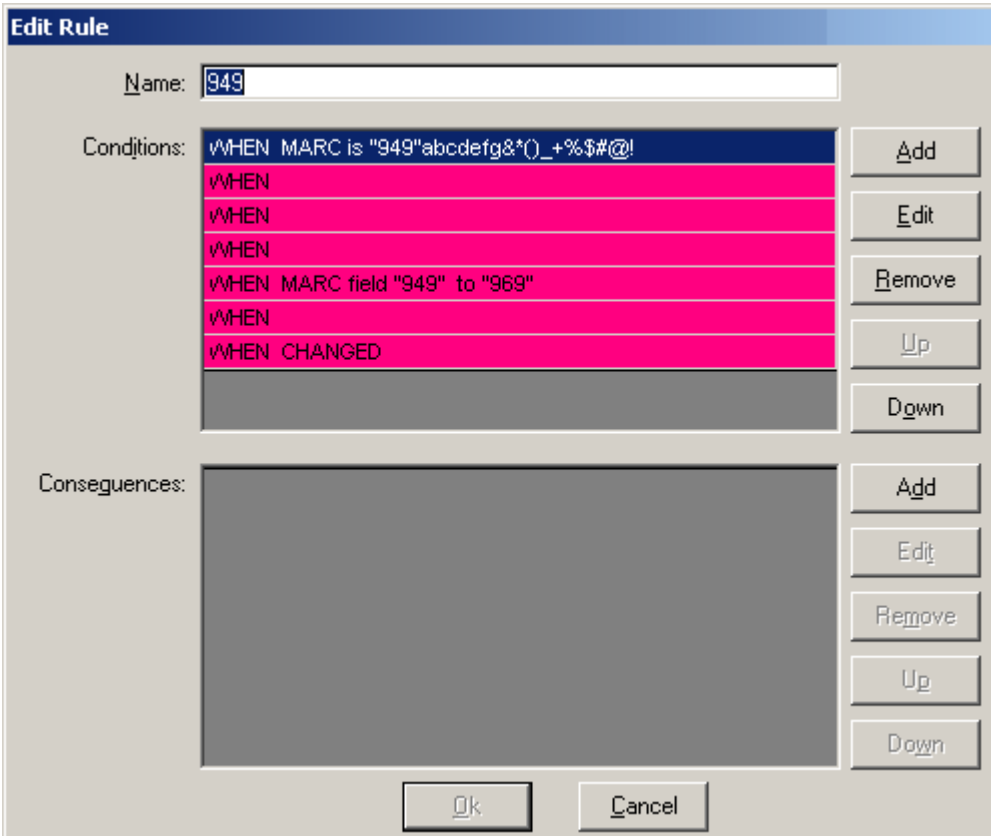

Figure 71: Example of Unimplemented Color

To change color settings:

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

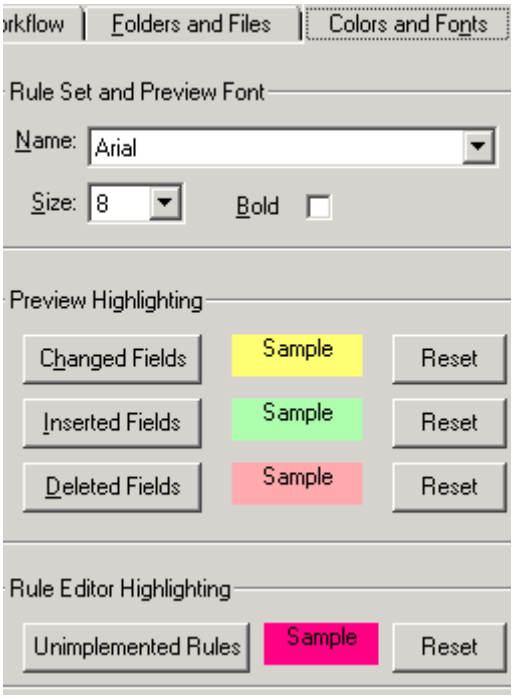

Figure 72: Colors and Fonts Tab

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

The Color dialog box displays.

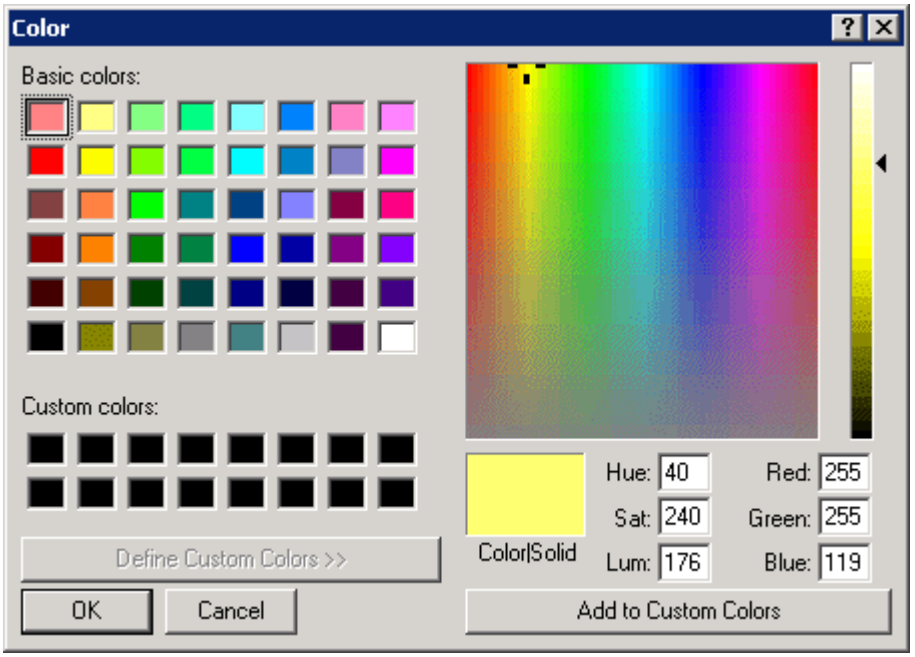

Figure 73: Color Dialog Box

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.

7

Technical Options/Considerations

This section includes:

Command Line Processing

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

- **Prulemgmt -a**
- **Prulemgmt -g**

The `Prulemgmt -a` and `Prulemgmt -g` command line options provide the equivalent to the GDC client rule import/export functions.

Prulemgmt -a

With `-a`, you can add a rule to the `RULE_DOC` table. Specify the following required arguments:

- Path to the local rule set (`.dslr`) file
- Rule name
- Description
- Type
- Operator ID

This saves the rule set to the RULES column of the new RULE_DOC entry.

Prulemgmt -g

With -g, you can get/retrieve a rule from the RULE_DOC table and write it to the file system. Specify the following required arguments:

- Path to new rule set (.dslr) file
- Rule ID
- Operator ID

The rule set that gets written to the new file comes from the RULES column of the RULE_DOC entry that matches the supplied ID.

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 an incident with Support via the eService 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.

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 dæmon

  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 **14** 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 dæmon 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 **89** 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_MHFD

  The 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 **100** for details regarding what is included in the log file and how you can view the log file via the GDC client.

8

Troubleshooting

This section includes:

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 incident via the Ex Libris eService.

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

In this usage example, the existing base URL string in the 856‡u 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 856‡u is being replace 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 **19** 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.

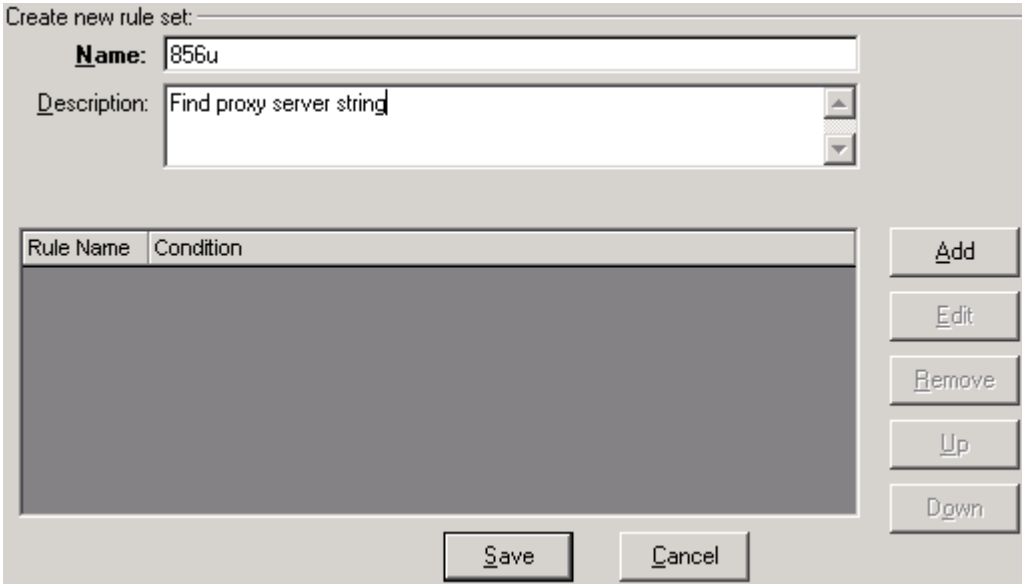

Figure 74: Create New 856‡u Scan Rule

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 856‡u (`www.ref.oclc.org`) and specify **Contains** for the operator.

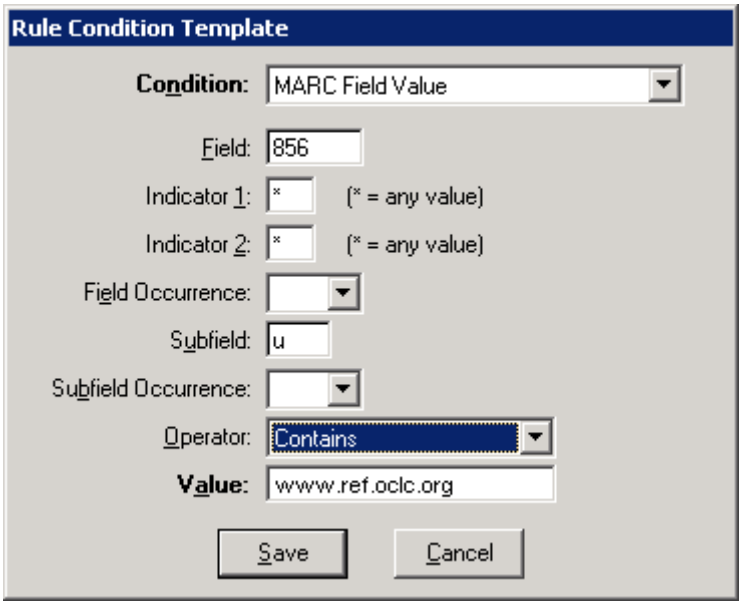

Figure 75: 856‡u Condition

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.

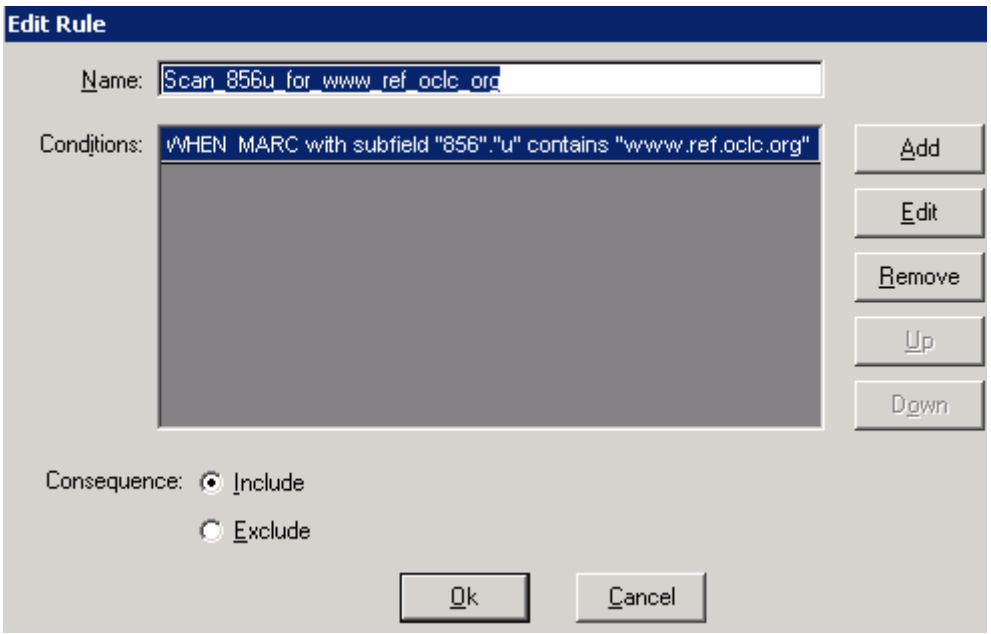

Figure 76: Save Scan Rule with Include (Click Ok)

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

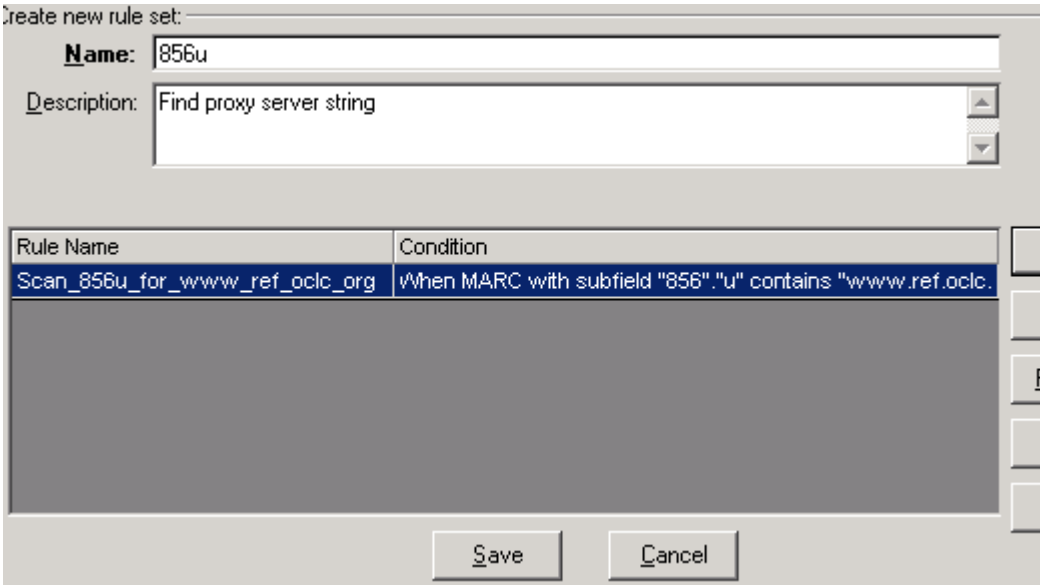

Figure 77: Save Scan Rule Set

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.

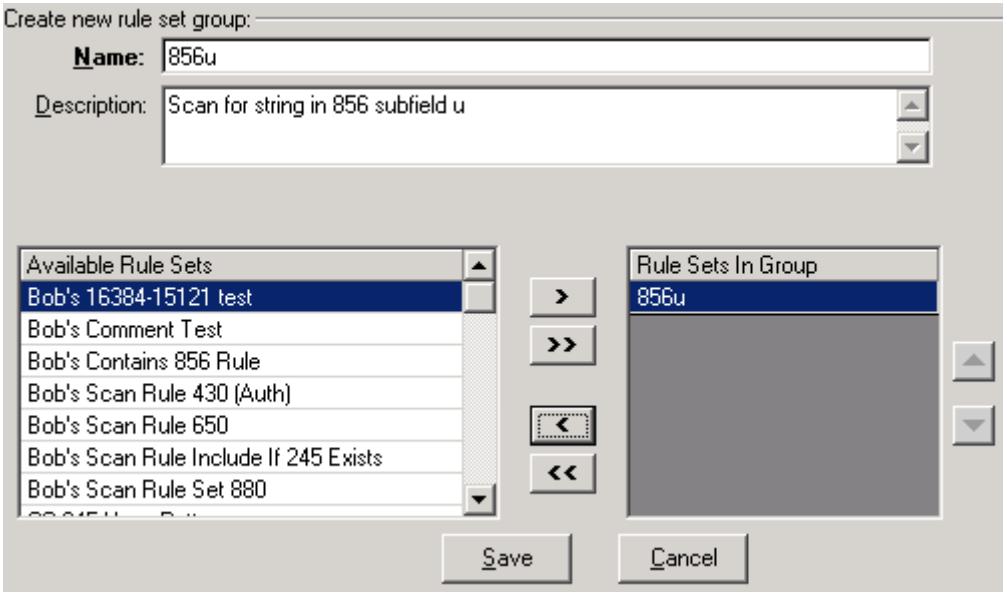

Figure 78: New Rule Set Group

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 **14**).

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.

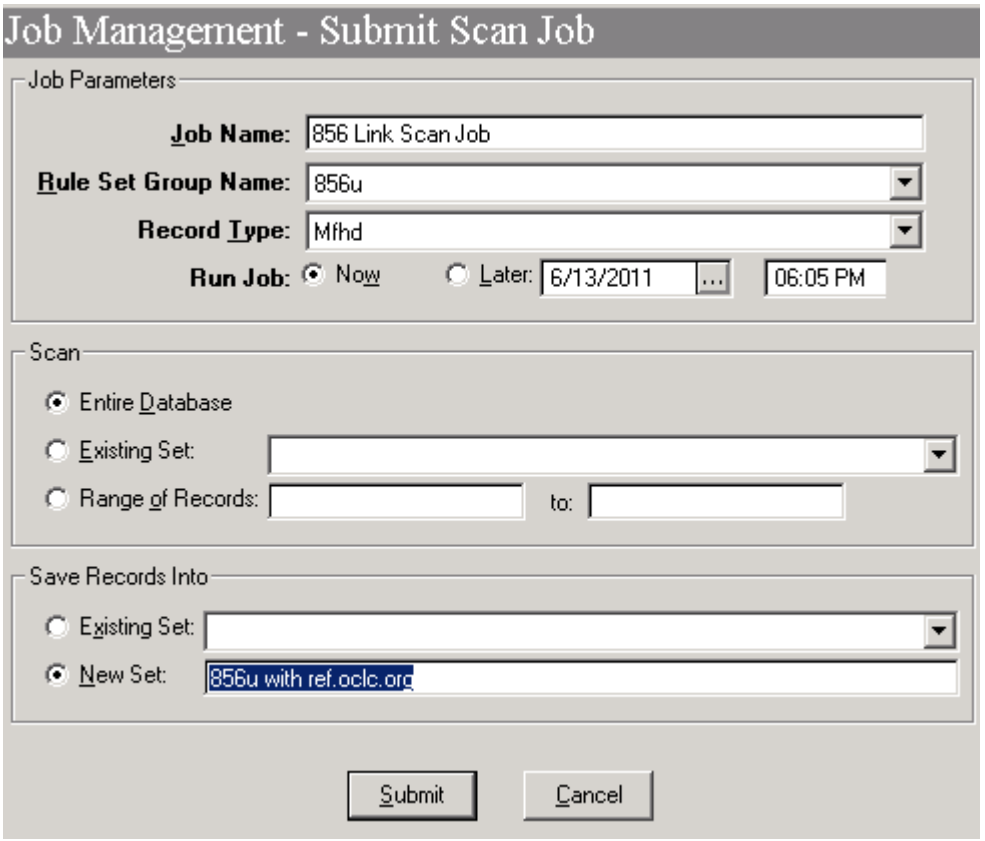

Figure 79: New 856u Job Management Scan Job

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 89, **View the Job Queue** on page 94, and **View the Running/ Completed Jobs** on page 96).

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.

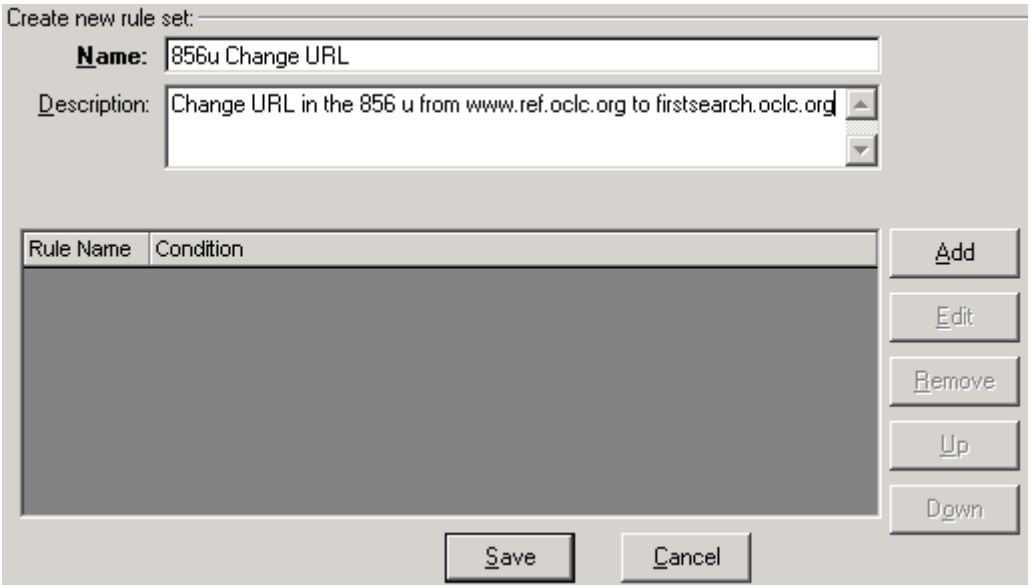

Figure 80: New 856‡u Data Change Rule

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.

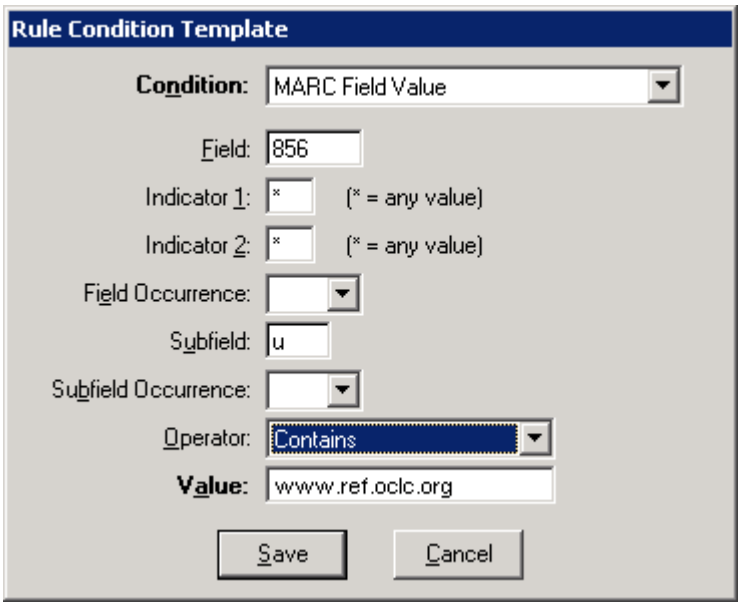

Figure 81: New 856‡u Data Change Rule Condition

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.

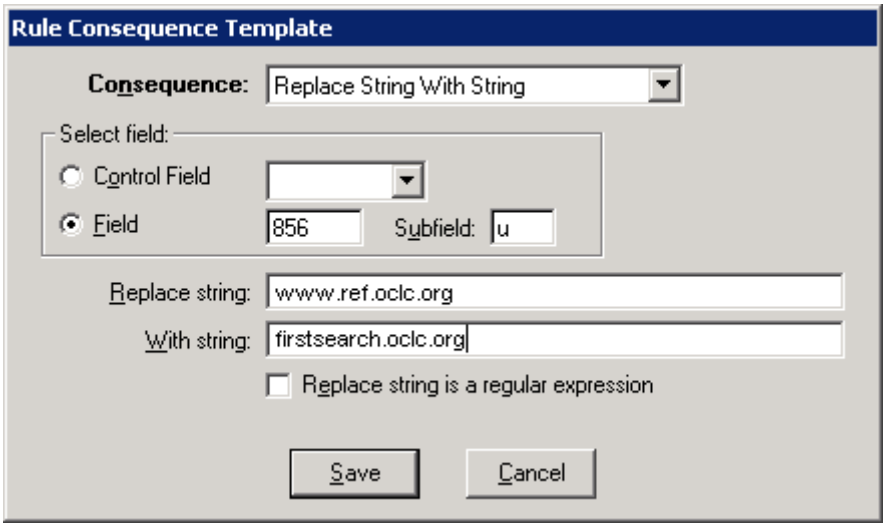

Figure 82: New 856‡u Data Change Rule Consequence

h Click **Save**.

i Enter a rule name and click **Ok** to save the rule.

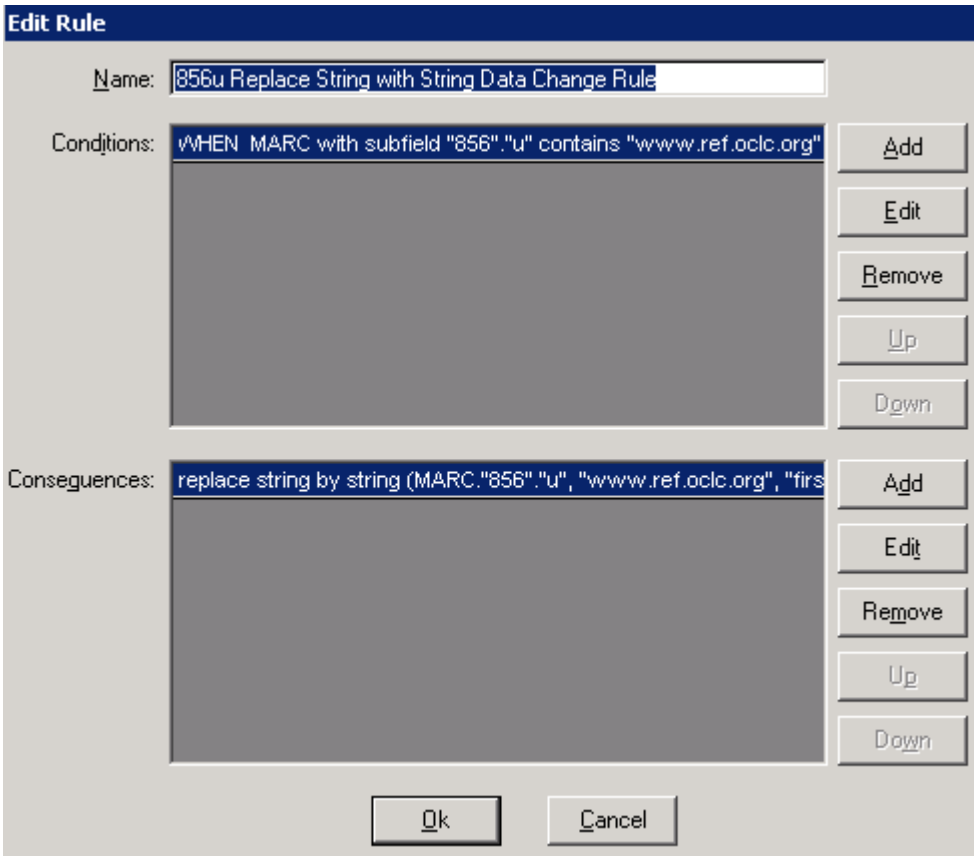

Figure 83: Click Ok to Save Conditions/Consequences

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

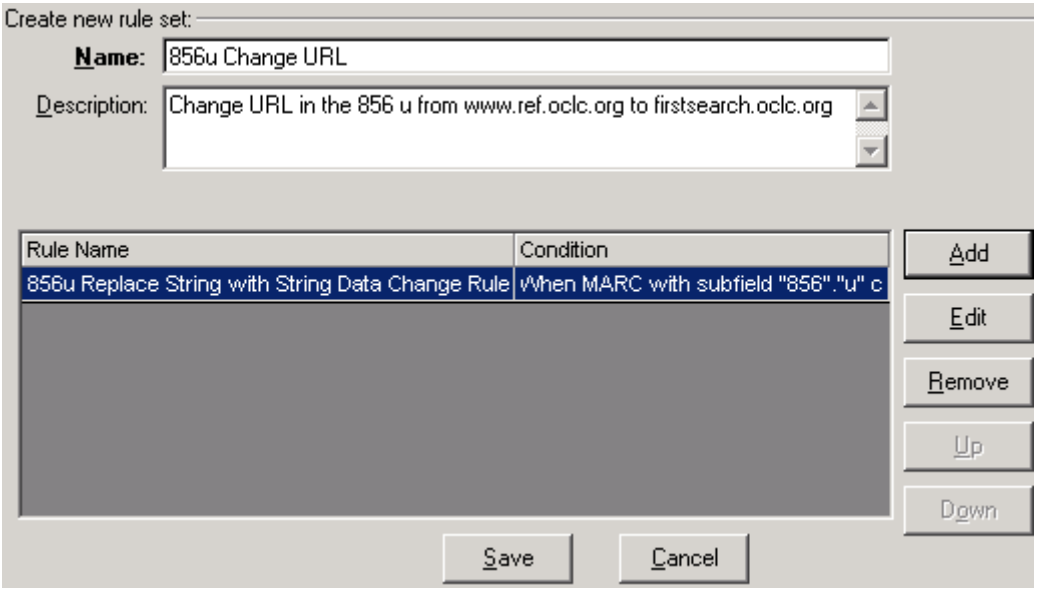

Figure 84: Save 856‡u Data Change Rule Set

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.

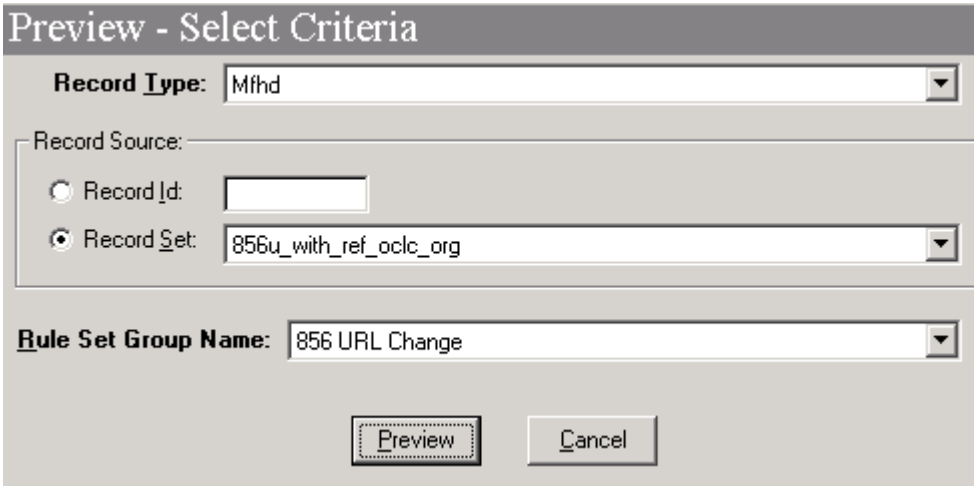

Figure 85: Enter Preview Criteria

4 Click **Preview**.

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

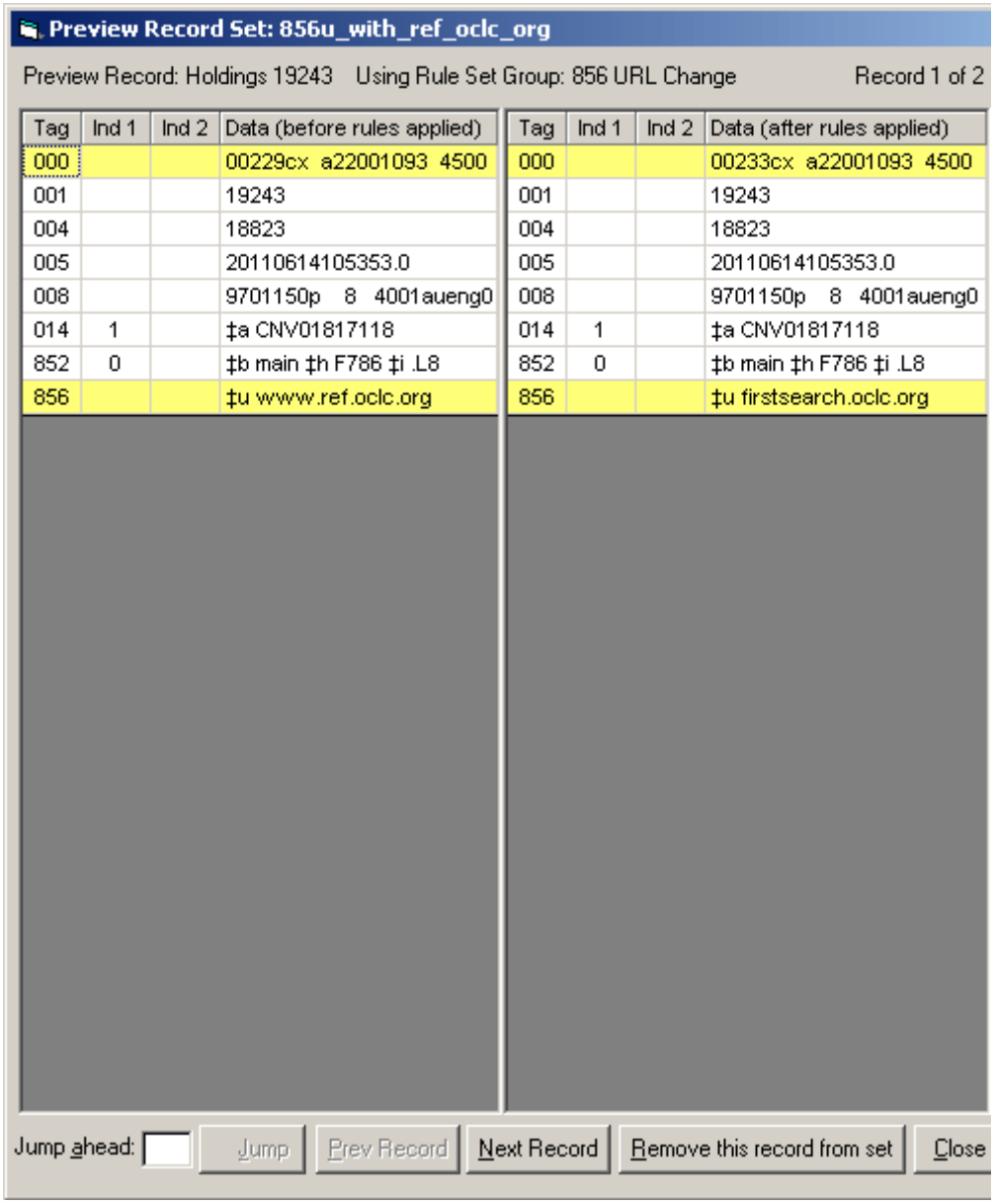

Figure 86: Preview Records

5 Review the change in each record thoroughly.

NOTE:
In this example, the LDR changed (the first five characters of the leader) because the length of the record changed.

Use the **Prev Record** and **Next Records** buttons to review the records. You can also jump through the records 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 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 **93** for more information).

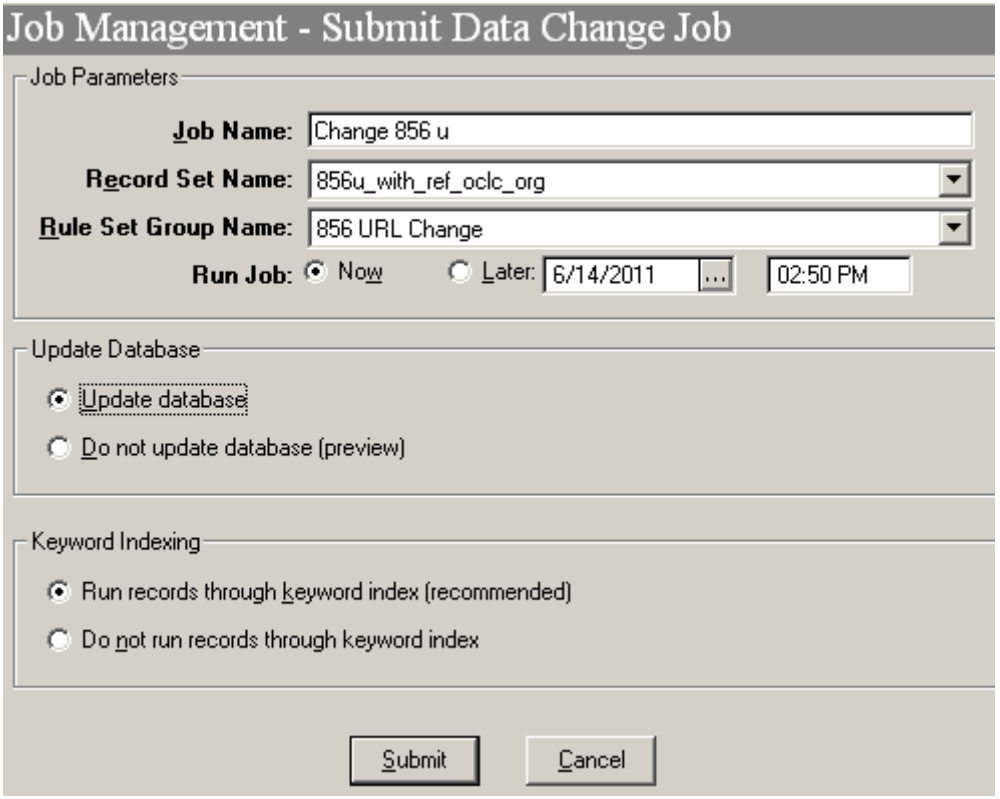

Figure 87: Data Change Job Settings

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**.

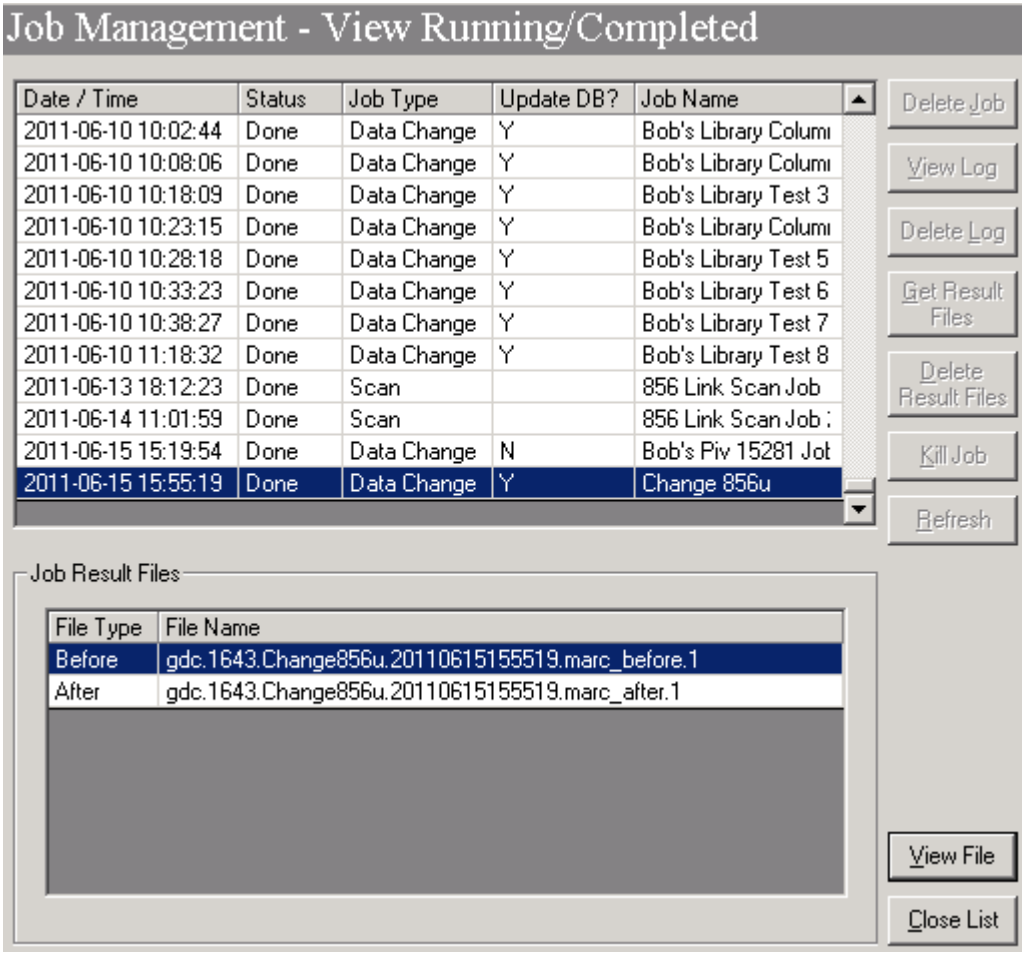

Figure 88: Get Result Files Display

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 **119** and open an incident with Ex Libris Support via eService to review next steps.

B

Usage Example 2

This section includes:

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 **19** 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.

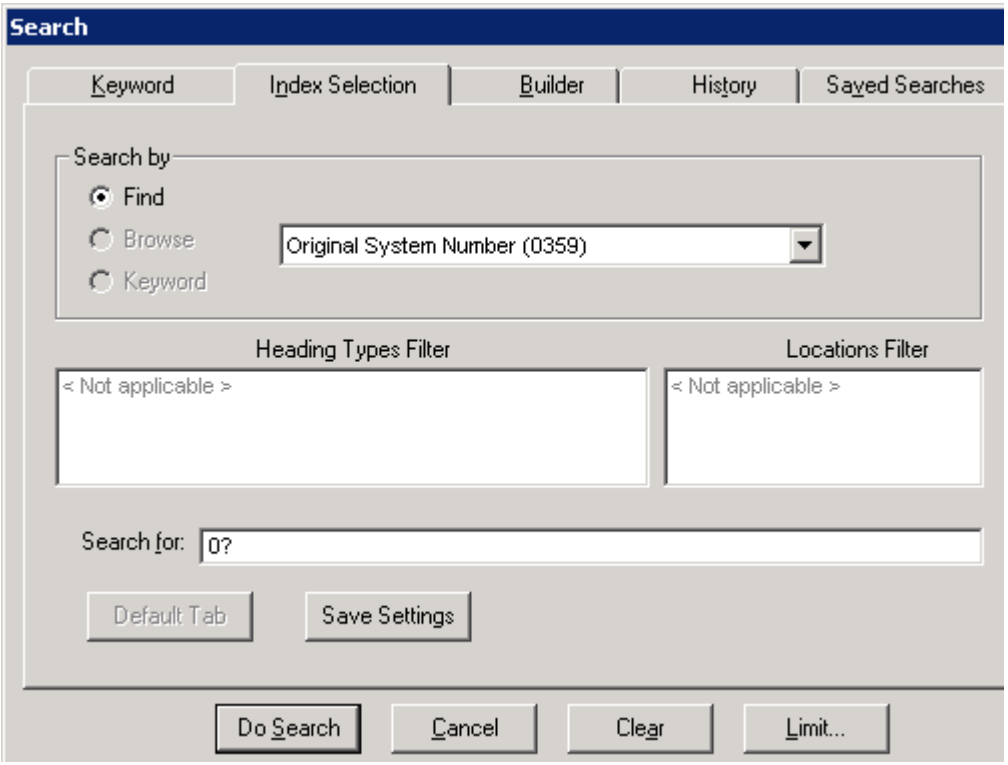

Figure 89: Search

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

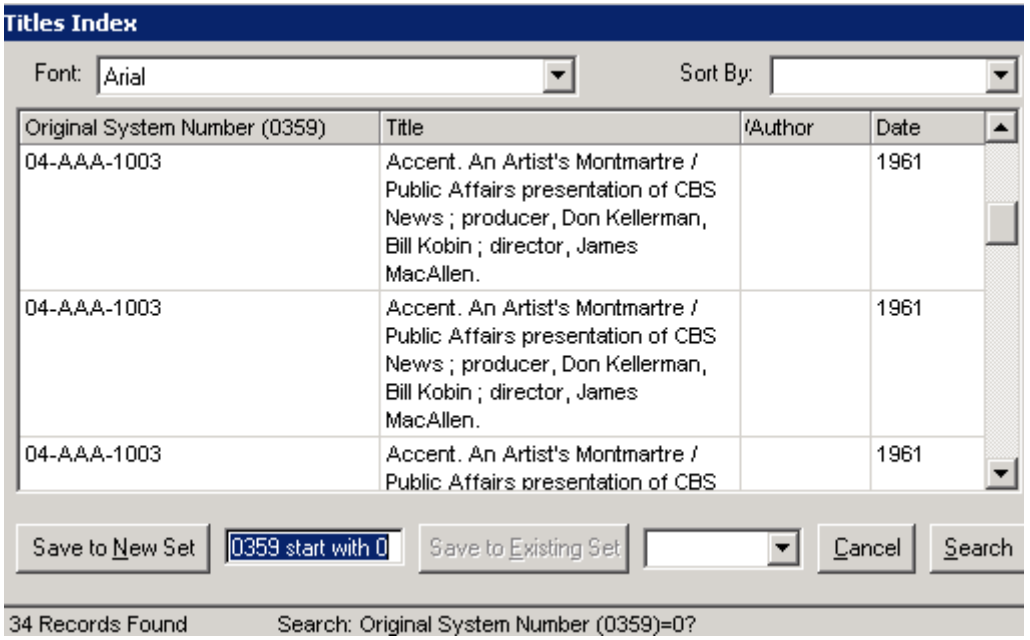

Figure 90: Titles Index

f Click **OK** when the save confirmation message displays.

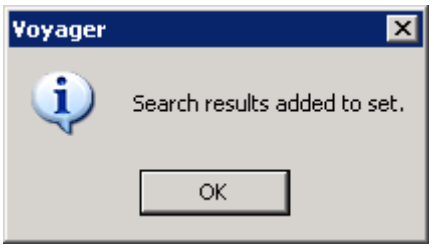

Figure 91: Save Confirmation Message

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.

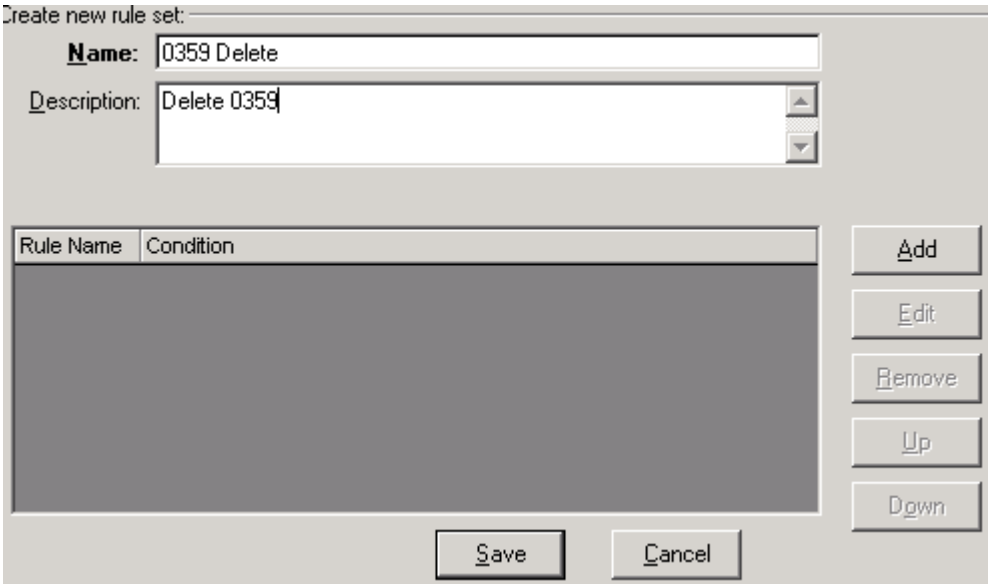

Figure 92: New 0359 Data Change Rule

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

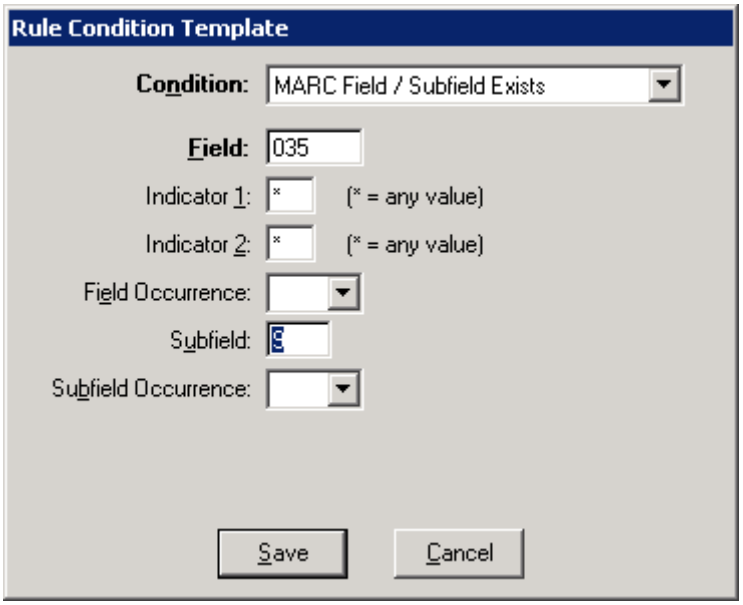

Figure 93: New 0359 Delete Data Change Rule Condition

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

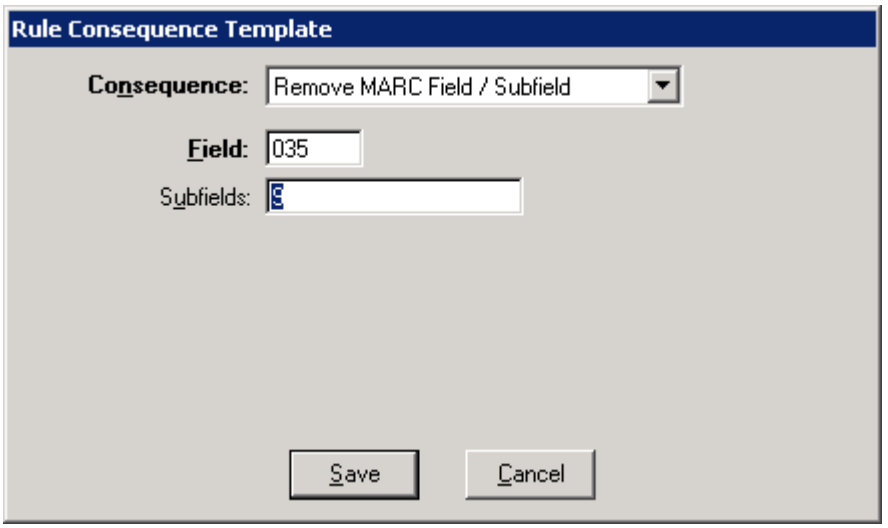

Figure 94: New 0359 Data Change Rule Consequence

g Click **Save**.

h Enter a rule name and click **Ok** to save the rule.

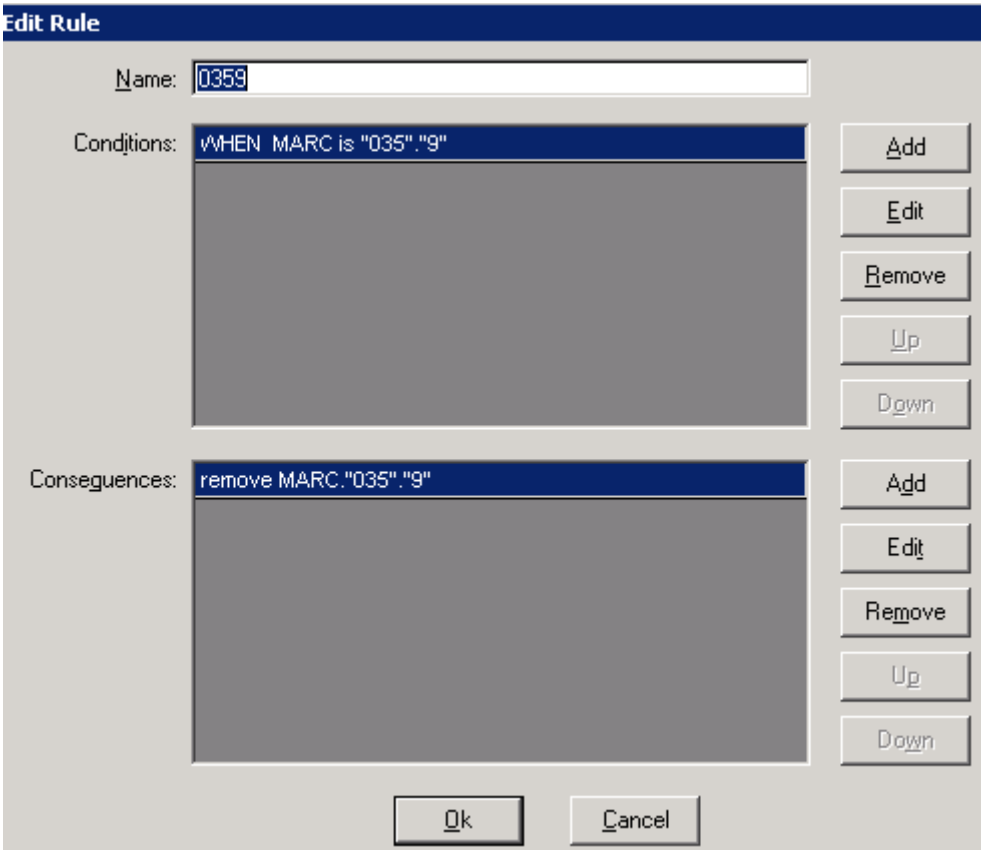

Figure 95: Click Ok to Save Conditions/Consequences

i Click **Save** to save the rule set.

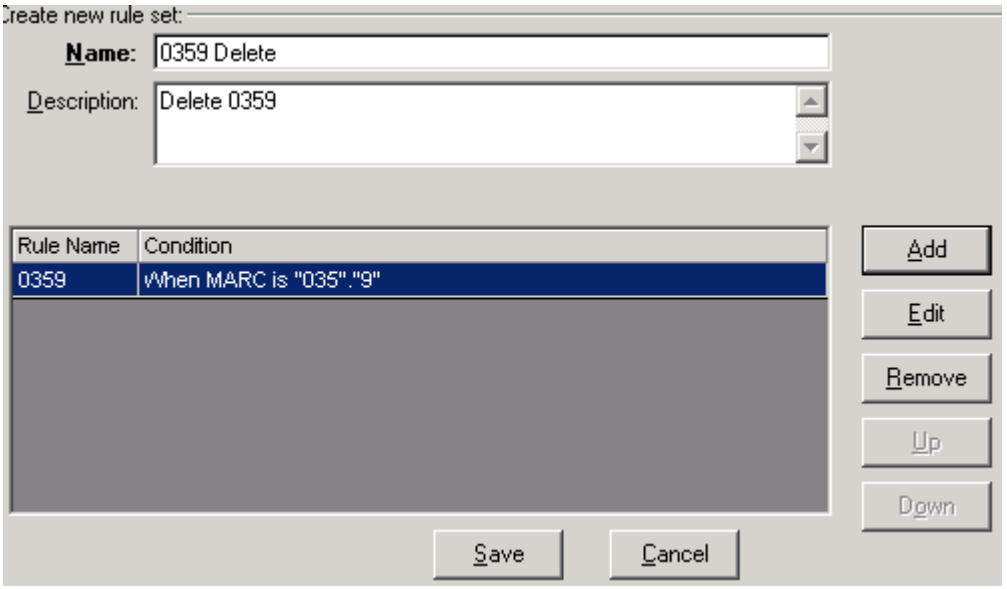

Figure 96: Save 0359 Delete Data Change Rule Set

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.

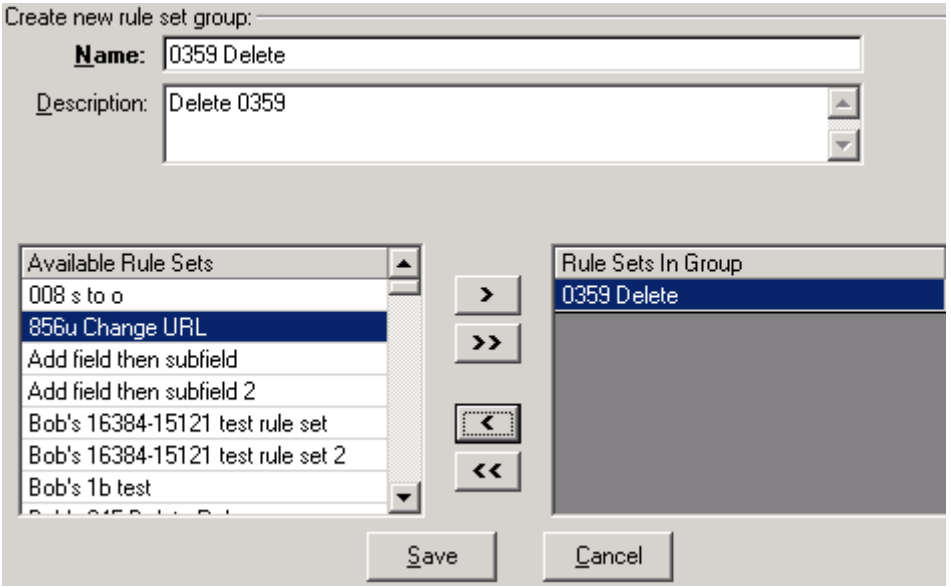

Figure 97: New Rule Set Group

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.

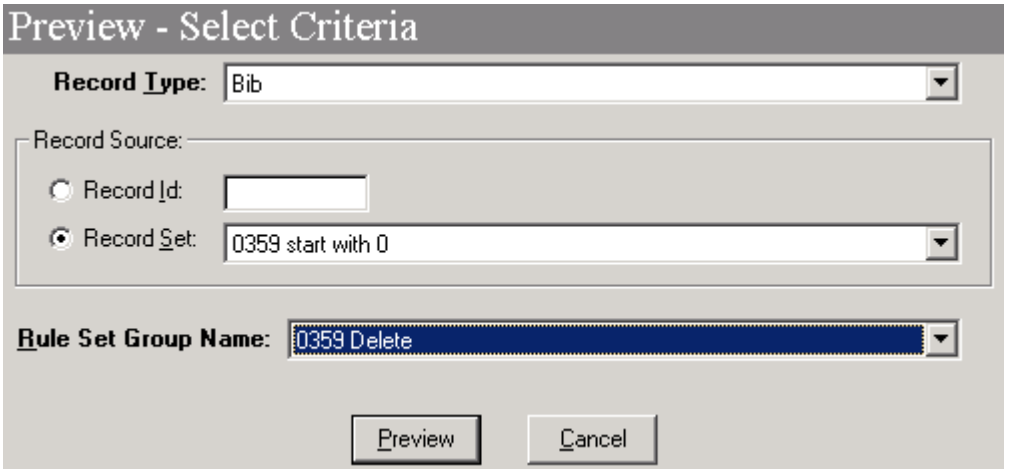

Figure 98: Enter Preview Criteria

4 Click **Preview**.

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

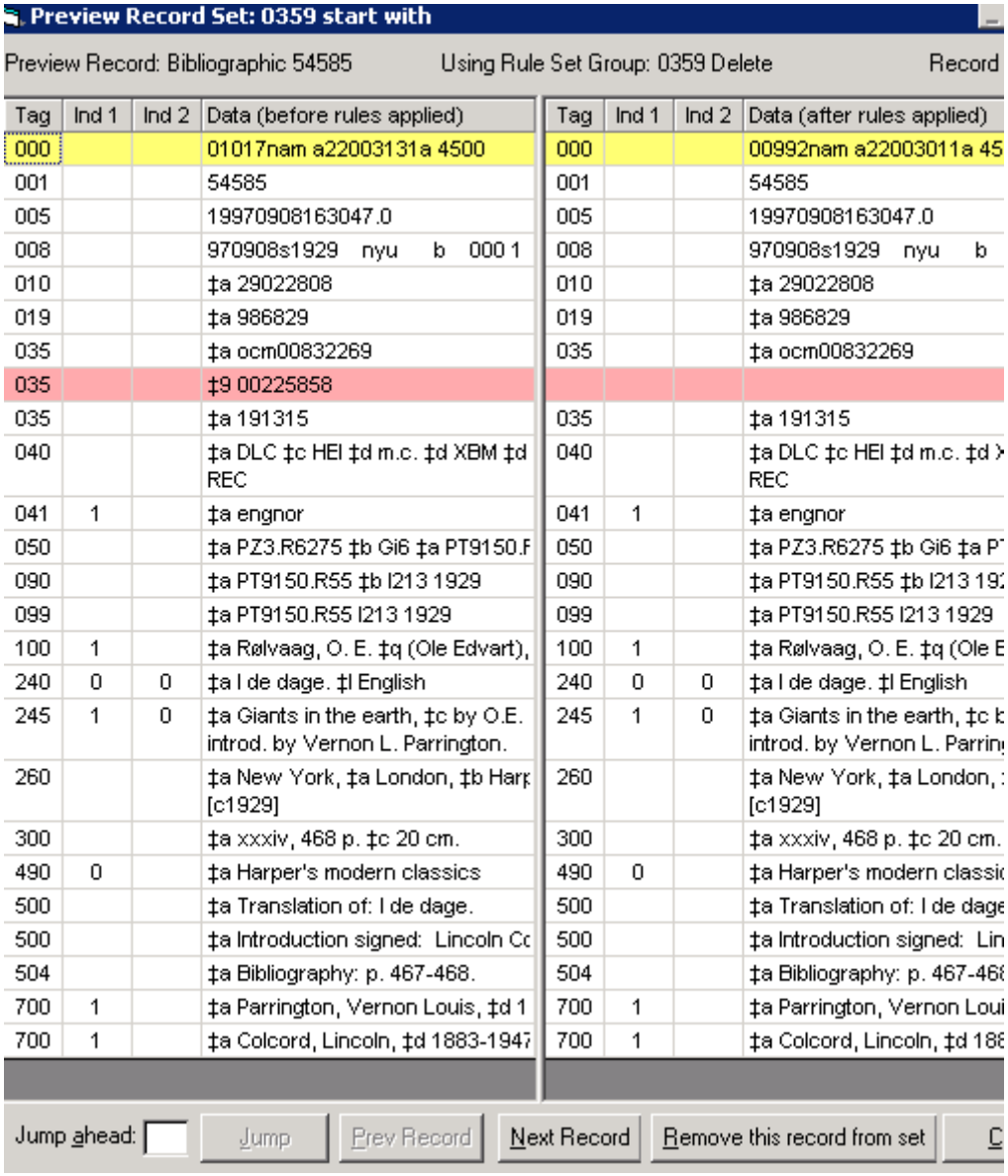

Figure 99: Preview Records

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 **93** for more information).

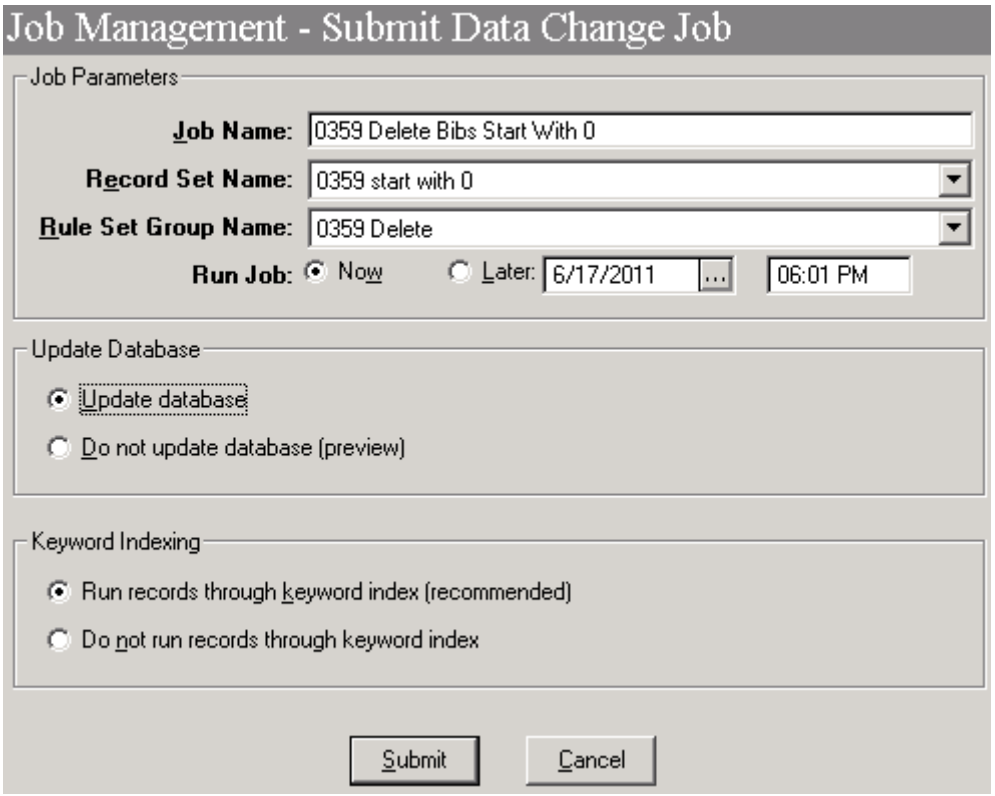

Figure 100: Data Change Job Settings

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**.

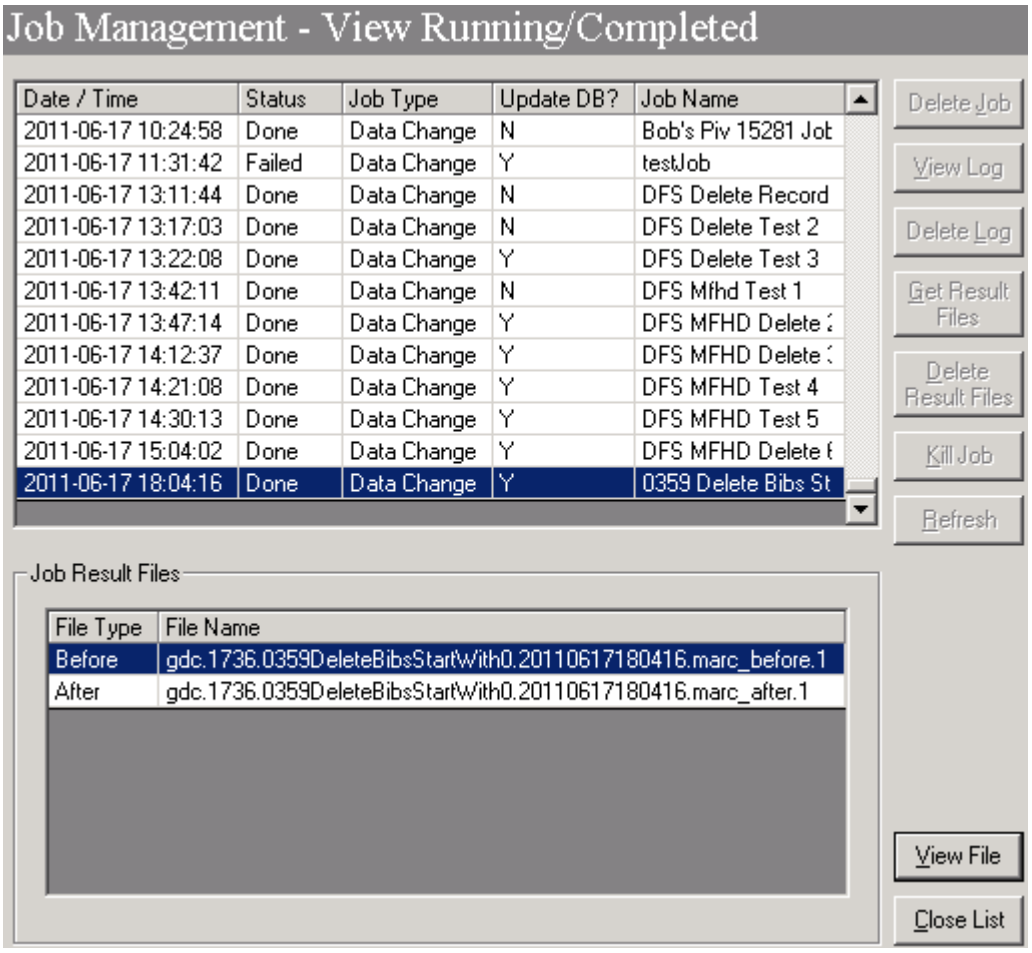

Figure 101: Get Result Files Display

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 **119** and open an incident with Ex Libris Support via eService to review next steps.

C

Usage Example 3

This section includes:

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 **19** 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.

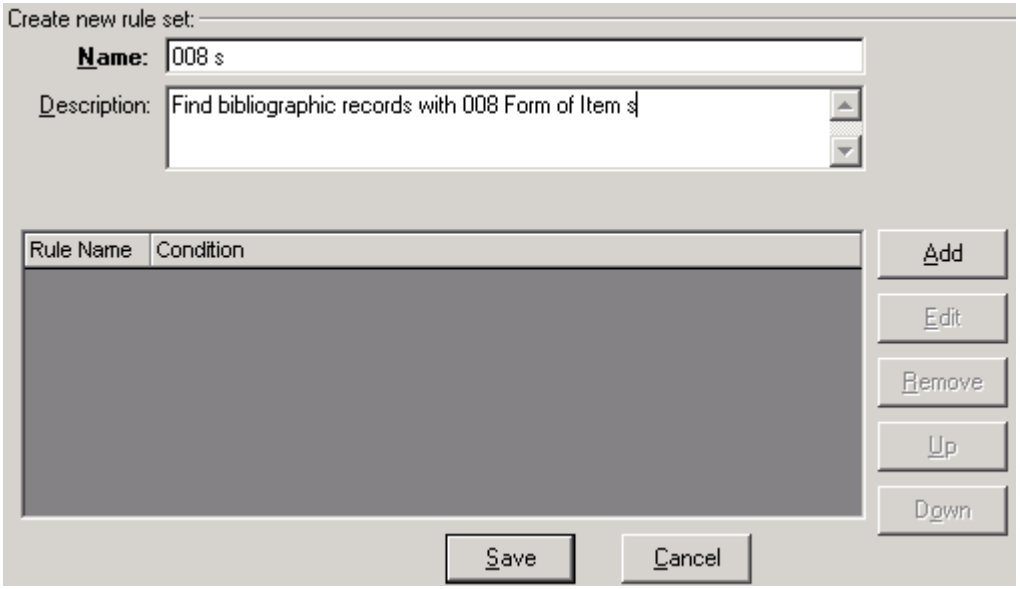

Figure 102: Create New Scan Rule for 008 Form of Item with s

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**.

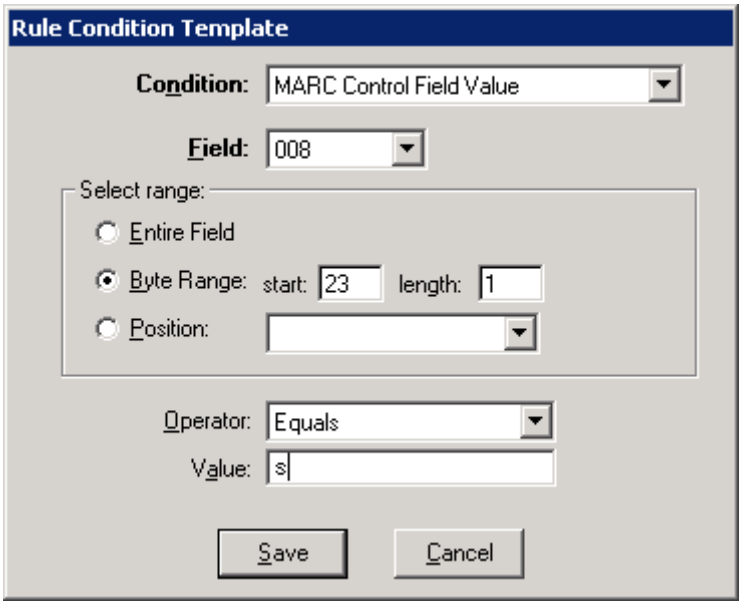

Figure 103: 008 Form of Item s Condition

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.

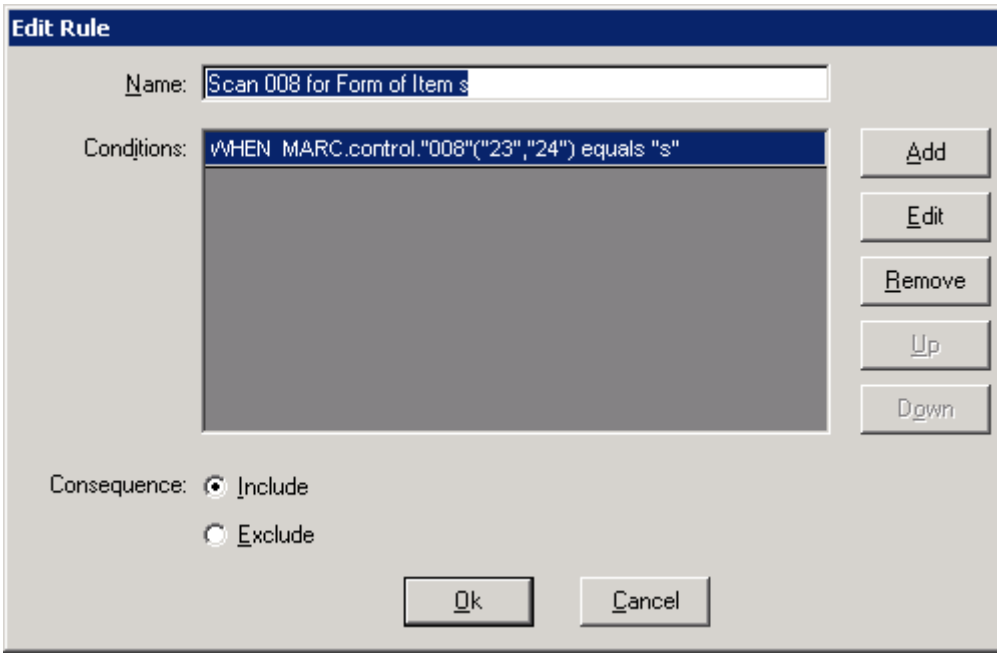

Figure 104: Save Scan Rule with Include (Click Ok)

l Click **Save** to save the rule set.

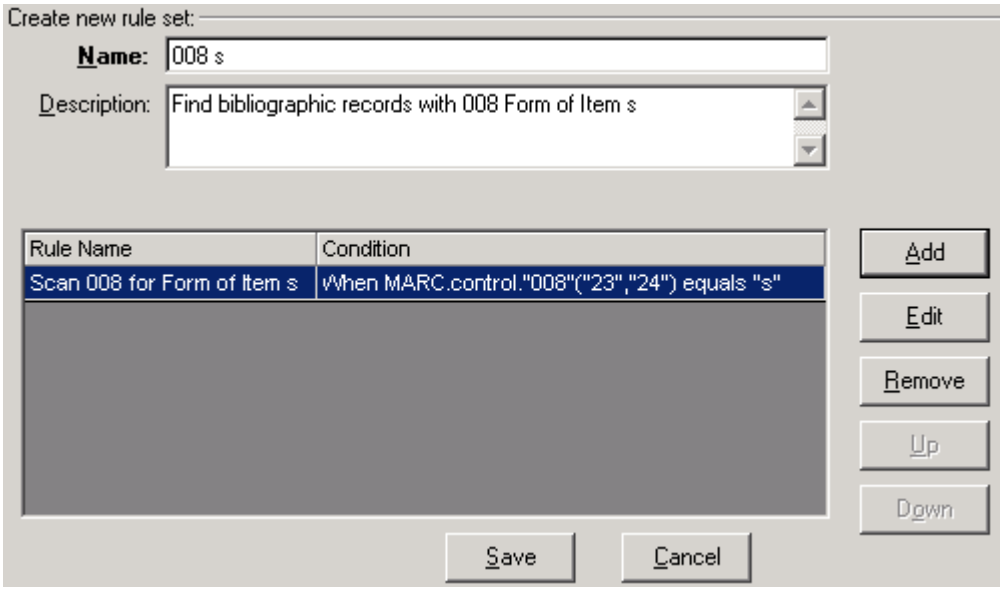

Figure 105: Save Scan Rule Set

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 008 s rule set, that you created in step 2, to the Rule Sets in Groups column.

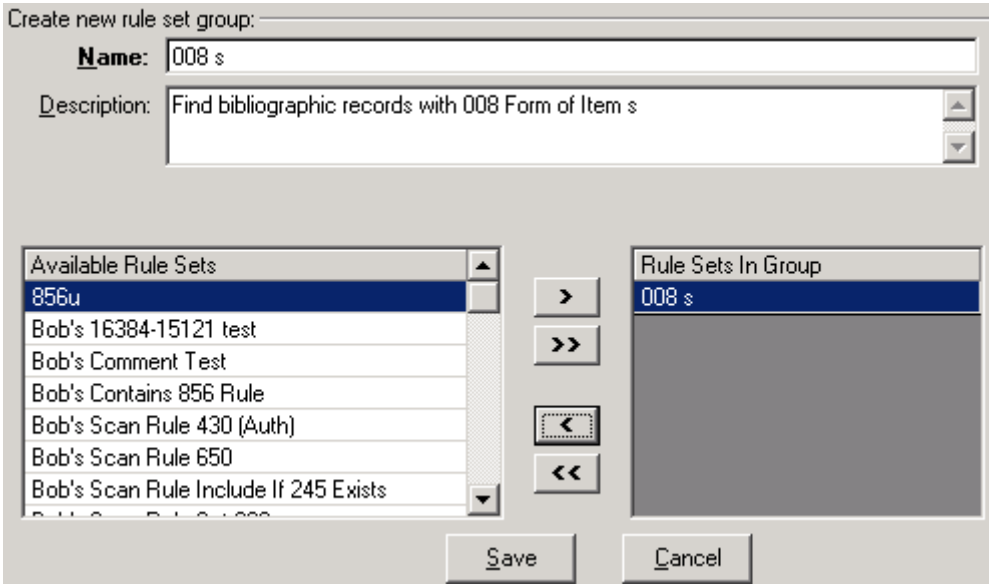

Figure 106: New Rule Set Group

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 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 **14**).

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.

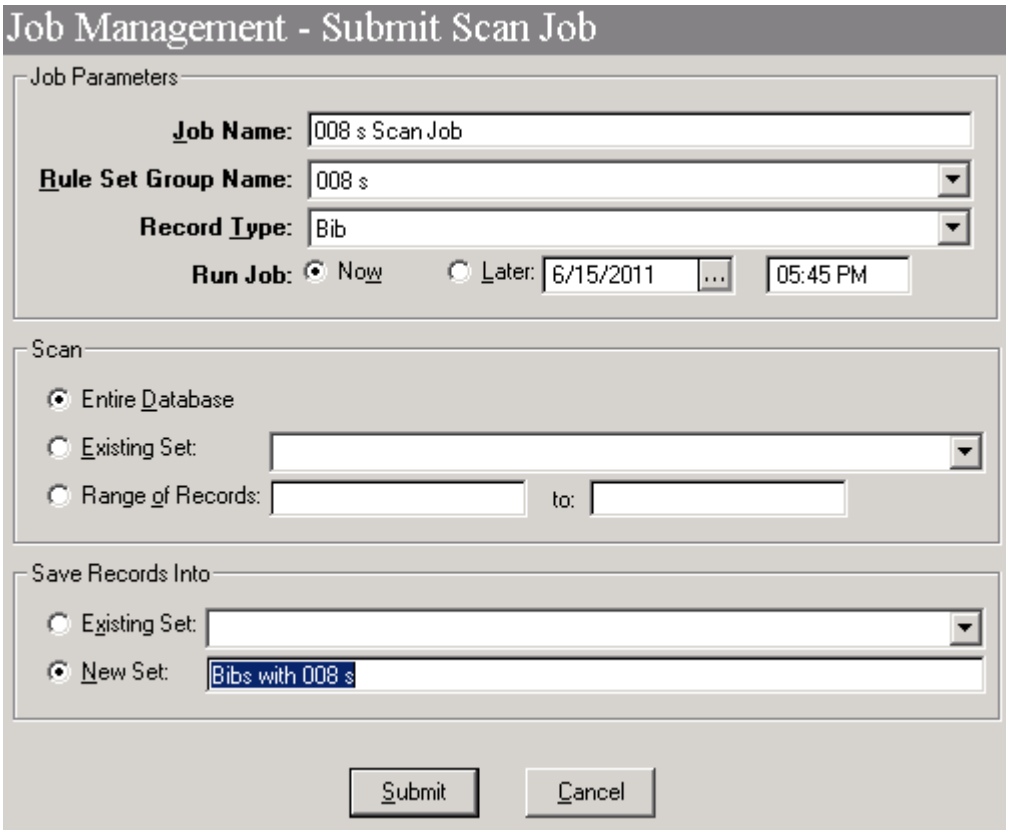

Figure 107: New 008 s Job Management Scan Job

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 **89**, **View the Job Queue** on page **94**, and **View the Running/ Completed Jobs** on page **96**).

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.

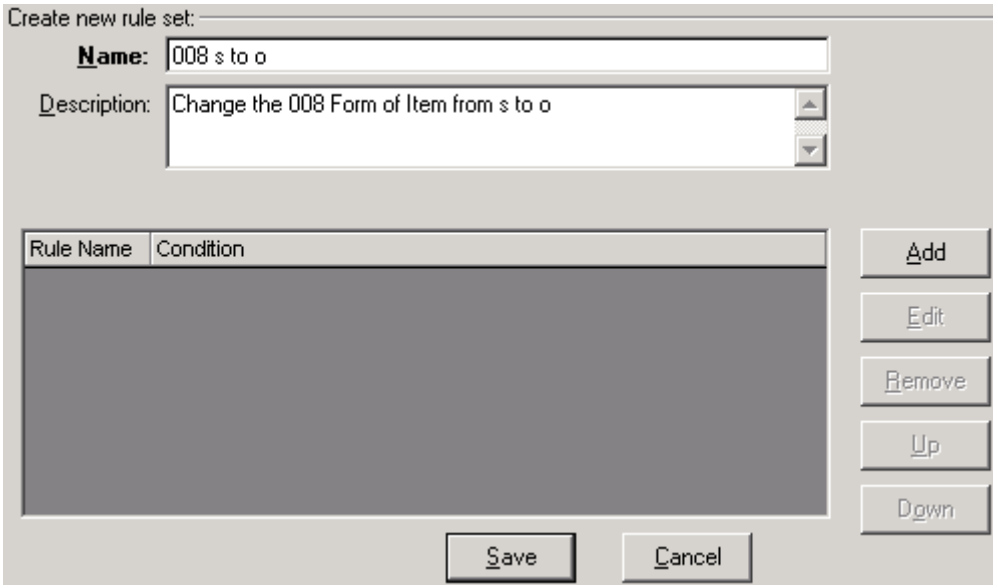

Figure 108: New 008 s to o Data Change Rule

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.

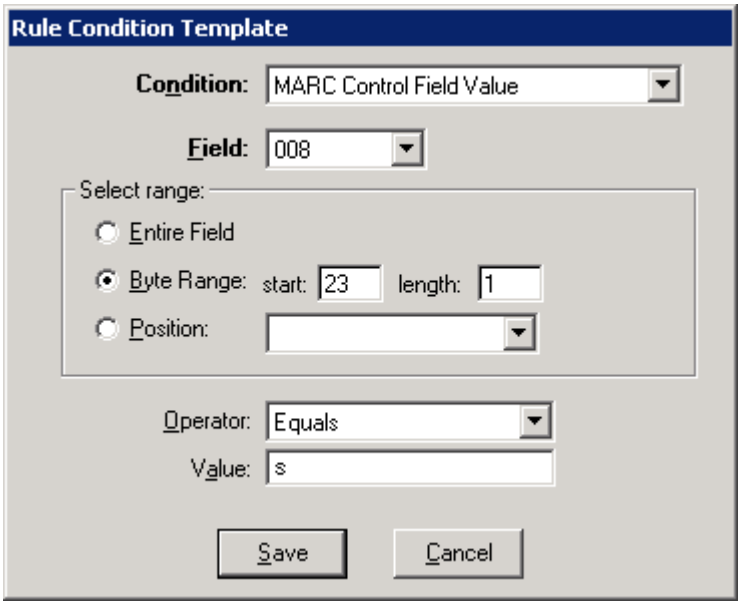

Figure 109: New 008 s to o Data Change Rule Condition

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

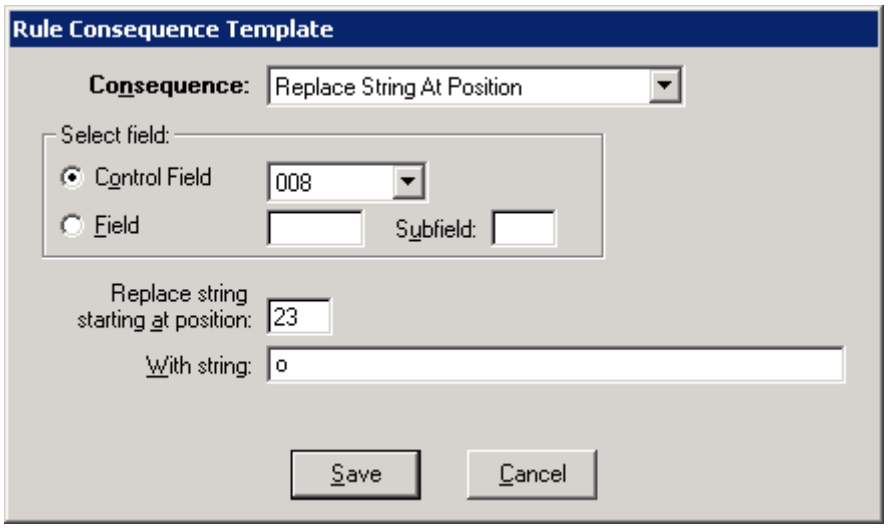

Figure 110: New 008 s to o Data Change Rule Consequence

h Click **Save**.

i Enter a rule name and click **Ok** to save the rule.

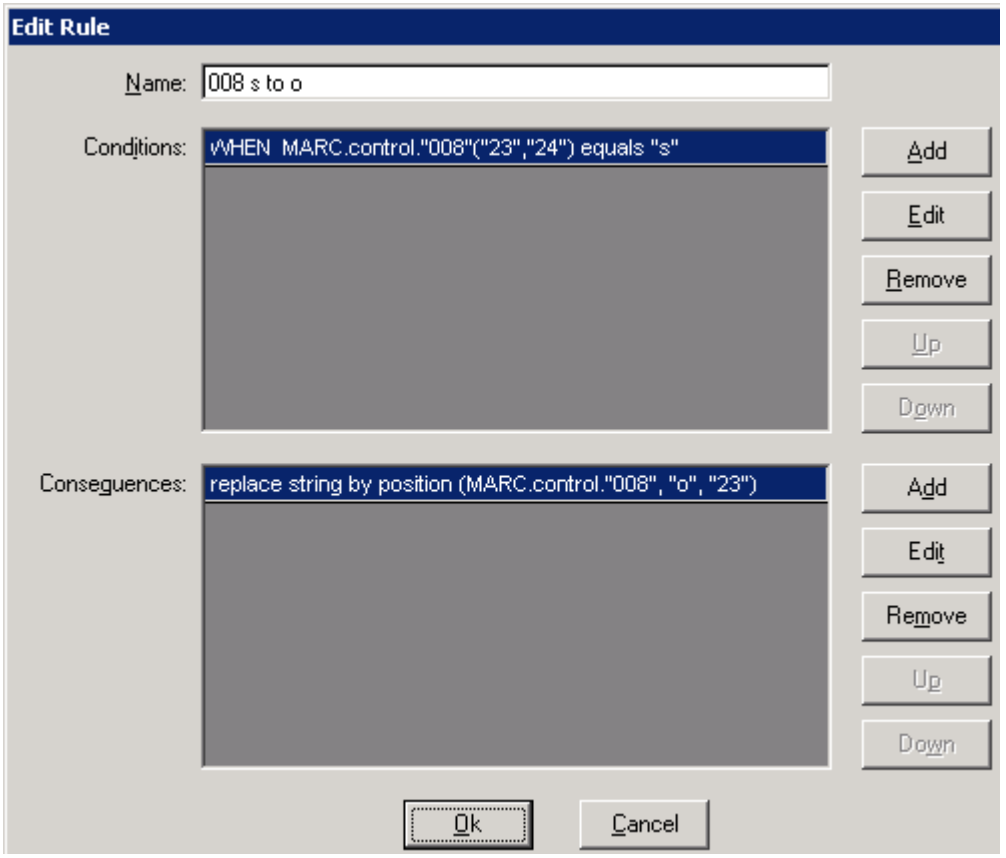

Figure 111: Click Ok to Save Conditions/Consequences

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

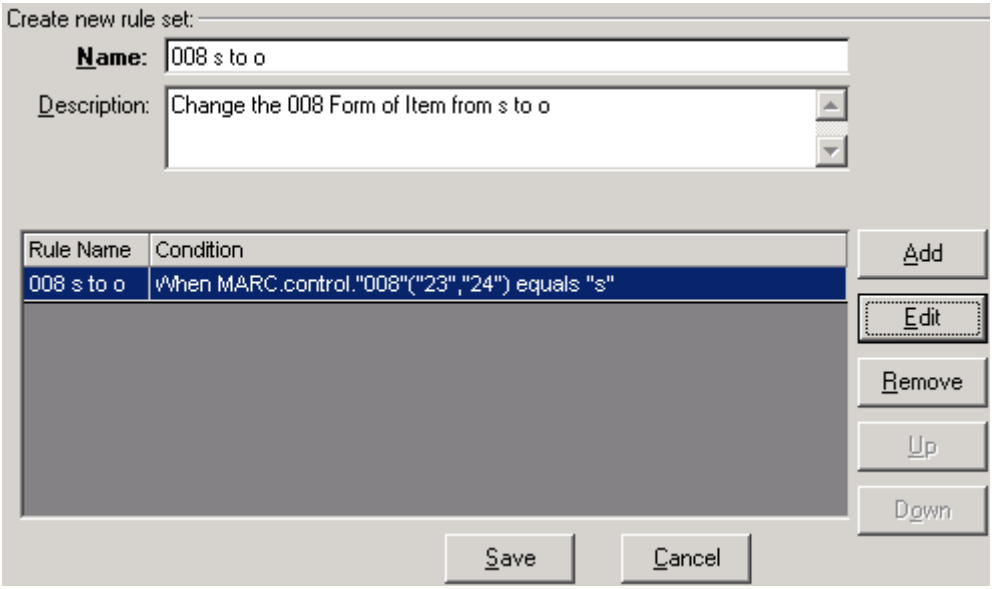

Figure 112: Save 008 s to o Data Change Rule Set

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.

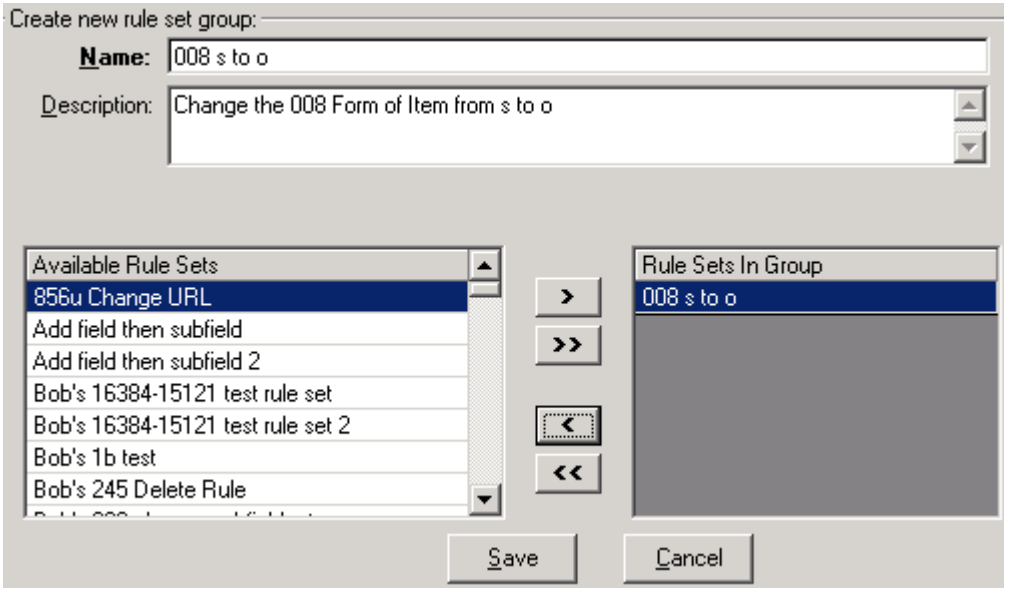

Figure 113: New Rule Set Group

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.

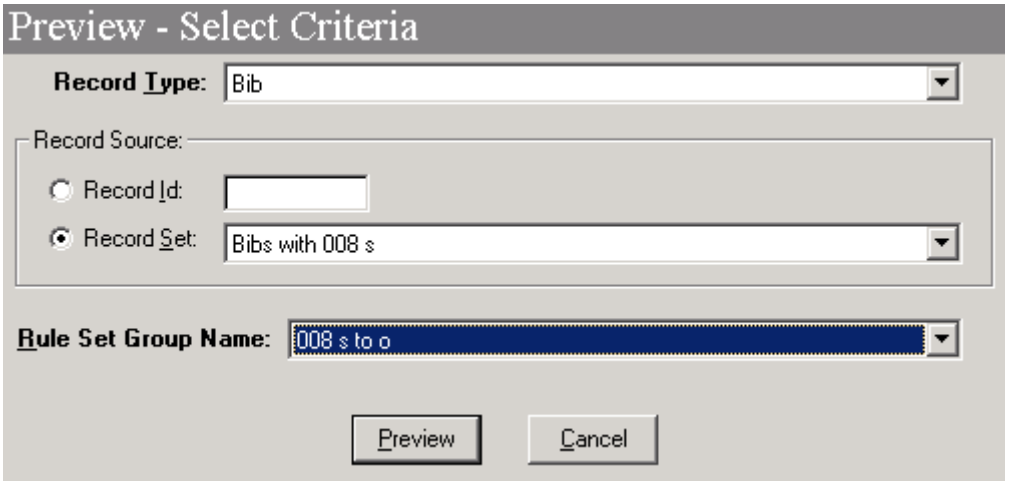

Figure 114: Enter Preview Criteria

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 **93** for more information).

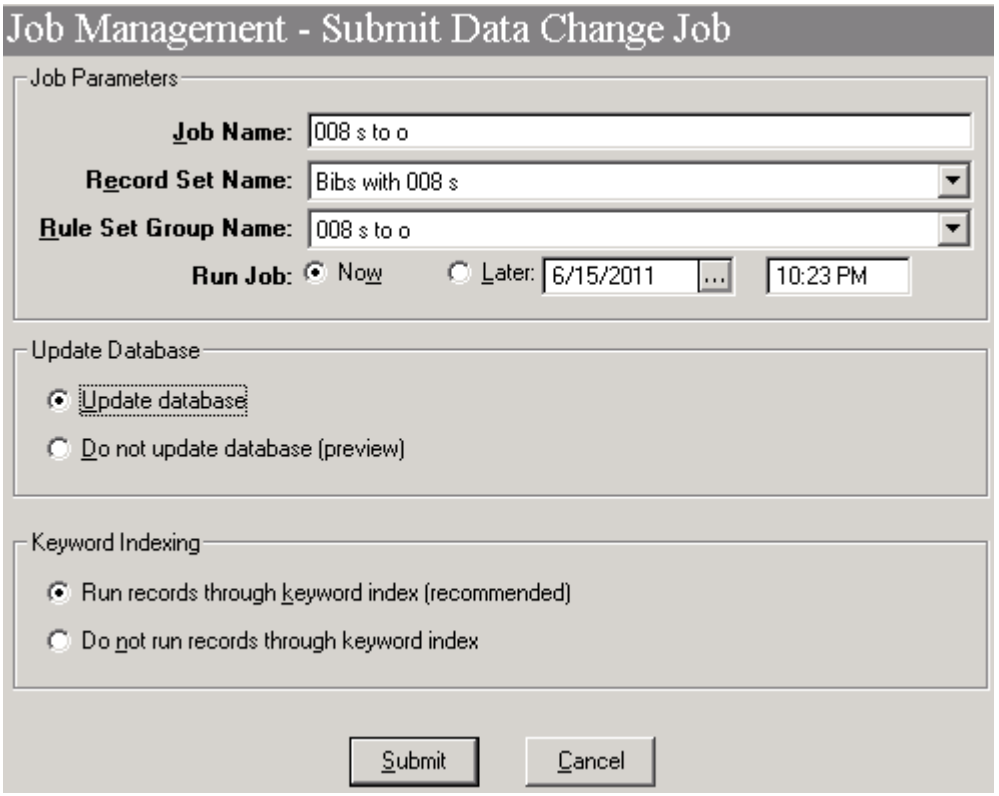

Figure 115: Data Change Job Settings

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**.

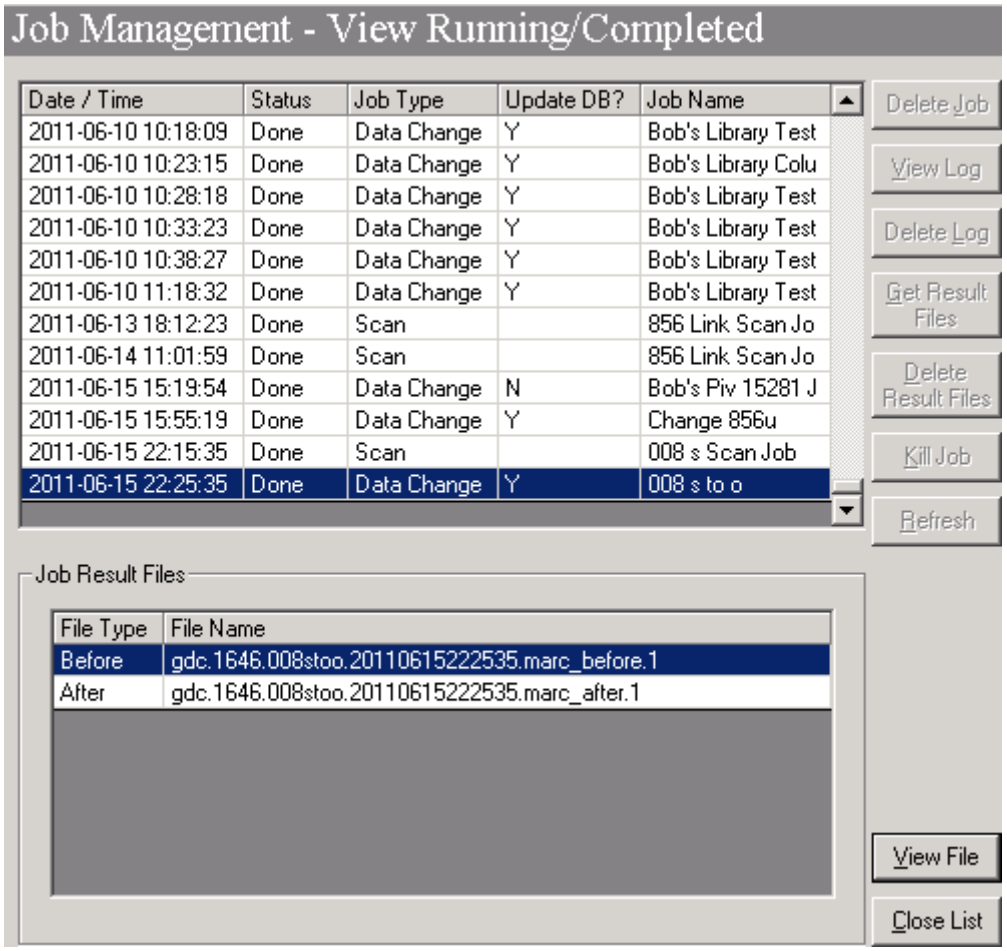

Figure 116: Get Result Files Display

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 **119** and open an incident with Ex Libris Support via eService to review next steps.

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

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