Voyager®
Automated Retrieval System (ARS)

June 2011

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Document released: June 2011

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Contents

About This Document

- Purpose vii
- Intended Audience vii
- Reason for Reissue vii
- How to Use This Document viii
- Conventions Used in This Document viii
- Document Reproduction/Photocopying ix
- Comment on This Document x

1 Getting Started

- Introduction 1-1
- Purpose of this Chapter 1-1
- Prerequisite Skills and Knowledge 1-1

2 How ARS Works

- Introduction 2-1
- Purpose of this Chapter 2-1
- About the Automated Retrieval System (ARS) 2-2
  - Third-Party Vendor Systems 2-2
- How ARS Works 2-2
  - Remote Storage Request 2-3
    - Patron-Initiated Requests 2-3
    - Staff-Initiated Requests 2-5
  - Notifying the ARS and Retrieving the Requested Item 2-6
  - Routing and Circulating the Item 2-6
  - Discharging and Returning the Item to Remote Storage 2-6
- Communication Between Voyager and the ARS 2-6
  - Mhs_msg Dæmon 2-8
  - Message Types and Content 2-8
    - Request an Item from the ARS 2-8

Contents

Add a Barcode to the ARS 2-9
Delete a Barcode from the ARS 2-10
Acknowledgement of Receipt Message 2-10
Message Logs 2-10
Message Log log.strgvfy.YYYYMMDD.HHMM 2-10
Message Log mhs_msg.log 2-11
Message Log out.strgexp.YYYMMMDD.HHMM 2-13
Queue Data 2-13

3 Setting Up and Maintaining Barcodes in the ARS

- Introduction 3-1
- Purpose of this Chapter 3-1
- Loading and Verifying Barcodes in the ARS 3-1

Storage Barcode Export Program (Pstrgexp) 3-2
Pstrgexp Command-Line Parameters 3-2
Pstrexp Command File (Optional) 3-4
Pstrgexp Log File 3-5
Pstrgexp Output File 3-6
Storage Barcode Verify Program (Pstrgvfy) 3-6
Pstrgvfy Command-Line Parameters 3-7
Pstrgvfy Command File (Optional) 3-10
Sample Pstrgvfy Command Line 3-13
Pstrgvfy Log File 3-13

4 Setting Up ARS in Voyager System Administration

- Introduction 4-1
- Purpose of this Chapter 4-1
- ARS Setup in the System Administration Module 4-1

New Location for ARS 4-2
ARS Location and Circulation Policy Group 4-4
ARS Location Defined as Automated Storage Facility 4-7
OPAC Request Form 4-9

Contents

IN **Index** IN-1

Contents

About This Document

Purpose

The purpose of this document is to explain how the Voyager® Automated Retrieval System (ARS) works, how to set up barcodes to initiate working with ARS, and how to set up the System Administration module to work with a third-party ARS.

Intended Audience

This document is intended for library System Administrators using the Voyager extension module, Voyager Automated Retrieval System.

Reason for Reissue

This guide incorporates and is being reissued for the following reasons:

- Corrections to the Request an Item from the ARS section on page 2-8
- Corrections to the Add a Barcode to the ARS section on page 2-9
- Updated item number 2 in Communication Between Voyager and the ARS on page 2-6
- Updated the Delete a Barcode from the ARS section on page 2-10
- Updated Table 2-1 on page 2-8

How to Use This Document

This document consists of the following segments:

Chapter 1	"Getting Started" Chapter 1 describes the prerequisite downloads, installations, and configurations for using Voyager ARS.
Chapter 2	"How ARS Works" Chapter 2 describes how ARS works, both from a back-end, technical perspective and from the perspective of a user (a patron or library staff member).
Chapter 3	"Setting Up and Maintaining Barcodes in ARS" Chapter 3 explains how to set up, configure, and maintain barcodes in the ARS by running scripts on the Voyager server and using command-line parameters as needed.
Chapter 4	"Setting Up ARS in Voyager System Administration" Chapter 4 describes the procedures needed to integrate the ARS with Voyager's System Administration module. This includes creating and defining locations, associating locations with Circulation policy groups, and defining request forms.
Index	The Index is an alphabetical, detailed cross-reference of topics contained in this document.

Conventions Used in This Document

The following conventions are used throughout this document:

- Names of commands, variables, stanzas, files, and paths (such as `/dev/tmp`), as well as selectors and typed user input, are displayed in `constant width` type.
- Commands or other keyboard input that must be typed exactly as presented are displayed in **`constant width bold`** type.
- Commands or other keyboard input that must be supplied by the user are displayed in ***`constant width bold italic`*** type.
- System-generated responses such as error messages are displayed in `constant width` type.
- Variable *portions* of system-generated responses are displayed in *`constant width italic`* type.
- Keyboard commands (such as **Ctrl** and **Enter**) are displayed in **bold**.
- Required keyboard input such as "Enter **`vi`**" is displayed in **`constant width bold`** type.

- Place holders for variable portions of user-defined input such as **`ls -l`** ***`filename`*** are displayed in ***`italicized constant width bold`*** type.
- The names of menus or status display pages and required selections from menus or status display pages such as “From the **Applications** drop-down menu, select **System-wide**,” are displayed in **bold** type.
- Object names on a window’s interface, such as the **Description** field, the **OK** button, and the **Metadata** tab, are displayed in **bold** type.
- The titles of documents such as *Cataloging User’s Guide* are displayed in *italic* type.
- Caution, and important notices are displayed with a distinctive label such as the following:

NOTE:
Extra information pertinent to the topic.

IMPORTANT:
Information you should consider before making a decision or configuration.

CAUTION:
Information you must consider before making a decision, due to potential loss of data or system malfunction involved.

TIP:
Helpful hints you might want to consider before making a decision.

RECOMMENDED:
Preferred course of action.

OPTIONAL:
Indicates course of action which is not required, but may be taken to suit your library’s preferences or requirements.

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Getting Started

1

Contents

Introduction	**1-1**
Purpose of this Chapter	**1-1**
Prerequisite Skills and Knowledge	**1-1**

Contents

Getting Started

1

Introduction

This chapter describes the prerequisite skills and knowledge you will need to use this guide.

Purpose of this Chapter

This chapter's purpose is to provide preparatory information for using this guide and the Automated Retrieval System (ARS) with Voyager.

Prerequisite Skills and Knowledge

To use this document effectively, you need to know how to do the following.

- Navigate in a Microsoft Windows environment
- Telnet to the server and use UNIX® commands

How ARS Works

2

Contents

Introduction **2-1**

Purpose of this Chapter **2-1**

About the Automated Retrieval System (ARS) **2-2**

- Third-Party Vendor Systems 2-2

How ARS Works **2-2**

- Remote Storage Request 2-3
  - Patron-Initiated Requests 2-3
  - Staff-Initiated Requests 2-5
- Notifying the ARS and Retrieving the Requested Item 2-6
- Routing and Circulating the Item 2-6
- Discharging and Returning the Item to Remote Storage 2-6

Communication Between Voyager and the ARS **2-6**

- Mhs_msg Dæmon 2-8
- Message Types and Content 2-8
  - Request an Item from the ARS 2-8
  - Add a Barcode to the ARS 2-9
  - Delete a Barcode from the ARS 2-10
  - Acknowledgement of Receipt Message 2-10
- Message Logs 2-10
  - Message Log log.strgvfy.YYYYMMDD.HHMM 2-10
  - Message Log mhs_msg.log 2-11
  - Message Log out.strgexp.YYYMMMDD.HHMM 2-13
- Queue Data 2-13

Contents

How ARS Works

2

Introduction

This chapter provides an overview of the Automated Retrieval System (ARS). Included in this discussion are the following.

- The way ARS functions with Voyager to retrieve remote library holdings
- An overview of the entire remote storage circulation process to include the following:
  - Requesting a remote item
  - Obtaining an item from circulation
  - Returning/discharging the item
  - Routing the item back to storage

Purpose of this Chapter

This chapter's purpose is to provide you with an understanding of how ARS works.

About the Automated Retrieval System (ARS)

Remote storage facilities provide high-density storage of items, allowing libraries to conserve a significant amount of space. The ARS handles the storage and circulation of library materials that are warehoused at remote storage facilities. Materials stored remotely are retrieved by a machine such as a robot arm or a crane for circulation to library patrons. This saves library staff time and effort.

NOTE:
The Automated Retrieval System may be referred to as a Robot Arm or a Materials Handling System (MHS). For consistency, ARS is used throughout this user's guide.

Third-Party Vendor Systems

The following vendors produce Automated Retrieval Systems with which Voyager can communicate.

- HK Systems, Inc.
- GFA Software Technologies, Inc.
- Siemens Dematic - Rapistan

These systems communicate with Voyager using a standard TCP/IP connection. See "How ARS Works" on page 2-2 for more details on how Voyager and the ARS communicate.

NOTE:
For information on specific third-party vendor software, contact the ARS vendor.

How ARS Works

Requesting, retrieving, and returning items using an ARS involves the following process.

1. A patron or library staff member requests an item from remote storage.
2. Voyager notifies the ARS of the request.
3. The ARS retrieves the requested item from storage and routes it to the specified pick-up location (a Circulation desk).
4. The requesting patron is notified of the item's arrival, examines it, and/or checks it out from the pick-up location.

5. A library staff member discharges the item and routes it back to the storage facility.
6. The ARS returns the item to its location in remote storage.

Remote Storage Request

Requests for items stored at remote facilities can be placed either by patrons or by library staff.

Patron-Initiated Requests

Patrons can request remotely-stored items through WebVoyáge in the same way they request items from other locations. See the *Voyager WebVoyáge User's Guide* for detailed information on how to place a patron-initiated request.

Item records displayed in WebVoyáge specify if an item requires a remote request. For example, the location in the bibliographic record of an item may read **Offsite** or **In Remote Storage**, depending on the name you define for the remote storage location in System Administration. See Figure 2-1.

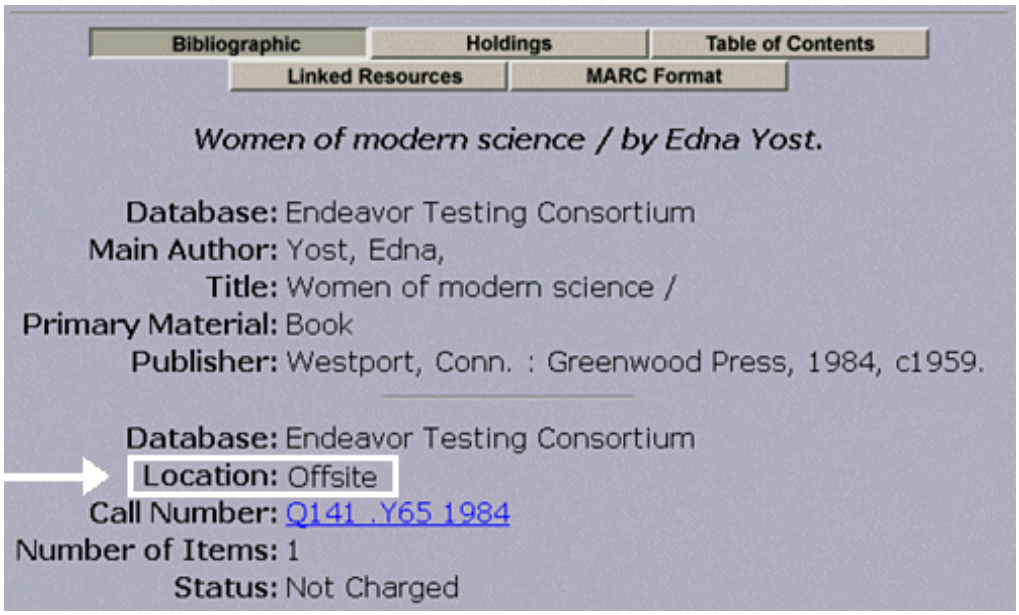

Figure 2-1. Patron-initiated request, record indicating item is in remote storage

Patrons can select the remote retrieval request from a drop-down list of request types on the **Request** page. See Figure 2-2. The name that displays in the drop-down list is the name entered for the remote retrieval OPAC request form in the Voyager System Administration module.

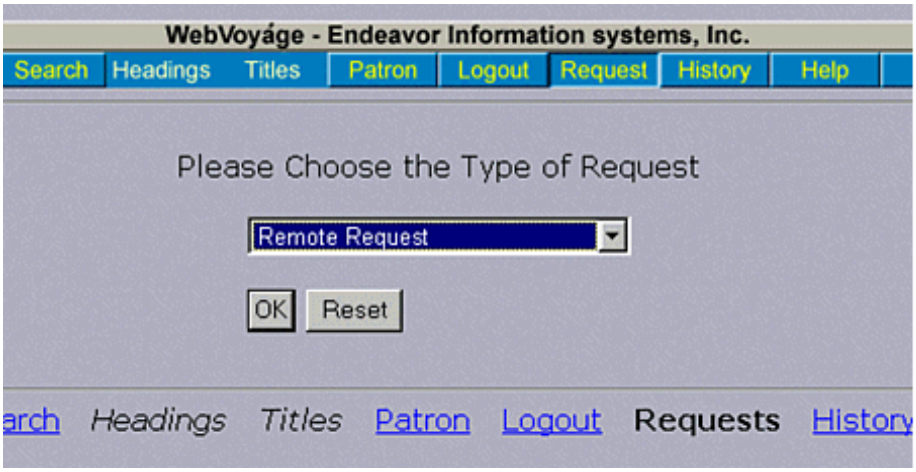

Figure 2-2. Patron-initiated request, choosing to place a remote request

When a patron selects a remote retrieval request, the corresponding OPAC request form opens. See Figure 2-3.

Patrons can specify a pick-up location (a specific Circulation desk) for the delivery of the requested item. The list of available pick-up locations displays on the OPAC request form in the **Pick Up At** drop-down list. See Figure 2-3. The list options are customized through the Voyager System Administration module.

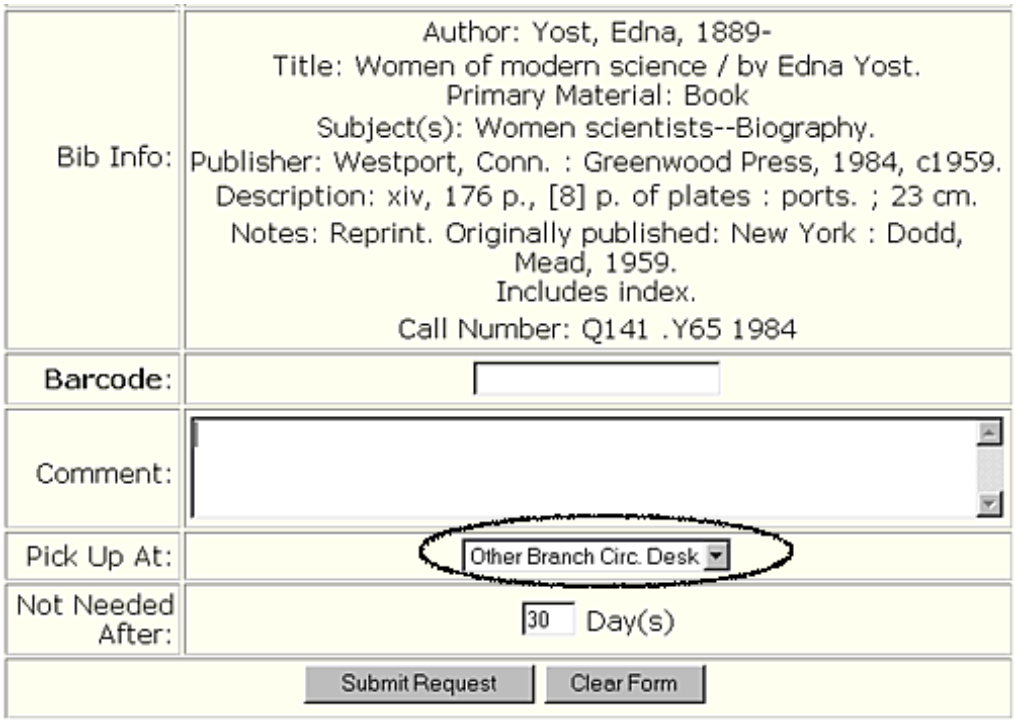

Figure 2-3. Request form for a patron-initiated request in WebVoyáge

NOTE:
In the case of multiple requests for the same item, the requested item is made available to patrons in the order in which the requests are received. The request for the item remains in effect until the item is retrieved from remote storage or until the request expires or is canceled.

Staff-Initiated Requests

A request for an item stored remotely can also be placed through the Voyager Circulation module by a library staff member. The process is the same as for placing other types of requests in Voyager. See the *Voyager Circulation User's Guide* for detailed instructions.

Staff members can specify a pick-up location (a specific Circulation desk) for the delivery of the requested item. The list of available pick-up locations displays in the **Pickup At** drop-down menu on the **Place Request** window of the Circulation module.

Notifying the ARS and Retrieving the Requested Item

Once the item at the ARS facility is requested (patron-initiated or staff-initiated), Voyager sends a message to the ARS requesting the item from storage. See “Communication Between Voyager and the ARS” on page 2-6 for detailed information.

The ARS takes action to retrieve the requested item. For more information on how the ARS retrieves the item, contact the third-party producer of the ARS software.

Routing and Circulating the Item

Voyager routes the item to the pick-up location (a Circulation desk) specified in the OPAC or in Circulation, depending on who initiated the request. The item is then put aside for the patron who has placed the remote request.

When the patron comes to the pick-up location for the requested item, the patron either charges the item or examines the item without charging it.

When finished with the item, the patron returns it to the pick-up location.

Discharging and Returning the Item to Remote Storage

When the patron returns the item, a staff member discharges it and routes it back to the remote storage facility. The item is then placed in its designated storage bin.

Contact the third-party producer of the ARS software for information on how the item is returned to its storage bin.

Communication Between Voyager and the ARS

The following describes the communication cycle between Voyager and the ARS.

1. A dæmon on the Voyager server entitled `mhs_msg` waits for messages to send to the ARS.
2. A library patron or staff member requests an item that is stored remotely, either for checkout purposes or for barcode maintenance or removal.

3. The `mhs_msg` dæmon sees the request on the Voyager server, and it connects and sends the message to the ARS server using a standard TCP/IP connection.
4. The ARS receives the message sent by `mhs_msg`.
5. The ARS sends a message to the Voyager server acknowledging the successful receipt of the message sent by `mhs_msg`.

Figure 2-4 illustrates this process.

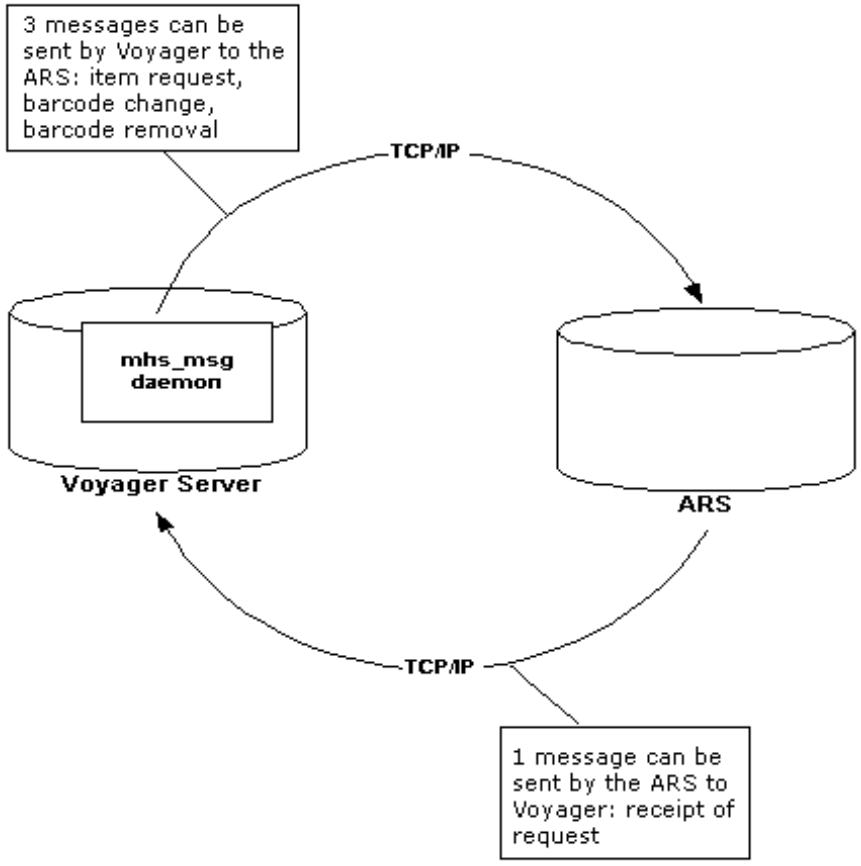

Figure 2-4. Communication cycle between Voyager and ARS

Mhs_msg Dæmon

The Pmhs_msg UNIX script starts the mhs_msg dæmon when the Voyager server is booted or system startup procedures are initiated. The Pmhs_msg script resides in the /m1/voyager/xxxdb/sbin directory (where xxxdb = the name of your database) on the Voyager server.

Parameters for the mhs_msg dæmon are taken from the voyager.env file located in the /m1/voyager/xxxdb/ini directory. You do not have to set values at the command line. Table 2-1 shows the MHS Message Server section of the voyager.env file, in which you can set the ARS server name/IP address, the server port, and the frequency at which you want to run the mhs_msg dæmon.

Table 2-1. Sample MHS Message Server section of the voyager.env file

```
##  MHS Message Server
export MHS_SERVERNAME=148.61.131.210
export MHS_SERVERPORT=5050
export MHS_FREQUENCY=1
```

Message Types and Content

The messages sent between the ARS and Voyager can be classified as send messages which are sent by Voyager (specifically, mhs_msg) to the ARS or receive messages which are sent by the ARS to Voyager. The types of content contained in send messages are as follows.

- Request an item from the ARS
- Add a barcode to the ARS for a newly created item
- Delete a barcode from the ARS

The only receive message sent by the ARS to the Voyager server acknowledges that the add, delete, or request message has been received.

Request an Item from the ARS

When a patron or staff librarian requests an item stored remotely, Voyager's mhs_msg dæmon sends a message to the ARS. The message includes the following items:

- A request code (REQI)
- The requested item's barcode (25-character maximum)
- A one-character priority code (only "I" is supported)

- The name of the patron requesting the item (70-character maximum)
- The title of the item being requested (100-character maximum)
- The author of the title (100-character maximum)
- The requested pick-up location for the item (50-character maximum) only if the AUTO_RETRIEVE_SYSTEM setting in the MISCELLANEOUS table is set to C or P

  Contact Customer Support if you need help in determining your setting.
- The call number of the item requested (144-character maximum) only if the AUTO_RETRIEVE_SYSTEM setting in the MISCELLANEOUS table is set to C

  Contact Customer Support if you need help in determining your setting.
- A terminator value

After the ARS receives the message, it retrieves the item and makes it available for circulation to the patron or staff librarian.

NOTE:
If the mhs_msg dæmon has been set to check for messages at longer intervals, the message may not be sent immediately.

NOTE:
Voyager retains the item request message until the item is discharged in Circulation. This prevents duplicate requests from being made while the item is out of storage.

Add a Barcode to the ARS

Voyager's mhs_msg dæmon sends an add message to the ARS when one of the following occurs:

- Any new item barcode is created
- A new barcode is assigned to any item

This message contains the following.

- A request code (ADDI)
- The barcode to be added (25-character maximum)
- A terminator value

NOTE:
Pstrgvfy does not cause the mhs_msg to send an add message, nor does modifying the 852‡b for an existing record.

Delete a Barcode from the ARS

Voyager's `mhs_msg` dæmon sends a delete message to the ARS when one of the following occurs.

- An existing item barcode is deleted
- An existing item barcode is deactivated

This message contains the following.

- A request code (`DELI`)
- The barcode to be deleted (25-character maximum)
- A terminator value

When you delete an item that has a Perm Loc or Temp Loc that is marked as Automated Storage in a Circulation Policy Definition, Voyager displays the following warning:

"WARNING: Item is in a remote storage location and should be removed before deleting. Proceed with delete?". Meaning that the item is in a remote storage location and should be removed from that location before deleting. For more information on deleting item records, see the Voyager Circulation User's Guide or Voyager Cataloging User's Guide.

Acknowledgement of Receipt Message

The ARS sends a message to the Voyager server, acknowledging the receipt of the send messages. The message includes a 4-character request code (`ACKM`).

Message Logs

Message information is stored in the following logs.

- `log.strgvfy.YYYYMMDD.HHMM`
- `mhs_msg.log`
- `out.strgexp.YYYMMMDD.HHMM`

Message Log log.strgvfy.YYYYMMDD.HHMM

The `log.strgvfy.YYYYMMDD.HHMM` log is created when you run Pstrgvfy and stored in `/m1/voyager/xxxdb/rpt`. See Table 2-2 for an example of the message information stored in this log.

Table 2-2. Sample log.strgvfy.YYYYMMDD.HHMM log

```
Barcode Alter.Verify Processing: Start Time: Thu Jul 28 14:46:06 2005


Message: Location code:| <asrs>
Message: Location ID:| <370>
Message: Barcode Verification Processing: Start Time:| <Thu Jul 28 14:46:06 2005>
Message: Run mode| <Alter/Update>
Error: Barcode is not active.| <39424049801670>
Read: 1000 |Valid: 999 |Mfhds Changed: 510 |Bad: 1
Error: Barcode is not active.| <39424050087649>
Read: 2000 |Valid: 1998 |Mfhds Changed: 1076 |Bad: 2
Error: Barcode is not active.| <39424025628097>
Read: 3000 |Valid: 2997 |Mfhds Changed: 1381 |Bad: 3
Error: Barcode is not active.| <39424048900168>
Read: 4000 |Valid: 3996 |Mfhds Changed: 1800 |Bad: 4
Error: Barcode is not active.| <39424031144196>
Read: 5000 |Valid: 4995 |Mfhds Changed: 2209 |Bad: 5
Final counts:  Read: 5595 |Valid: 5590 |Mfhds Changed: 2700 |Bad: 5 |


Barcode Alter/Verify Processing: End Time: Thu Jul 28 14:48:52 2005
```

Message Log mhs_msg.log

The `mhs_msg.log` log is stored in `/m1/voyager/xxxdb/rpt`. See Table 2-3 for an example of the message information stored in this log.

Table 2-3. Sample mhs_msg.log log

```
Initializing...
Initializing...
Sun Jul 24 04:05:37 2005 MHS Message Delivery Online...
MHS Message Delivery Online...
Mon Jul 25 05:00:06 2005 ...SHUTDOWN
...SHUTDOWN
MHS Message Delivery -- TERMINATED
Initializing...
Initializing...
Mon Jul 25 05:01:52 2005 MHS Message Delivery Online...
MHS Message Delivery Online...
Tue Jul 26 05:00:06 2005 ...SHUTDOWN
...SHUTDOWN
MHS Message Delivery -- TERMINATED
Initializing...
Initializing...
Tue Jul 26 05:01:51 2005 MHS Message Delivery Online...
MHS Message Delivery Online...
Wed Jul 27 05:00:02 2005 ...SHUTDOWN
...SHUTDOWN
MHS Message Delivery -- TERMINATED
Initializing...
Initializing...
Wed Jul 27 05:01:46 2005 MHS Message Delivery Online...
MHS Message Delivery Online...
Thu Jul 28 05:00:02 2005 ...SHUTDOWN
...SHUTDOWN
MHS Message Delivery -- TERMINATED
Initializing...
Initializing...
Thu Jul 28 05:01:48 2005 MHS Message Delivery Online...
MHS Message Delivery Online...
```

Message Log out.strgexp.YYYMMMDD.HHMM

The `out.strgexp.YYYMMMDD.HHMM` log is created when you run Pstrgexp and stored in `/m1/voyager/xxxdb/rpt`. See Table 2-4 for an example of the (barcode matching input criteria) message information stored in this log.

Table 2-4. Sample out.strgexp.YYYMMMDD.HHMM log

39999000000396
39999000000404
39424012754807
39424012602915
39424015808675
39424026189883
39424005714719
39424012669252
39424024990910

Queue Data

The `remote_storage_queue` table stores request code and barcode information sent with request, add, and delete messages to ARS. See Table 2-5 for an example of information stored in this table.

Table 2-5. Sample remote_storage_queue

QUEUE_ID	LOCATION_ID	MESS	ITEM_BARCODE	ITEM_ID	PATRON_ID	S	PICKUP_LOCATION_ID
1089661	197	DELI	39424046067838	73104	0	Y	0
1089662	197	ADDI	39424021992992	73104	0	Y	0
1089663	370	REQI		4188252	9928	Y	270
1089664	47	DELI	39999002539144	1310826	0	Y	0
1089665	47	ADDI	39424028704606	1310826	0	Y	0
1089666	370	REQI		4357076	9928	Y	270
1089668	100	DELI	39999001163433	566698	0	Y	0
1089669	100	ADDI	39424025482727	566698	0	Y	0
1089670	370	REQI		4078703	9928	Y	270
1089671	47	DELI	39999009649359	3151328	0	Y	0
1089672	47	ADDI	39424020334121	3151328	0	Y	0
1089673	126	ADDI	39424048328980	4569483	0	Y	0
1089674	47	DELI	39999003135074	1588317	0	Y	0
1089675	47	ADDI	39424034180130	1588317	0	Y	0
1089676	79	DELI	39424049631663	4307237	0	Y	0
1089677	79	ADDI	39424049631663	4569484	0	Y	0
1089678	370	REQI		2361059	66366	Y	132
1089679	47	DELI	38888002096125	3933563	0	Y	0
1089680	47	ADDI	39424019960530	3933563	0	Y	0
1089681	2	ADDI	39424049306704	4569485	0	Y	0
1089682	79	ADDI	39424048328931	4569486	0	Y	0
1089683	79	DELI	39424025481166	767137	0	Y	0
1089684	79	ADDI	39424012672413	767137	0	Y	0
1089685	79	DELI	39424049127787	4309627	0	Y	0
1089686	79	ADDI	39424049127787	4569487	0	Y	0
1089687	47	DELI	39999002539730	1311406	0	Y	0
1089688	47	ADDI	39424028731237	1311406	0	Y	0
1089689	126	ADDI	39424048328634	4569488	0	Y	0
1089690	47	ADDI	39424051777321	4569489	0	Y	0
1089691	214	ADDI	39424048328683	4569490	0	Y	0
1089692	47	ADDI	39424035340204	4569491	0		0

Setting Up and Maintaining Barcodes in the ARS

3

Contents

Introduction **3-1**

Purpose of this Chapter **3-1**

Loading and Verifying Barcodes in the ARS **3-1**

- Storage Barcode Export Program (Pstrgexp) 3-2
  - Pstrgexp Command-Line Parameters 3-2
  - Pstrexp Command File (Optional) 3-4
  - Pstrgexp Log File 3-5
  - Pstrgexp Output File 3-6
- Storage Barcode Verify Program (Pstrgvfy) 3-6
  - Pstrgvfy Command-Line Parameters 3-7
  - Pstrgvfy Command File (Optional) 3-10
  - Sample Pstrgvfy Command Line 3-13
  - Pstrgvfy Log File 3-13

Contents

Setting Up and Maintaining Barcodes in the ARS

3

Introduction

This chapter explains how to set up and maintain barcodes in an ARS. To do this, you should be familiar with basic UNIX commands.

This chapter also describes the files related to ARS and how they function on the Voyager server.

Purpose of this Chapter

This chapter's purpose is to provide you with the following.

- A guide for setting up and maintaining barcodes in the ARS
- An understanding of the functions and capabilities of ARS-related files on the Voyager server.

Loading and Verifying Barcodes in the ARS

ARS references items by their barcodes. Library sites initiate the loading of item barcodes into the ARS so that items stored remotely can be circulated. After you have configured the ARS so that it is able to circulate remote items, you must

maintain the ARS barcodes. Periodic verification and updating of barcodes ensures that Voyager and the ARS are in sync regarding which items are held in remote storage.

Both the initial load and the maintenance of barcodes in the ARS are performed using the following two programs:

- Storage Barcode Export Program (`Pstrgexp`)
- Storage Barcode Verify Program (`Pstrgvfy`)

Storage Barcode Export Program (Pstrgexp)

The Storage Barcode Export Program (`Pstrgexp`) extracts active barcodes (no longer than 25 characters) from their associated item records at certain Voyager locations.

NOTE:
Voyager allows multiple inactive barcodes per item as well as a single active barcode. ARS uses only the active barcode.

`Pstrgexp` can be set to extract only from locations defined as ARS locations, or it can be set to extract from all Voyager locations. It places the barcodes into an ASCII flat file.

`Pstrgexp` resides in the `/m1/voyager/xxxdb/sbin` directory on the server and is initiated by the user. It is used during both the initial load and the maintenance of item barcodes for the ARS.

Pstrgexp Command-Line Parameters

`Pstrgexp` uses the command-line parameters described in Table 3-1.

NOTE:
The database name and user password are not set via parameters but are obtained by the program from the `voyager.env` file.

Table 3-1. Pstrgexp command-line parameters

Parameter	Description
-a	Required if the `-m` parameter is not used to specify a location code. A stand-alone parameter (no value following it) indicating that the barcodes for items from all Voyager locations are to be extracted. This includes barcodes for item records at non-ARS locations.
-m	Required if the `-a` parameter is not used to specify all location codes. A single, case-sensitive location code indicating the Voyager location from which item record barcodes will be extracted. For ARS purposes, it is likely to be the ARS location code. To specify multiple location codes, use a command file. (For more information on command files, see “Pstrexp Command File (Optional)” on page 3-4.)
-c	(Optional) A parameter specifying the use of a command file (with a full path to the file if not in the `/m1/voyager/xxxdb/local` directory). You can create a command file to specify multiple location codes from which barcodes will be extracted. This saves you from having to use multiple `-m` parameters at the command line.
-l	(Optional) The full path to a directory in which you want the log file placed if you do not want it written to the default directory for log files (`m1/voyager/xxxdb/rpt`). **NOTE:** If you specify a path here, the date and time will not be appended to the file name.
-o	(Optional) The full path to a directory in which you want the output file placed if you do not want it written to the default directory for output files (`/m1/voyager/xxxdb/rpt`). **NOTE:** If you specify a path here, the date and time will not be appended to the file name.
-h	This parameter provides a listing and brief description of all the valid parameters for the `Pstrgexp` script.

Pstrexp Command File (Optional)

You can create a command file to specify multiple location codes from which barcodes are extracted. This allows you to avoid using multiple `-m` parameters at the command line.

Procedure 3-1. Creating a command file

Use the following to create a command file to run `Pstrgexp` or `Pstrgvfy`.

1. Open a text editor such as Notepad or vi.

2. Enter a list of `-m` parameters, each followed by a single location code.

NOTE:
Enter each `-m`/location pair on its own line as shown in Table 3-2 and Table 3-3.

Table 3-2. Location codes in a Pstrgexp command file

```
-mARS1
-mARS2
-mCIRC3
```

IMPORTANT:
The location codes you specify in the command file are case sensitive and must appear exactly as they do in the System Administration module.

Table 3-3. Multiple -m parameters in a Pstrgvfy command file

```
-m Main
-m SpColl2
-m SpColl3
```

3. Save the command file with a `.com` file extension such as `strgvfy.com`, for example.

4. Put the file in the default directory (`/m1/voyager/xxxdb/local`) or in another directory, in which case you must specify a full path name to the file (with extension) at the command line using the `-c` parameter (for example, `-c/m1/voyager/xxxdb/temp/strgexp.com`).

IMPORTANT:
The command file should not be saved to the `/m1/voyager/xxxdb/sbin` directory. That directory is used primarily for the Pscripts such as `Pstrgexp`, for example.

Procedure 3-2. Running Pstrgexp

Use the following to run `Pstrgexp`.

1. Log in as the Voyager user.
2. Navigate to the `/m1/voyager/xxxdb/sbin` directory on the server.
3. Enter a command line for running `Pstrgexp`, using Table 3-1 on page 3-3 for help with parameters.

   Result: `Pstrgexp` extracts the barcodes from the location(s) specified in the command line and generates log and output files.

   Example: `./Pstrgexp -mARS1`

   This command line causes `Pstrgexp` to extract all the barcodes from item records with the `ARS1` location code. Because the `-l` and `-o` parameters are not used, the log and output files are written to their default directories.

Pstrgexp Log File

`Pstrgexp` generates a log file called `log.strgexp.date.time`. As the example “Pstrgexp log file” on page 3-6 shows, the log file includes a count of all the barcodes exported for the locations specified and the date and time the run started and ended.

Example: Pstrgexp log file

```
Final counts: Read: 61468|Writ: 61468| Bad: 0|
Barcode Export Processing Start Time: Fri Mar 31
                  13:26:29 2000
Barcode Export Processing Completed: Fri Mar 31
                  13:26:42 2000
```

NOTE:
When statistics from the log file indicate a numeric value for `Bad` on the `Final Counts` line, it is possible that `Pstrgexp` encountered an item barcode that is either null or bad.

By default, `Pstrgexp` places the log file in the `/m1/voyager/xxxdb/rpt` directory. However, you can specify a different location following the `-l` parameter at the `Pstrgexp` command line. If you specify a different location, note that the date and time are not included in the filename.

IMPORTANT:
If you run `Pstrgexp` consecutively without waiting for a full minute to pass, the existing `log.strgexp.date.time` is overwritten.

Pstrgexp Output File

`Pstrgexp` also generates an output file (`out.strgexp.date.time`) containing a list of all the barcodes extracted from item records at the location(s) specified. By default, the output file is written to the `/m1/voyager/xxxdb/rpt` directory. However, you can specify a different directory following the `-o` parameter at the command line. If you specify a different directory, the date and time are not included in the filename.

IMPORTANT:
If you run `Pstrgexp` consecutively without waiting for a full minute to pass, the existing `log.strgexp.date.time` is overwritten.

Storage Barcode Verify Program (Pstrgvfy)

The Storage Barcode Verify program (`Pstrgvfy`) resides in the `/m1/voyager/xxxdb/sbin` directory on the Voyager server. It is used during both the initial load and the maintenance of item barcodes in the ARS.

`Pstrgvfy` works with `Pstrgexp` output file which contains the extracted barcodes generated by the `Pstrgexp` program.

`Pstrgvfy` serves the following purposes.

- Changes the location codes of item records (or item records and MFHDs simultaneously)
- Populates the **Operator** or **Cataloging Location** columns of a MFHD's **History** tab in the Voyager Cataloging module (if the location codes of MFHDs are changed)
- Verifies the barcodes of item records (or item records and MFHDs simultaneously)

NOTE:
`Pstrgvfy` does not cause the MFHD/item information to be sent to the ARS.

Pstrgvfy Command-Line Parameters

`Pstrgvfy` resides in the `/m1/voyager/xxxdb/sbin` directory on the Voyager server and uses the command-line parameters detailed in Table 3-4.

NOTE: The database name and user password are not set using command-line parameters, but are obtained by `Pstrgvfy` from the `voyager.env` file.

Table 3-4. Pstrgvfy command-line parameters

Parameter	Description
-i	If the input file is located in a directory other than the default (`/m1/voyager/xxxdb/rpt`), the `-i` is used to specify its path and filename with extension.
-m	Must be used with `-a` or `-v`. When combined with `-a`, `-m` specifies a single location code to which `Pstrgvfy` will set item records (or item records and MFHDs) related to the barcodes in the input file. Only one `-m` can be used with the `-a`; if you use more than one, `Pstrgvfy` will only apply the first one. When combined with `-v`, `-m` verifies the barcodes listed in the input file against those associated with item records or MFHDs for the location you specify. You can specify multiple locations, in which case you should create a command file (as opposed to using multiple `-m` parameters at the command line). See "Pstrgvfy Command File (Optional)" on page 3-10 for details on command files. **NOTE:** Location codes are case-sensitive and must appear exactly as they do in the System Administration module.

Table 3-4. Pstrgvfy command-line parameters

Parameter	Description
-a	Must be used with -m, cannot be used with -v. When used with -m, this stand-alone parameter (no qualifying data needed) changes the location codes of item records (or item records and MFHDs) related to the barcodes listed in the input file. You must also use the -b parameter if you want to change the location code of MFHDs. If you do not, only the location code of item records will be changed. If a duplicate barcode is found in the database, the log file counts it as "bad," and its location is not changed or added. See “Pstrgvfy Log File” on page 3-13 for details on the log file.
-b	Must be used with -a, cannot be used with -v. When used with -a and -m, this stand-alone parameter (no qualifying data needed) changes the location codes of MFHDs (in addition to item records) that are related to barcodes in the input file. Pstrgvfy sets the 852|b field of the MFHDs to the location code specified using the -m parameter. If the location code in the 852|b field matches the one specified in -m, no change is made. Pstrgvfy acknowledges that no change was made in the log file. See the "Pstrgvfy Log File" section for details on the log file. If you do not use this parameter, only the location codes of item records will be changed.
-v	Must be used with -m, cannot be used with -a. This stand-alone parameter (no qualifying data needed) verifies barcodes in the input file against barcodes associated with item records (or item records and MFHDs) having the location code you specify with -m (or with multiple location codes you specify in a command file). Using the -v, Pstrgvfy checks for duplicate barcodes, ensures that the associated item records (or item records and MFHDs) have the location code you specify, and ensures that the barcodes do not have an inactive status.
-o	Must be used with -b. The -o parameter is used to specify an operator name that will populate the **Operator** column on the MFHD’s **History** tab, indicating which operator altered the MFHD. (This does not apply to item records, as item records do not have a **History** tab.) Operator names are defined in the System Administration module. If you do not specify an operator name with -o, or if the operator name is invalid, the default (SYSTEM) will be used.

Table 3-4. Pstrgvfy command-line parameters

Parameter	Description
-g	Must be used with `-b`. The `-g` parameter allows you to specify a Cataloging location code (case-sensitive) to populate the Cataloging Location column on the MFHD's **History** tab in the Voyager Cataloging module. This does not apply to item records, as item records do not have a **History** tab. The location specified with `-g` must be a valid location code as defined in the Voyager System Administration module. If it is invalid (for example, you misspell the code at the command line), `Pstrgvfy` will stop. In the log file, `Pstrgvfy` will acknowledge that the location code is invalid. See "Pstrgvfy Log File" on page 3-13 for details. If the location is not a valid Cataloging happening location, `Pstrgvfy` will process the input file of barcodes but will not populate the **Cataloging Location** column on the MFHD's **History** tab. `Pstrgvfy` will acknowledge that the location is not a valid Cataloging happening location in the log file. You define locations as Cataloging happening locations in the Cataloging Policy Groups portion of the System Administration module. For details, see the *Voyager System Administration User's Guide*. If you do not specify a Cataloging location with `-g`, the **Cataloging Location** column of the MFHD will be empty.
-c	Only used with `-v`. With the `-c` parameter you specify the path and filename (with extension) of a command file to be referenced by `Pstrgvfy`. This command file contains a list of `-m` parameters with location codes from which you want barcodes in the input file to be compared and verified. See "Pstrgvfy Command File (Optional)" on page 3-10 for more details on this file. The -c parameter is only used if barcodes of item records or MFHDs are being verified (through the `-v` parameter), not added or changed.
-l	If you do not want the `Pstrgvfy` log file written to the default directory (`/m1/voyager/xxxdb/rpt`), you can specify a path and filename (with extension) using the `-l`. See "Pstrgvfy Log File" on page 3-13 for more details on this file.
-h	The `-h` parameter provides a listing and brief description of all the valid parameters for the `Pstrgvfy` script.

Pstrgvfy Command File (Optional)

To compare and verify barcodes in the input file against those of item records (or item records and MFHDs) at more than one location, create a `Pstgrvfy` command file. This allows you to avoid using multiple `-m` parameters at the command line (followed by multiple location codes).

Use Procedure 3-1, “Creating a command file,” on page 3-4 to create a `Pstrgvfy` command file.

IMPORTANT:
The command file will be referenced by `Pstrgvfy` only if the `-c` parameter is used on the command line. See “Pstrgvfy Command-Line Parameters” on page 3-7 for details.

Procedure 3-3. Changing location codes of item records (or item records and MFHDs)

`Pstrgvfy` allows you to automatically change the location codes of item records or item records and MFHDs-852‡b field.

IMPORTANT:
MFHD location codes must be changed simultaneously with item record location codes.

Use the following to change location codes.

1. Log in as the Voyager user.
2. Navigate to the `/m1/voyager/xxxdb/sbin` directory on the server.
3. Run `Pstrgvfy` with the input file consisting of the file of extracted barcodes created in the `Pstrgexp` program (the `Pstrgexp` output file).

   This input file contains a list of barcodes associated with the item records or item records and MFHDs.
4. Enter a command line for running `Pstrgvfy`, using Table 3-4 on page 3-7 for help with parameters.

NOTE:
The new location code is specified at the `Pstrgvfy` command line (using the `-m` parameter). See “Pstrgvfy Command-Line Parameters” on page 3-7 for details on the `-m` parameter.

Changing location codes using `Pstrgvfy` is particularly useful if you are moving many materials from one physical location to another. For example, if you are pulling many items from your main stacks (location code: `Main`) and placing them in a special collection (location code: `SpColl2`), `Pstrgvfy` allows you to change the location of the associated item records (or item records and MFHDs 852‡b field) from `Main` to `SpColl2` without having to manually wand in each item and change the location yourself. In this way, `Pstrgvfy` saves a significant amount of time.

For detailed information on locations and location codes, see the *Voyager System Administration User’s Guide*.

Procedure 3-4. Populating the operator or location columns of a MFHD’s History tab

If you change the location codes of MFHDs using `Pstrgvfy`, you can specify the operator name or cataloging location code for populating the **Operator** or **Cataloging Location** columns on the **History** tab of the Voyager Cataloging module. (See the *Voyager Cataloging User’s Guide* for details on the MFHD **History** tab.)

NOTE:
This does not apply to item records, as item records do not have a **History** tab. In addition, it does not apply if you have already verified barcodes related to MFHDs using `Pstrgvfy`.

Use the following to populate operator and/or location columns on the **History** tab of the Voyager Cataloging module.

1. Log in as the Voyager user.

2. Navigate to the `/m1/voyager/xxxdb/sbin` directory on the server.

3. Enter a command line for running `Pstrgvfy`, specifying the operator name or Cataloging location code at the command line following the `-o` or `-g` parameters, respectively.

   Result: If you specify a name and/or code, the **History** tab of the Voyager Cataloging module populates with the value(s) you entered.

If you do not specify an operator name, the default (SYSTEM) populates the **Operator** column. If you do not specify a Cataloging location code, the **Cataloging Location** column remains empty. See “Pstrgvfy Command-Line Parameters” on page 3-7 for details.

Procedure 3-5. Verifying barcodes of item records or MFHDs

`Pstrgvfy` allows you to compare and verify barcodes related to item records (or item records and their associated MFHDs) at specific locations. The verification process includes the following.

- Checking for duplicate barcodes
- Ensuring that the related item records (or item records and their associated MFHDs) have the correct location code
- Ensuring that the barcodes do not have an inactive status

NOTE:
You do not have to change the location codes of item records (or item records and their associated MFHDs) for barcodes to be verified.

Use the following to verify barcodes.

1. Log in as the Voyager user.

2. Navigate to the `/m1/voyager/xxxdb/sbin` directory on the server.

3. Run the input file consisting of the file of extracted barcodes created in the `Pstrgexp` program (the `Pstrgexp` output file). Specify which barcodes you want verified.

   Result: The barcodes in the input file are compared with barcodes of item records (or item records and their associated MFHDs) with the location code you specify at the command line (via the `-m` parameter). See Table 3-4 on page 3-7 for details on command-line options.

   If you want to compare the barcodes in the input file with barcodes related to item records (or item records and their associated MFHDs) at multiple locations, you can create a command file (as opposed to specifying multiple `-m` parameters at the command line). This command file contains a list of `-m` parameters and location codes. See “Pstrgvfy Command File (Optional)” on page 3-10 for details.

The results of the verification are reported in the Pstrgvfy log file. For example, if a duplicate barcode is found, the log file will include this information as well as which barcode was duplicated). See “Pstrgvfy Log File” on page 3-13 for details on the log file.

Sample Pstrgvfy Command Line

When in the /m1/voyager/xxxdb/sbin directory, the sample command line in Table 3-5 on page 3-13 causes Pstrgvfy to do the following:

- Reference an input file located in the /m1/voyager/testdb/local directory called out.strgexp.2000405.1018
- Change the location code of both item records and MFHDs associated with barcodes in the input file to SpColl2
- Verify the barcodes in the input file against those related to item records and MFHDs set as at the SpColl2 location
- Populate the operator name and Cataloging location code on the MFHD’s **History** tab with CatOp and SpColl2 respectively

Table 3-5. Sample command line for running Pstrgvfy

```
Pstrgexp -i/m1/voyager/testdb/local/out.
strgexp.2000405.1018 -mSpColl2 -a -b -v
-gCatOp -oSpColl2
```

Pstrgvfy Log File

Pstrgvfy automatically generates a log file called log.strgvfy.date.time. It includes the following information:

- A count of all the barcodes changed or verified for the locations specified
- The date and time the run started and ended
- Information about problems Pstrgvfy encountered during its run (for example, invalid location codes, duplicate barcodes, barcodes at wrong locations)

By default, Pstrgvfy will place the log file in the /m1/voyager/xxxdb/rpt directory. You can specify another filename and path to which you want the log file written using the -l parameter at the command line. See “Pstrgvfy Command-Line Parameters” on page 3-7 for details.

NOTE:
If you specify another filename and path using the `-l` command-line parameter, the date and time will not be included as a part of the `Pstgrvfy` log file name.

Table 3-6 shows the contents of a `Pstrgvfy` log file. This log file pertains to a run that both changed location codes and verified barcodes.

Table 3-6. Sample Pstrgvfy log file

```
Barcode Alter.Verify Processing: Start Time: Mon June
        20 08:58:00 20 00
Error: Location Id Lookup| <SpColl1>
Error: Invalid location code.| <SpColl4>
Error: Barcode at Wrong location.| <CIRC>
Error: Barcode is duplicated.| <39550000123456>
Error: Barcode at Wrong location.| <CIRC>
Error: Barcode at Wrong location.| <CIRC>
Error: Barcode at Wrong location.| <CIRC>
Error: Barcode at Wrong location.| <CIRC>
Final counts: Read: 6|Valid: 0|Bad: 6|
Barcode Alter/Verify Processing: End Time: Mon June 20
        08:58:01 2000
```

Setting Up ARS in Voyager System Administration

4

Contents

Introduction **4-1**

Purpose of this Chapter **4-1**

ARS Setup in the System Administration Module **4-1**

- New Location for ARS 4-2
- ARS Location and Circulation Policy Group 4-4
- ARS Location Defined as Automated Storage Facility 4-7
- OPAC Request Form 4-9

Contents

Setting Up ARS in Voyager System Administration

4

Introduction

This chapter describes the procedures needed to integrate the ARS with Voyager's System Administration module.

Purpose of this Chapter

This chapter's purpose is to provide you with instructions for completing the setup of Voyager with ARS.

ARS Setup in the System Administration Module

In order for ARS to function, the following procedures must be performed in the System Administration module.

- Adding a location for the ARS
- Associating the ARS location with a Circulation Policy Group
- Defining the ARS location as an automated storage facility
- Defining an OPAC request form for placing remote requests

New Location for ARS

In order for Voyager to differentiate between materials stored at the remote facility and materials stored at other locations, you must add a location for the ARS in the System Administration module.

NOTE:
You can create as many ARS locations as you want, though it is unlikely that you will need more than one.

Procedure 4-1. Creating a Location for the ARS

Use the following to create a location for the ARS.

1. Log in to the Voyager System Administration module.

2. From the Voyager System Administration **Functions** menu, select **System**, then click **Locations** (see Figure 4-1 on page 4-2). Alternately, click the **System** bar in the left column, then the **Locations** icon below the **System** bar.

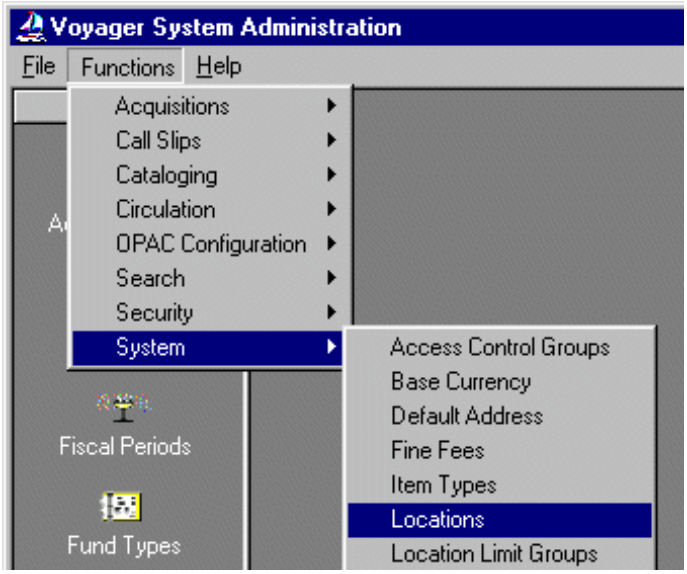

Figure 4-1. Functions - System - Locations menu path in System Administration

Result: The **System - Locations** window opens.

3. Click the **New** button.

   Result: Fields for adding a new location display below the list box of codes and names on the **System - Locations** window (see Figure 4-2 on page 4-3).

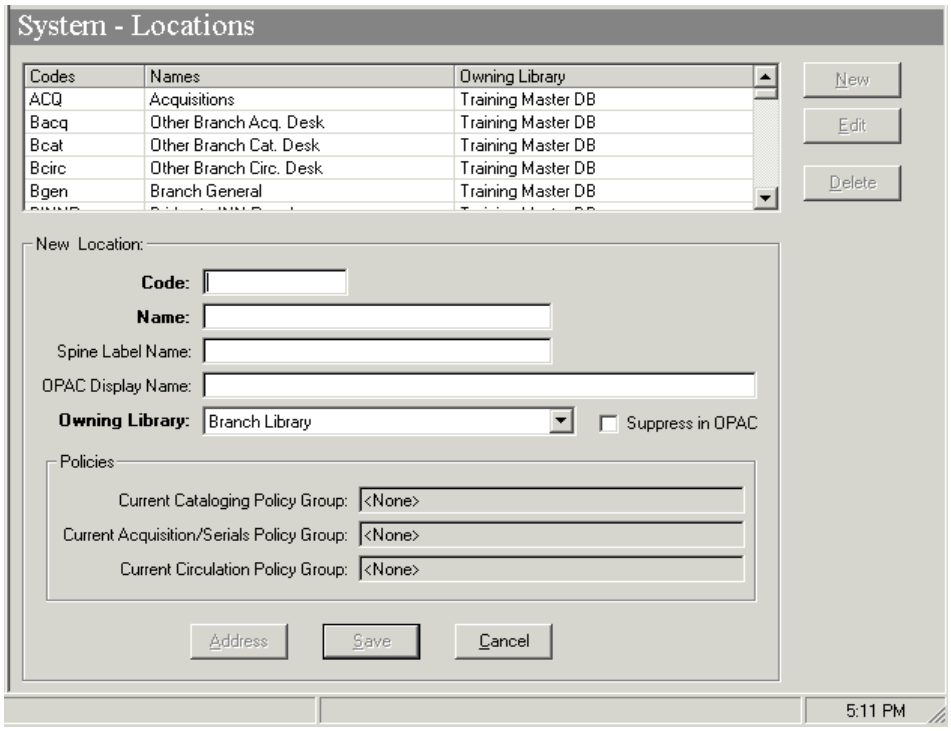

Figure 4-2. New location form

4. Enter information for adding the new location. See Figure 4-3 on page 4-4 for an example. (For further explanation, see the *Voyager System Administration User's Guide*.)

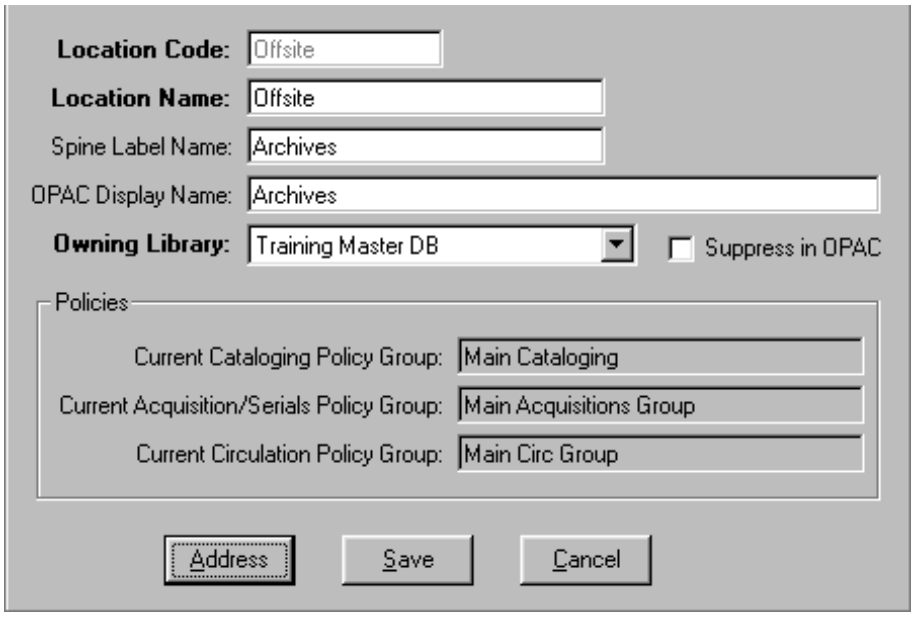

Figure 4-3. Sample entries for offsite location

5. Click the **Save** button to save the new location in Voyager.

   Result: The add/edit section closes and the new location displays in the list box above.

ARS Location and Circulation Policy Group

After you have added a new location for the ARS, you must associate it with the applicable Circulation Policy Group. This establishes circulation rules for materials warehoused at the remote storage facility.

IMPORTANT:
A location can only belong to one Circulation Policy Group at a time.

NOTE:
You may need to associate the ARS location with policy groups of other modules (such as Cataloging or Acquisitions), depending on the workflow of your institution. See the *Voyager System Administration User's Guide* for further detail.

Procedure 4-2. Associating the ARS Location with a Circulation Policy Group

Use the following to associate the ARS location with an existing or a new circulation policy group.

1. If you haven't done so already, log in to the Voyager System Administration module.

2. From the Voyager System Administration **Functions** menu, select **Circulation**, then click **Policy Definitions**. Alternately, click the **Circulation** bar in the left column, then the **Policy Definitions** icon below the bar.

   Result: The **Circulation - Policy Definitions** window opens (Figure 4-4 on page 4-5).

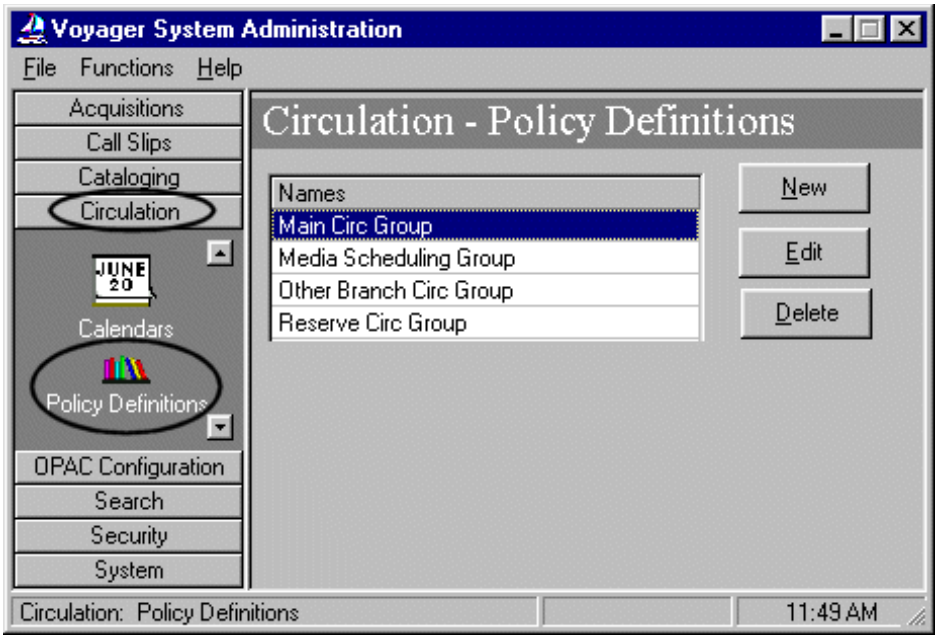

Figure 4-4. Circulation - Policy Definitions window

3. In the list box, click the name of the circulation policy group to which you want to associate the ARS location.

4. Click the **Edit** button.

Result: The **Edit Policy Definition** section displays below the list box on the **Circulation - Policy Definitions** window.

5. Click the **Locations** tab.

   Result: The **Locations** tab displays two list boxes containing **Available** and **Selected** locations (see Figure 4-5 on page 4-6).

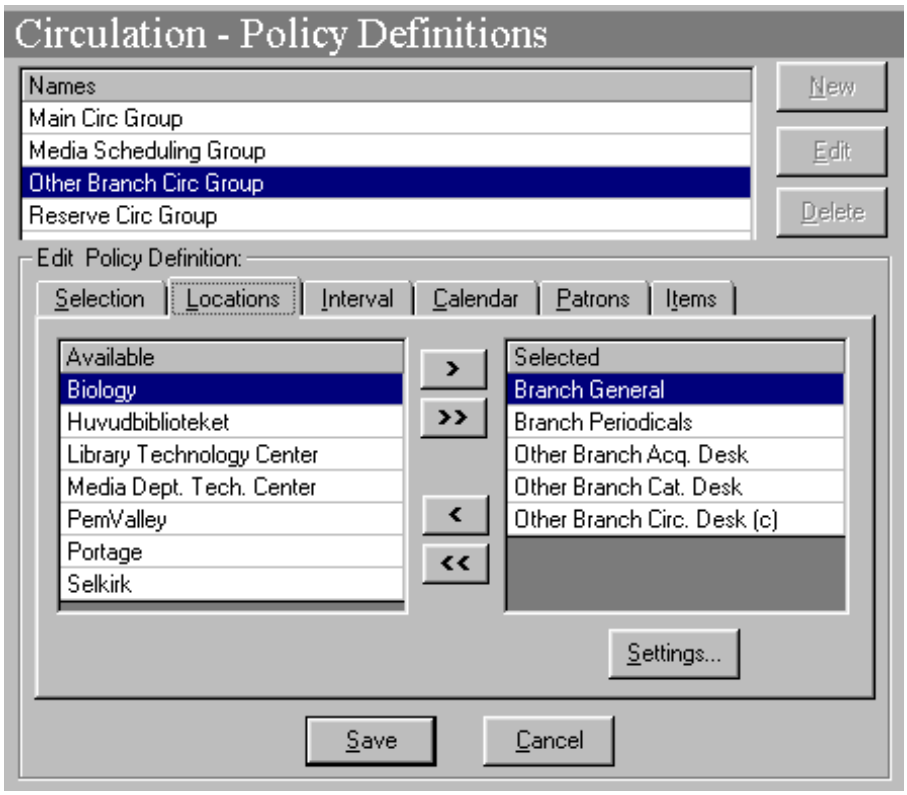

Figure 4-5. Edit Policy Definition section, Locations tab

6. From the **Available** list, click the location you created for ARS.

   NOTE:
   The **Available** locations list box is populated by locations created in System-Wide Configuration that have not yet been assigned to a policy group.

7. Click the single right arrow button.

Result: The ARS location item moves from the **Available** list to the **Selected** list and is associated with the circulation policy group.

8. Click the **Save** button to save the association, the **Cancel** button to cancel it.

   Result: The **Edit Policy Definition** section closes.

ARS Location Defined as Automated Storage Facility

After a location(s) is set up for the ARS and associated with a Circulation Policy Group, it has to be defined as an automated storage facility.

Procedure 4-3. Designating the ARS location an automated storage facility

Use the following to define the ARS location as an automated storage facility.

1. From the Voyager System Administration **Functions** menu, select **Circulation**, then click **Policy Definitions**. Alternately, click the **Circulation** bar in the left column, then the **Policy Definitions** icon below the bar.

   Result: The **Circulation - Policy Definitions** window opens.

2. Click the policy group with which the ARS storage facility location is associated.

3. Click the **Edit** button.

   Result: The **Edit Policy Definition** section displays below the list box of policy names.

4. Click the **Locations** tab.

   Result: The **Locations** tab displays lists of available and selected locations (Figure 4-6 on page 4-8).

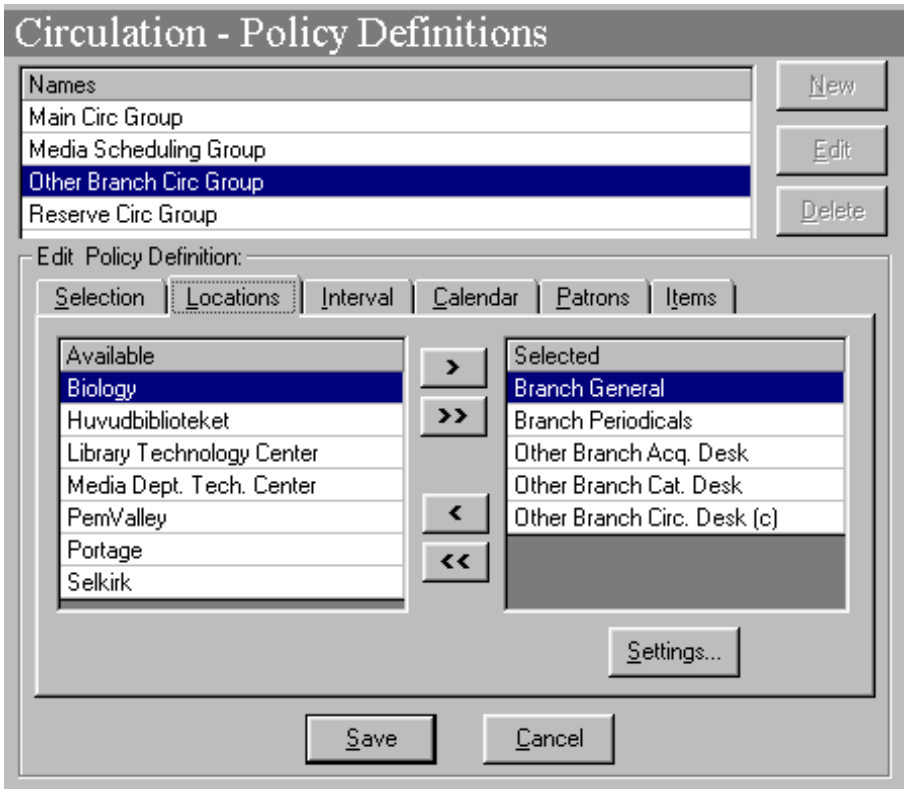

Figure 4-6. Edit ARS location in Voyager

5. Click the name of the ARS storage facility location from the list of **Selected Locations**.

6. Click the **Settings...** button.

   Result: The **Location Settings** dialog box opens (Figure 4-7 on page 4-9).

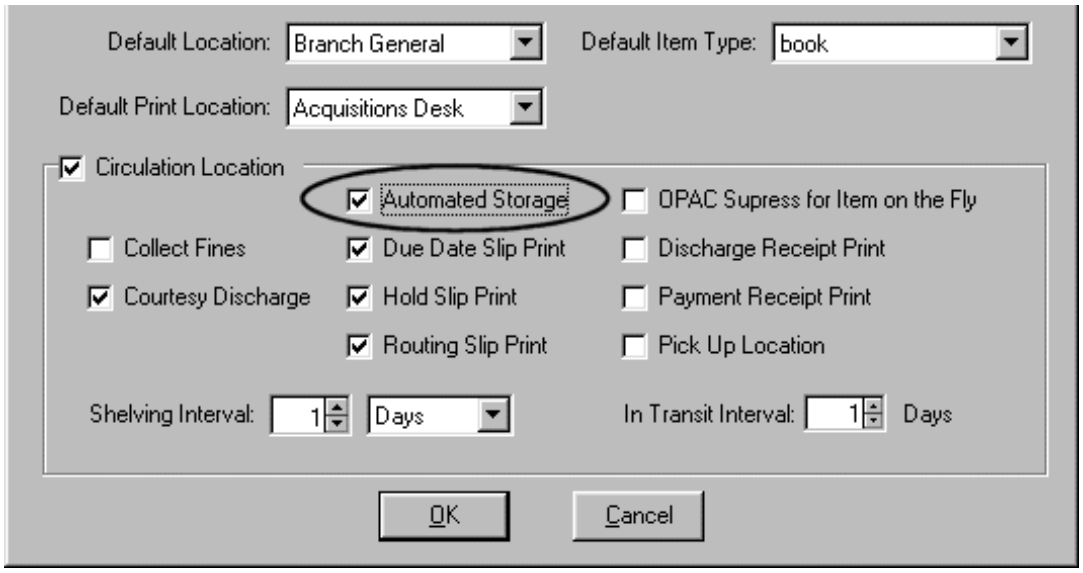

Figure 4-7. Location Settings dialog box

7. Check the **Automated Storage** check box to designate the location is an ARS storage facility.

8. Click the **OK** button to save the designation, the **Cancel** button to discard it.

   Result: The **Location Settings** dialog box closes.

9. Save or cancel out of the **Edit Policy Definition** section.

10. Repeat Steps 2 - 9 for any additional locations you want to define as ARS.

OPAC Request Form

After you have purchased the ARS software, Endeavor adds an OPAC request form to your Voyager system. This form allows patrons to request items stored remotely. As with other request forms, you decide the name of the form.

Procedure 4-4. Defining an OPAC request form for placing remote request

Use the following to define an OPAC request form for placing remote requests.

1. From the Voyager System Administration **Functions** menu, highlight **OPAC Configuration**, then click **Request Forms** (see Figure 4-8 on page 4-10).

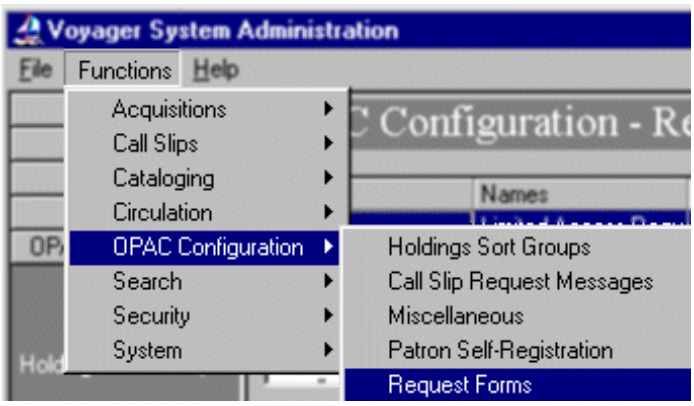

Figure 4-8. Path to OPAC request forms

Result: The **OPAC Configuration - Request Forms** window opens.

2. Click the **New** button.

   Result: The **New Request Form** section opens below the list box of forms.

3. From the **Form Type** drop-down menu, click **system defined form**.

   Result: The **New Request Form** section of the **OPAC Configuration - Request Forms** window alters tabs and fields as necessary to conform to the chosen form type (Figure 4-9 on page 4-11).

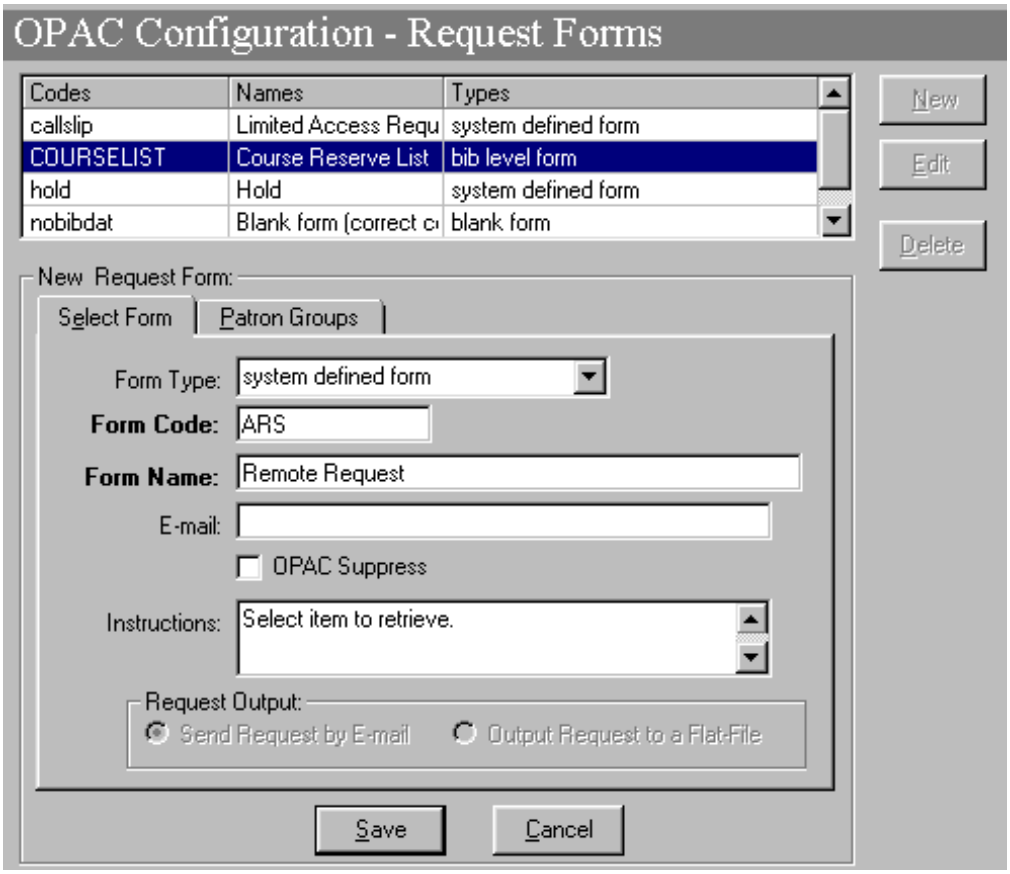

Figure 4-9. OPAC Configuration - Request Forms, system defined form, Select Form tab

4. Enter a form code and name in the **Form Code** and **Form Name** fields.

5. In the **Instructions** field, enter any instructions for the individual requesting the item.

6. Click the **Patron Groups** tab.

   Result: The **Patron Groups** tab opens (Figure 4-10 on page 4-12).

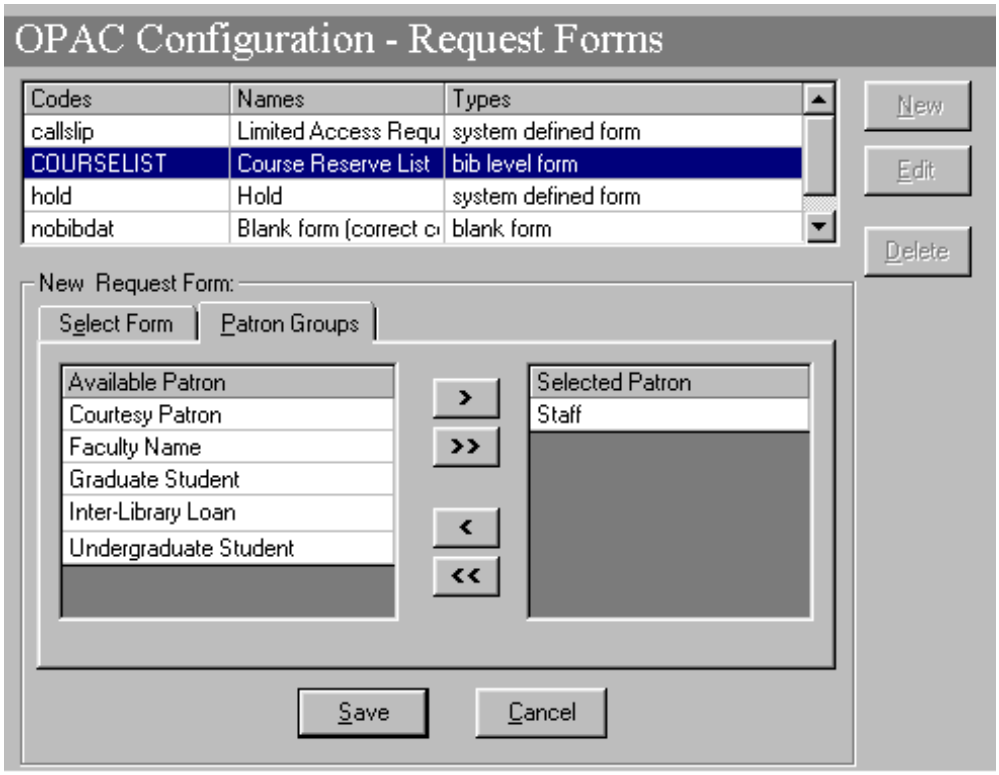

Figure 4-10. OPAC Configuration - Request Forms, Patron Groups tab

7. From the **Available Patron** list, click the name of the patron group(s) you want to enable for remote requests, then click the single right arrow button. To move the entire list, click the double right arrow button.

   Result: The group name moves from the **Available Patron** list to the **Selected Patron** list. The selected group(s) will be able to place remote requests from the OPAC.

   For more detailed information, see the section on OPAC configuration in the *Voyager System Administration User's Guide*.

Index

A

About this document, -vii
ARS
  See Automated Retrieval System.
audience
  of this document, -vii
Automated Retrieval System (ARS), 2-1
  about, 2-2
  as automated storage facility, 4-7
  communication with Voyager, 2-6, 2-7
  creating location, 4-2
  location
    Circulation Policy Group, 4-4, 4-5
  message
    mhs_msg message received, 2-10
  notifying, 2-6
  process overview, 2-2–2-6
  receipt message, 2-10
  receipt to Voyager, 2-7
  retrieval, 2-6
  storage bin, 2-6
  vendors, 2-2
  Voyager System Administration
    new location, 4-2
automated storage facility
  ARS defined as, 4-7
  designating ARS location, 4-7

B

barcode
  add, 2-9
  bad, 3-6
  delete, 2-10
  extraction, 3-2
    Voyager location, 3-3
  inactive, 3-2
  loading, 3-1
  maintenance, 2-6
  null, 3-6
  removal, 2-6
  verifying, 3-12

C

Cataloging Location column
  MFHD, 3-9
checkout, 2-6
Circulation - Policy Definitions window, 4-5, 4-7
  Edit Policy Definition section, 4-6, 4-7
  Locations tab, 4-6
Circulation module request, 2-5
Circulation Policy Group, 4-4
  and ARS location, 4-4
  associating with ARS location, 4-5
command file
  creating, 3-4
  location codes, 3-4
  Pstrgexp, 3-3, 3-4
  Pstrgvfy, 3-4, 3-10, 3-12
command line, 3-4
  parameters, 3-3, 3-7
    Pstrgexp, 3-2
    Pstrgvfy, 3-7
  Pstrgexp, 3-5
  sample
    Pstrgvfy, 3-13
communication
  cycle, 2-6
  Voyager and ARS, 2-6, 2-7
conventions used
  in this document, -viii
creating
  ARS location, 4-2
  command file, 3-4

D

dæmon, mhs_msg
  See mhs_msg (dæmon).
dialog box

Location Settings, 4-9
discharging
item, 2-6

E

Edit Policy Definition section, 4-7
Circulation - Policy Definitions window, 4-6

F

field
Pick Up At, 2-4
Pickup At, 2-5

G

GFA Software Technologies, Inc., 2-2

H

HK Systems, Inc., 2-2
how to use this document, -viii

I

inactive barcodes, 3-2
intended audience
of this document, -vii
item
barcode
maintenance, 2-6
removal, 2-6
checkout, 2-6
circulating, 2-6
discharging, 2-6
mhs_msg (dæmon) request, 2-8
patron retrieval, 2-6
pick-up location, 2-6
record, 3-10
returning, 2-6
routing, 2-6

L

loading barcodes, 3-1
location
ARS as automated storage facility, 4-7
associating with Ciculation Policy Group, 4-5
Circulation desk, 2-4, 2-5
Circulation Policy Group, 4-4
editing in Voyager, 4-8
new for ARS, 4-2
offsite, 4-4
pick-up, 2-4, 2-5
Voyager System Administration
form, 4-3
location codes
case-sensitivity, 3-7
changing, 3-8, 3-10
Pstrgvfy, 3-8
command file, 3-4
multiple, 3-3
Pstrgexp, 3-4
Pstrgvfy, 3-4
Location Settings dialog box, 4-9
Locations tab
Circulation - Policy Definitions window, 4-6
log file
Pstrgexp, 3-5
example, 3-6
Pstrgvfy, 3-13–3-14
example, 3-14

M

Materials Handling System (MHS), 2-2

message
“receive” type, 2-8
“send” type, 2-8
mhs_msg message received, 2-10
types, 2-8
message log
log.strgvfy.YYYYMMDD.HHMM, 2-10
mhs_msg.log, 2-11
out.strgexp.YYYMMMDD.HHMM, 2-13
MFHD, 3-10
Cataloging History tab, 3-11
Cataloging Location column, 3-9
changing location codes, 3-8
operator name, 3-8
MHS, 2-2
MHS Message Server, 2-8
mhs_msg (dæmon), 2-6, 2-8
message
add barcode, 2-9
delete barcode, 2-10
item request, 2-8
types, 2-8
parameters, 2-8
request to ARS, 2-7
system startup, 2-8
Voyager request, 2-7
multiple parameters, 3-4
multiple requests, 2-5

N

null barcode, 3-6

O

offsite location, Voyager System Administration, 4-4
OPAC
patron-initiated requests, 2-3
request, 2-4
request form, 2-4, 4-9
OPAC Configuration - Request Forms window, 4-10
New Request Form section, 4-10
Patron Groups tab, 4-11
Select Form tab, 4-11
operator name
MFHD, 3-8
output
Pstrgexp, 3-6

P

parameter
multiple, 3-4
Pstrgexp, 3-3
Pstrgvfy, 3-7
patron
pick-up location, 2-6
requests, 4-9
retrieves item, 2-6
Pick Up At field, 2-4
Pickup At field, 2-5
pick-up location, 2-4, 2-5
Pmhs_msg UNIX script, 2-8
policy group, 4-7
Pscripts, 3-5
Pstrgexp, 3-2–3-6
command file, 3-3, 3-4
command line parameters, 3-2, 3-3
location codes, 3-4
log file, 3-5
directory, 3-3
example, 3-6
output file, 3-6, 3-12
directory, 3-3
running, 3-5
Pstrgvfy, 3-6–3-13
changing location codes, 3-10
changing locations, 3-13
command file, 3-4, 3-10, 3-12
command line parameters, 3-7
command line sample, 3-13
input file, 3-7
location codes, 3-4
log file, 3-13–3-14
changing directory, 3-9
example, 3-14
name, 3-14
verification results, 3-13
multiple locations, 3-7
parameter list, 3-9

single location code, 3-7
verifying barcodes, 3-7, 3-8, 3-12
purpose
of this document, -vii

R

remote retrieval request, 2-4, 4-9
remote storage
returning item, 2-6
WebVoyage indication, 2-3
remote_storage_queue table, 2-13
request
Circulation module, 2-5
mhs_msg (dæmon) message, 2-8, 2-9, 2-10
multiple, 2-5
OPAC, 4-9
OPAC form, 4-9
patron-initiated, 2-3
remote, 4-9
remote storage, 2-3
staff-initiated, 2-5
Voyager to ARS, 2-6
request form
OPAC, 2-4
WebVoyage, 2-5
request types, 2-4
patron-initiated, 2-4
Robot Arm, 2-2
running Pstrgexp, 3-5

S

Siemens Dematic - Rapistan, 2-2
Storage Barcode Export Program (Pstrgexp), 3-2
See also Pstrgexp.
Storage Barcode Verify Program (Pstrgvfy), 3-6
See also Pstrgvfy.
System - Locations window, 4-3
System-Wide Configuration, available locations, 4-6

T

TCP/IP connection, 2-2
Voyager to ARS, 2-7

V

vendor, ARS third-party, 2-2
GFA Software Technologies, Inc., 2-2
HK Systems, Inc., 2-2
Siemens Dematic - Rapistan, 2-2
verifying barcodes, 3-12
Voyager
communication with ARS, 2-6, 2-7
request to ARS, 2-6
routing, 2-6
server, 2-8
system startup, 2-8
Voyager Acquisitions, 4-4
Voyager Cataloging, 4-4
Voyager System Administration, 4-5
ARS setup, 4-1
Circulation - Policy Definitions window, 4-5, 4-7
creating ARS location, 4-2
new location form, 4-3
OPAC configuration, 4-10
OPAC Configuration - Request Forms window, 4-10
request forms, 4-10
System - Locations window, 4-3
voyager.env file, 2-8, 3-3
MHS Message Server section, 2-8

W

WebVoyage
patron-initiated requests, 2-3
remote storage item, 2-3
request, 2-4
request form, 2-5