Ex Libris
MetaLib

Upgrade Express Guide

Version 3.13 to 4.2.x

ExLibris The bridge to knowledge

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Appendixes

Glossary

This section contains a glossary of terms used during an upgrade of MetaLib systems.

Upgrade Process	The upgrade process comprises the entire process of upgrading a MetaLib local installation from version 3.13 to version 4.2.x, using two kits: the MetaLib Installation Kit (MIK) and the MetaLib Upgrade Express Kit (UEK).
MetaLib Instances	**Source version** — The current MetaLib version environment that the customer would like to upgrade to the next version. **Target version** — The new MetaLib version 4.2.x installation, which is the target instance of the upgrade process.
Upgrade Express Initial Round	The full Upgrade Express process from the 3.13 source to the 4.2.x target, including user data conversion, as well as conversion of configuration tables.
Switch to Production (STP)	The final stage in which the customer's latest data and KnowledgeBase from the 3.13 source instance is installed and converted on the customized 4.2.x target instance.
MetaLib Installation Kit (MIK)	The automated tool that allows system administrators to install the MetaLib software.
MetaLib Service Pack (SP)	A software update that provides fixes and/or minor enhancements between versions of MetaLib.
Upgrade Express Kit (UEK)	The automated tool that allows system librarians to upgrade a MetaLib installation to a new version.

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Introduction

The Upgrade Process

The upgrade process consists of two essential parts, both designed to be applied by customers, in the following order:

1   Install the new MetaLib version 4.2.x from scratch using the MetaLib Installation Kit (MIK). The *MetaLib Installation Kit (Version 4.2.x)* document provides detailed step-by-step instructions on how to install MetaLib version 4.2.x. The installation takes a few hours and should be performed by a System Administrator.

2   Upgrade the MetaLib 3.13 customer's local version to version 4.2.x using the Upgrade Express Kit (UE). This document provides detailed step-by-step instructions on how to apply the Upgrade Express Kit. The Upgrade Express process may involve a number of iterations, depending on the complexity of the site, and can take one to several days to complete, excluding customization of the UI.

The UE Kit allows customers to test the upgrade so that they feel confident about the process itself. Test upgrades do not affect the current live system.

Customers should continue working on the live MetaLib version 3.13 system, updating their Local KnowledgeBase, applying CKB updates, and applying

service packs until the final switch to production. These updates are included in the final data conversion.

Overview of the MetaLib Installation Kit (MIK)

Ex Libris provides an automated MetaLib Installation Kit (MIK) for customer self-installation. The installation should be performed by a local System Administrator. The installation takes a few hours depending on the server. Ex Libris offers installation services to interested customers for a fee. Contact your local office to obtain a quote.

The *MetaLib Installation Kit (Version 4.2.x)* document provides instructions for the automatic installation of MetaLib version 4.2.x using the MetaLib Installation Kit (MIK). The package facilitates installation of MetaLib version 4.2.x, Oracle 10g, and the creation of an Oracle database. Oracle 10g is installed in parallel to Oracle 9 and a new separate database is created for Oracle 10.

NOTE:
> During the MetaLib installation, two reboots of the server are required, one for new values of the system parameters to take effect, the other to test startup scripts. Other Ex Libris applications on the server using Oracle experience a short downtime when the new Oracle 10g listener is configured.

Customers should coordinate their upgrades with local offices to ensure that local staff can provide appropriate support.

Overview of the Upgrade Express

The Upgrade Express Kit encompasses a methodology and a set of programs to achieve a smooth and fast upgrade of local MetaLib systems, including local data and setup.

The upgrade process is not merely a process of installing the new MetaLib software components. It is also a process of converting the customer's local data and setup. New MetaLib developments often require changes in the structure and content of MetaLib data, configuration tables, and files (setup thereafter). This means that the Upgrade Kit needs to convert the local data to the new required structure while preserving its integrity.

The Upgrade Express methodology replaces the previous revision process applied by MetaLib customers who upgraded from MetaLib Version 2.x to Version 3.x.

The Upgrade Express Kit is introduced to upgrade MetaLib version 3.13 to Version 4.2.x (it is not possible to upgrade directly from version 3.12 or version 2.00).

The Upgrade Express Kit is designed to allow customers to test and apply data conversion a number of times. This enables customers to fine-tune their new upgraded system while not affecting their current live system. It also provides tools for saving configuration and customization work while rerunning data conversion.

What Is Not Included in the MetaLib Upgrade Express?

MetaLib Upgrade Express upgrades the customer's MetaLib system with the aim of maintaining current setup and functionality as much as possible. Upgrade Express runs on the installed new version 4.2.x software, making the required data structure and conversion changes.

Because version 4.2.x includes a completely new set of HTML files recoded to comply with http://www.w3.org/TR/1999/WAI-WEBCONTENT-19990505 and with HTML and CSS validity standards, the Upgrade Express Kit does not transfer any HTML local customization from version 3.13. Customers need to re-customize the new set of HTML files using the new customization guidelines.

MetaLib version 4.2.x includes new functionality which, in many cases, requires configuration. Such new configuration is not included as part of the Upgrade Kit, since the purpose of the Upgrade Kit is to convert local 3.13 data, setup, and configuration to version 4.2.x. However, in cases where system parameters were changed from version 3.13 to version 4.2.x, the Upgrade Kit converts old parameters to new parameter settings.

NOTE:
MetaLib version 3.13 installations are converted as a whole. This means that consortia installations need to plan the upgrade together. There is no mechanism for upgrading single institutions from a consortium.

Who Should Run the Upgrade Express Kit?

Since the Upgrade Kit is applied directly from the server and requires familiarity with MetaLib configuration and setup, the MetaLib System Librarian is best suited to run the Kit.

Customer-Owned and MetaLib-Owned Data

It is important to differentiate between customer-owned data and MetaLib-owned data. The Upgrade Kit converts customer-owned data from the source 3.13 instance to the target 4.2.x instance. MetaLib-owned data is delivered via the new Installation Kit.

The table below contains a mapping of the customer data vs. MetaLib data:

Table 1. Customer-Owned and MetaLib-Owned Data

Component	Customer Data	MetaLib Data
KnowledgeBase (`dat01`)	Local Knowledgebase (LKB)	Central KnowledgeBase (CKB)
Main configuration tables (`./metalib_conf`)	Customizable global parameters	Hard-coded global parameters
Instances (HTML, icons, configuration tables)	`ins<NN>` trees	`ins00` tree
Institutions	Local institutions	METALIB institution
User Data (`vir00`)	User records, personalized lists, statistics	METALIB template data
PDS	`tab_service.<inst>` PDS configuration	`tab_service.metalib` Default logon page

Upgrade Express Methodology and Orientation

The methodology of the Upgrade Express is as follows:

- A new version of MetaLib 4.2.x is installed by running the MetaLib Installation Kit (MIK).

- The latest 4.2.x service pack is applied.

- The customer data from version 3.13 is added to the new MetaLib installation by running the Upgrade Express.

The final result, after running the MIK and the Upgrade Express, is a MetaLib 4.2.x software environment with the customer's 3.13 configuration and data.

While the upgrade process is being executed, the version 3.13 production instance can continue to function in parallel. Customers can customize, test, and localize their new version 4.2.x without pressure and without affecting the production instance. The upgrade process is composed of an Upgrade Express initial round, customization, and a user data synchronization process.

The Upgrade Express can be run on version 3.13 regardless of the service pack (SP) that was last applied.

The Upgrade Express menus guide you step by step as you move from one stage to another. You must always start with the source 3.13 menu and then move to the target 4.2.x menu. Steps should be run in the order presented in the Upgrade Express utility.

Before applying each step, two minus signs (--) appear next to the step. After successful completion of each step, the minus signs turn to plus signs (++) in the Upgrade Express menu to indicate which steps have already been performed. The ++ signs appear after you reactivate the menu.

Although much of the upgrade is done automatically, some configuration has to be done manually. A new set of HTML files is introduced in version 4.2.x to comply with accessibility standards. As a result, re-customization of the user interface is necessary, including the PDS logon page. In addition, a conversion of icons to the new format of PNG (Portable Network Graphics) is required.

Guidelines for Running the Upgrade Express on Test/ Production Servers and Instances

Customers may have test and production instances. In some cases, the test and production instances are on the same server, and in other cases they are on separate servers.

Customers have the option to download the Upgrade Express to a test server to perform a trial run of UE and familiarize themselves with the upgrade process. In such a case, the source can be either the test 3.13 instance or the production 3.13 instance. After such a test run, it is important to start the procedure from scratch by downloading the package again and running the entire UE process from the production instance to the new 4.2.x installation.

Running a test from the production version 3.13 allows customers to:

■ Test a real data export, including real-user and KB data.

■ Estimate the time it will take to run each step to plan the final STP.

■ Simulate as much as possible the final upgrade express conversion process.

There are a number of advantages to installing the new MetaLib version 4.2.x on the production server in parallel to the production instance, rather than on the test server:

■ There is no need to transfer the data across servers via SFTP for each Upgrade Express run.

■ The switch to production following the final Upgrade Express run can be immediate and simple using the switch port utility, without having to copy MetaLib from one server to another, which must be done manually and is therefore a time-consuming process.

NOTES:

■ To ensure data integrity, it is mandatory to shut down MetaLib when doing the final data export from the 3.13 Source Production instance. It is not mandatory to do so during test runs. In such a case, the export can be

done without shutting down MetaLib. However, ensure that no actions are being performed in the 3.13 Management Interface during the export.

■ The export process and some other UE processes take up substantial system resources and should not be run during peak time.

Major Stages of the Upgrade

The following major stages are required in order to upgrade from MetaLib 3.13 to MetaLib 4.2.x:

1 Install the new MetaLib version 4.2.x (using the MIK).

2 Execute the Upgrade Express from 3.13 to 4.2.x (initial round).

3 Localize and customize the new MetaLib version.

4 Switch to production.

Figure 1 illustrates the four major stages (as indicated by the four boxes in the center of the chart). The large top box marked 3.13 illustrates the process of extracting data from the 3.13 installation and importing it via the Upgrade Express. The large bottom box marked 4.2.x illustrates the status of the data at each stage—from the initial installation of version 4.2.x, to the import of customer data, to the final synchronization of user and CKB data.
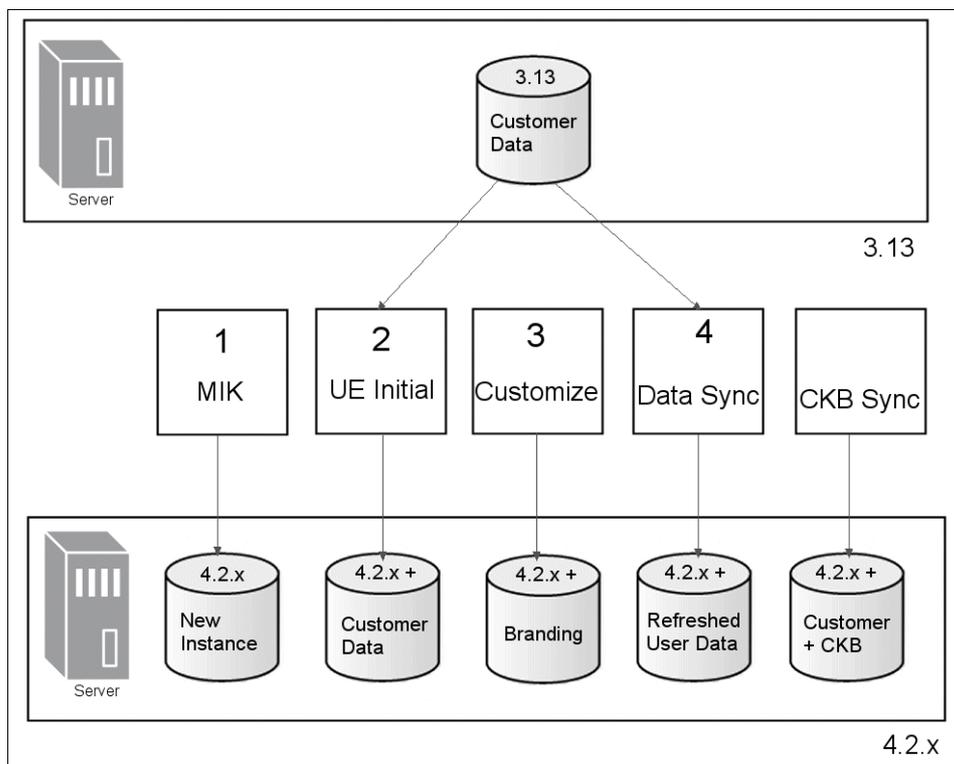
Figure 1: Upgrade Process - Major Stages

Stage 1: Install the New Version 4.2.x Target

The first stage in the upgrade process is the preparation of the target environment. The target version (4.2.x) can be installed on the same server as version 3.13 or on a separate server. In both cases, hardware and operating system requirements for 4.2.x and the size of the customer's database must be taken into account.

The source and target servers do not need to be on the same operating system. You can upgrade from SUN Solaris to Linux RH3/4 or from Linux RH2/3/4 to SUN Solaris.

For further information, refer to the following documents:

■ *Requirements for MetaLib 4 and SFX 3 Installation* (for installations on new servers)

■ *Requirements for Upgrading from MetaLib Version 3.13 to MetaLib Version 4* (for installations on servers that already have a MetaLib installation)

NOTE:
The Upgrade Express requires additional disk space because during the upgrade of Oracle tables, the source schemas are stored in temporary

schemas. This means that in the target installation, you need sufficient space to store the original data of version 3.13 and the converted data. In addition, MetaLib stores the original data that comes with a new version 4.2.x installation.

Stage 2: Execute Upgrade Express (Initial Round)

The second stage of the upgrade exports the data from the source instance and converts it to the new version via the Upgrade Express utility.

Pre-Upgrade (Initial Round)

To prepare your system for the upgrade process:

1   In the source instance, clean the temporary database by running the `clear_vir01` utility. Remove the log/scratch files using UTIL/X/9.

2   Remove the old statistics.

Statistics data takes up a large amount of space in the Oracle database and slows down the conversion process. Therefore, it is recommended to clear old statistics data, keeping only the last six to 12 months of data in the 3.13 source version.

It is recommended that you generate statistical reports in the Management Interface for the old data and then remove the old data using the clean statistics utilities (UTIL/X/10). This speeds up the conversion process substantially and uses less space in the MetaLib version 4.2.x Oracle tables.

3   Check the disk space on both the source and target servers.

4   Download the Upgrade Express Kit from the FTP server to both the source and target servers (if both are on the same server, only one download is necessary). For details, see **Stage 1: Installing the Upgrade Express Package** on page **21**.

Upgrade Express Mandatory Steps (Initial Round)

To run the Upgrade Express on the source instance:

1   Define the upgrade parameters.

2   Export the customer data.

3   Transfer the customer data (only if the source and target are on different servers).

4   Monitor the logs.

For details, see **Steps to Be Performed on the Source Instance** on page **23**.

To run the Upgrade Express on the target instance:

1 Check the environment.

2 Install the customer data.

3 Update the configuration files.

4 Run all the steps in the Upgrade Express.

5 Monitor the logs.

6 Perform the steps listed in **Step 5: Perform Post-Upgrade Express Actions** on page **36** (with the exception of dropping the temporary Oracle schemas).

For details, see **Steps to Be Performed on the Target Instance** on page **29**.

Post-Upgrade (Initial Round)

Perform the following post-upgrade procedures:

1 Test that the upgraded instance is functional.

2 Run a backup (optional).

3 Run the CKB update (recommended).

Stage 3: Customization

The third stage of the upgrade allows you to localize and customize your site.

To localize and customize your site:

1 Proceed with customization/localization (HTML, CSS, icons).

2 Back up customized files/directories. For details, see **Stage 3: Customization** on page **40**.

Stage 4: Switch to Production

The fourth stage of the upgrade allows you to synchronize the customer data from the 3.1.3 source instance with the 4.2.x target instance prior to switching to production (STP).

Pre-Upgrade (STP)

Before you perform this stage of the upgrade:

1 Schedule an STP and confirm any questions you have with your local MetaLib Support team.

2 Perform a backup of MetaLib version 4.2.x.

3   Clean the statistics data in the source version. This is not a mandatory step but it is highly recommended, especially for sites with large volumes of statistical data.

4   Stop the MetaLib Web and search servers and stop the Apache processes, but leave Oracle 9 (and the Oracle listener) up and running.

Final Data Synchronization (STP)

The customer data synchronization process takes all MetaLib version 3.13 resource and user data, converts the data, and replaces the existing data within the MetaLib 4.2.x Oracle environment. However, it does not overwrite the version 4.2.x HTML and CSS customization.

To perform final data synchronization:

1   Enter the MetaLib 3.13 source version and run the export and transfer steps. For details, see **Steps to Be Performed on the Source Instance** on page **23**.

2   Enter the target 4.2.x version and run the submenu under Step P: Switch to Production Final Data Sync. For details, see **Step P: Switch to Production Final Data Sync** on page **43**.

3   Run the CKB update on the target version 4.2.x installation.

4   Test the upgraded target version 4.2.x (`dat01`, `vir00`, My e-Journals data conversion, local/remote logon, search, and so forth).

Post-Upgrade Procedures (STP)

To perform post-upgrade procedures:

1   Run the CKB synchronization.

The new MetaLib 4.2.x installation contains the Central KnowledgeBase (CKB) up to Dec 6, 2006. The Upgrade Express handles the conversion of the customer's Local KnowledgeBase (LKB) from version 3.13 to 4.2.x.

After running the Switch to Production Final Data Sync, sites must run the latest CKB update on the target instance in order to synchronize the METALIB institution with resources that were added/updated after Dec 6, 2006. For more information, refer to the **CKB Update Overview** section of the *MetaLib Resource Management Guide*.

2   Drop the temporary schemas from the target instance (see **Step 5: Perform Post-Upgrade Express Actions** on page **36**).

3   Adjust tablespaces if needed.

Upgrade Restrictions

The following restrictions apply to upgrades:

- The Upgrade Express cannot be applied to any version other than version 3.13.

- In a consortium, there is no mechanism for upgrading individual institutions. All the member institutions must be upgraded together and need to switch to production at the same time.

- Once the upgrade process has begun, no changes are to be made to the local institutional setup of the 3.13 source and 4.2.x target instances. Changes include adding a new institution, portal, or language. Adding new local IRDs or editing the existing IRDs, configuration records, or categories and QuickSets must only be done on the 3.13 source and not on 4.2.x target DAT01 database.

Reference Documents

The following documents should be reviewed before the upgrade and used in the upgrade process. All the documents are posted in the Ex Libris Documentation Center (http://www.exlibrisgroup.com/docportal).

- *MetaLib Installation Kit (Version 4.2.x)*
- *Requirements for Upgrading from MetaLib Version 3.13 to MetaLib Version 4*
- *MetaLib Version 4.0 Release Notes*

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Upgrade Express

Stage 1: Installing the Upgrade Express Package

The Upgrade Express package is a menu-driven program that is run by a single command and requires almost no configuration. The package is a .tar file that is available for download from the FTP server and should be installed and run on both the source and target servers.

The Upgrade Express package should be extracted to the `/exlibris/metalib` directory.

NOTES:

- If the source and target instances are on the same server, the package serves both instances, and you need to download it only once.

- If the source and target instances are on different servers, you must download the package at the same time to both servers.

To install the Upgrade Express package:

1   Log on to the MetaLib server as the `metalib` user.

2   Enter the following commands to connect to the FTP server:

```
cd /exlibris/metalib
ftp ftp.exlibris.co.il
```

3   When prompted, use the `metalux` user and the password provided by Ex Libris Support.

4   Enter the following commands to download the .tar file:

```
ftp> bin
ftp> prompt
ftp> get upgrade_express_313_400.tar.<N>.<NN>.gz
ftp> quit
```

5   Enter the following commands to extract the package to the `/exlibris/metalib` directory:

```
gzip -d upgrade_express_313_400.tar.<N>.<NN>.gz
tar -xvf upgrade_express_313_400.tar.<N>.<NN>
```

6   Enter the following commands to verify that the Upgrade Express directory tree was created:

```
cd /exlibris/metalib
ls -d upgrade_express_313_400/
```

Upgrade Express Log Files

The main log file is called `metalib_upgrade_express.log` and is located under the `upgrade_express_313_400/logs` directory.

This log file is an accumulative log file. This means that it contains information about all the steps performed from the first round of the Upgrade Express until the last one, regardless of how many times the various UE steps were run.

You can review the Upgrade Express main log file by clicking the **Upgrade** menu and selecting **View main log file**.

Additionally, a log file for each of the steps in the UE is created under the `upgrade_express_313_400/logs` directory. The logs for specific steps are overridden when the specific steps are rerun.

Logs for data conversion steps (Step 4 in the Target menu) are located under the sub-directory `upgrade_express_313_400/logs/conversion_step_logs`.

These log files include:

■   Description of the task being performed

- Progress reports of the process
- Report of successful tasks
- Warnings
- Alerts for errors

The upgrade process consists of a number of steps that take some time to complete—between half an hour to several hours, depending on the server and local data. An e-mail notification is sent after the success or failure of each step, enabling the user to let the system run in the background without constant supervision. Ensure that UNIX mail is enabled on the server.

If a step fails and you are notified by e-mail, you may need to perform tasks manually, or rerun a specific step after making the necessary changes. For assistance with failed steps, contact your local support office.

Stage 2: Running Upgrade Express (Initial Round)

NOTE:

The upgrade process must be performed on the source instance first, and only afterwards on the target instance.

Steps to Be Performed on the Source Instance

This section describes all the steps that should be performed on the source instance.

To start the Upgrade Express utility on the source instance:

1   Perform the pre-upgrade procedures described in **Pre-Upgrade (Initial Round)** on page **16**.

2   Log on to the MetaLib 3.13 source instance.

3   Enter the `tcsh` command to start the shell.

4   If you have installed the latest MetaLib 3.13 SP, enter the `kitm` alias. Otherwise, enter the following command to navigate to the UE main directory:

```
cd /exlibris/metalib/upgrade_express_313_400
```

5   Enter the following command to display the UE Main menu (see **Figure 2**):

```
upgrade_util
```

```
+----------------------------------------------------------+
| MetaLib Upgrade Express Utility 3.13->4.00               |
| Version 1.10                                             |
| Source Menu                                             |
+----------------------------------------------------------+


   0. Exit
-- 1. Define upgrade parameters
-- 2. Export customer data
-- 3. Transfer customer data
   4. View main logfile


Please select [0]:
```

Figure 2: MetaLib Upgrade Express Main Menu

NOTE:

Options that have not yet been run are indicated by two minus signs (--).

6   Perform each step in the menu in sequential order, beginning with Step 1 (described below).

Step 1: Define Upgrade Parameters

This is a mandatory step, which must be run at the beginning of the Upgrade Express. In this step you define the target instance IP, target instance port and instance, and the e-mail address to be used for receiving e-mail notifications.

The source server IP is taken from the `/etc/hosts` file. If the source server IP is not defined in the `/etc/hosts` file, UE prompts for the source server IP as well.

NOTE:

You can review and modify the upgrade parameters at any time by accessing Step 1 again. If you change the target parameters, you must download the UE to the new target.

If you select this step after you have already defined the target parameters, the Upgrade Express displays a summary of the values you entered for your target.

For example:

```
Define upgrade parameters
-------------------------
Source server      = 11.3.237.65
Source server name = il-mldev01.exlibris-int.il
Target server      = 11.3.237.68
Source instance    = m3_1
Target instance    = m4_2
Target user        = metalib
Ora user prefix    = M31_
Oracle users       = DAT01 JNL01 VIR00 VIR01
Email address      = admin@mylibrary.com


You are going to modify the above parameters.


Do you want to continue Y/N:


Type Y if you want to modify all/some of the parameters.
Type N to return to the Source menu if you are satisfied with the
values registered.
```

To define the upgrade parameters:

1 Enter option **1** to define the upgrade parameters.

2 At the following prompt, enter the server IP on which the new MetaLib 4.2.x is to be installed:

```
Target server IP [10.1.235.60]:
```

3 At the following prompt, enter the port of the new MetaLib 4.2.x installation:

```
Target port [8441]:
```

4 At the following prompt, enter the instance of the new MetaLib 4.2.x installation:

```
Target instance [m4_1]:
```

5 At the following prompt, enter the e-mail address that you intend to use for receiving e-mail notifications on UE status:

```
Mail address []:
```

The purpose of the e-mail address is to provide an update upon completion of a particular step and indicate whether the step was completed successfully or errors were experienced.

You can enter more than one e-mail address, separated by spaces. For example:

```
admin@mylibrary.com admin1@mylibrary.com
```

After successful completion, a ++ indication appears next to the relevant step in the Source menu.

Step 2: Export Customer Data

This is a mandatory step in which customer data, such as local configuration tables, setup files, and Oracle data is exported from MetaLib 3.13 and packaged into a zipped .tar file. It is run during the initial round, and once more prior to **Step P: Switch to Production Final Data Sync**.

NOTES:

- For test runs, ensure that there is no /M activity on your MetaLib 3.13 source instance while running this step.

- While the export customer data step is running, other steps from the menu are disabled.

- If the source and target are on different servers, enable an SFTP connection between them. If this is not possible, you will have to manually transfer the zipped .tar file containing the customer data.

You can monitor the main log file or monitor this step via the `export_customer_data.log` in the `/exlibris/metalib/upgrade_express_313_400/logs` directory.

At the end of this step, a zipped .tar file of the source customer data is created in the `exlibris/metalib/upgrade_express_313_400/data` directory.

After successful completion, a ++ indication appears next to the option in the Source menu.

Before switching to production (STP), perform the final Upgrade Express run on your MetaLib 3.13 instance.

To perform the final UE run on your MetaLib 3.13 instance:

1 Ensure the integrity of the data by performing the following steps:

a Take down the Web and search servers.

b Stop the Apache processes.

c Leave Oracle 9 up and running.

2 Enter option **2** to start the export.

The following message displays:

```
Export Customer Data on 11.3.237.65 m3_1
---------------------------------------------
This option will export local customer data from MetaLib 3.13
configuration and set up files and from Oracle tables.
The exported data will be packaged in the /exlibris/metalib/
upgrade_express_313_400 directory.
Do you want to continue Y/N:
```

3 Enter **Y** to continue. Otherwise, enter **N** to return to the Source menu.

The following message displays when you enter Y:

```
The Export Customer Data step is now running in the background
...
When this step is complete, an e-mail notification will be
sent.
Please wait until this step is complete before proceeding with
the next step.
This step will take from half an hour to several hours,
depending on customer data and server.
This step can be monitored via /exlibris/metalib/
upgrade_express_313_400/logs/export_customer_datalog log
file.

Press Enter to return to the Main Menu
```

NOTE:

As indicated in the above message, this step can take from half an hour to several hours, depending on customer data and server. Wait until you receive an e-mail notification confirming completion of this step and indicating whether any errors were reported. If any errors were reported, contact your local support office.

Step 3: Transfer Customer Data

This step should be run only if the target instance of the new MetaLib 4.2.x installation is on a different server than that of the source instance.

The customer data (packaged into a zipped .tar file during the Export step) is moved to the target server. The transfer is done via SFTP.

You can monitor the main log file or monitor this step via the `transfer_customer_data.log` file stored in the `/exlibris/metalib/upgrade_express_313_400/logs` directory:

NOTE:
You need to enable an SFTP connection from the source server to target server.

To transfer customer data:

1   If the source and the target are on different servers, enter option **3** in the Source menu. The following message displays:

```
Transfer Customer Data
----------------------
This option will transfer the customer data from 11.3.237.65
to 11.3.237.68

Do you want to continue Y/N: y
```

2   Enter **Y** to continue. The following message displays:

```
1. Packing the Customer Data ... Please wait ...
2. SFTP the Customer Data to the Target server ... Please wait
...
sftp metalib@11.3.237.68
Connecting to 11.3.237.68...
metalib@11.3.237.68's password:
```

3   Enter the MetaLib password on the target server.

4   Wait until you get an e-mail notification confirming completion of this step and indicating whether any errors were reported. If errors were reported, contact your local support office.

After successful completion, a ++ indication appears next to the option in the Source menu.

Step 4: View Main Log File

This is an optional step that opens the main log file of the Upgrade Express, located in exlibris/metalib/upgrade_express_313_400, in the UNIX editor view. It allows you to review the status of the steps that have already been activated.

The log file contains a timestamp of the start and end point of each step, the status of each step, and a reference to the relevant log file in the logs directory.

To exit this option, press **[ESC]** and then enter **:q**.

Figure 3 shows an example of the main Upgrade Express log file after running Steps 1 through 3.

```
The Upgrade Express Main Log File
======================================================
----------------
2007-01-04 14:07:33 Step define_upgrade_parameters - started
2007-01-04 14:07:52 Step define_upgrade_parameters - DONE
        See log at /exlibris/metalib/upgrade_express_313_400/logs/
define_upgrade_parameters.log
----------------
----------------
2007-01-04 14:08:02 Step export_customer_data - started
2007-01-04 14:13:35 Step export_customer_data - DONE
        See log at /exlibris/metalib/upgrade_express_313_400/logs/
export_customer_data.log
----------------
----------------
2007-01-04 14:14:26 Step transfer_customer_data - started
2007-01-04 14:14:26 Step transfer_customer_data - DONE
        See log at /exlibris/metalib/upgrade_express_313_400/logs/
transfer_customer_data.log
----------------
```

Figure 3: Example Upgrade Express Log

Steps to Be Performed on the Target Instance

After successfully completing Steps 1, 2 and 3 in the Source menu, log on to the target instance and proceed with the steps in the Target menu.

NOTE:

After you have performed the initial round of the upgrade, perform the post-upgrade procedures as described in **Post-Upgrade (Initial Round)** on page **17**.

To start the Upgrade Express utility on the target instance:

1   Log on to the MetaLib 4.2.x target instance.

2   Enter the tcsh command to start the shell.

3   Enter the following command to navigate to the UE main directory:

    cd /exlibris/metalib/upgrade_express_313_400

4   Enter the following command to display the UE Main menu (see **Figure 4**):

    upgrade_util

```
+--------------------------------------------------------+
| MetaLib Upgrade Express Utility 3.13->4.00             |
| Version 1.10                                           |
| Target Menu                                            |
+--------------------------------------------------------+


   0. Exit
-- 1. Check environment
-- 2. Install customer data
-- 3. Update configuration files
-- 4. Run upgrade express conversion steps
-- 5. Perform Post Upgrade Express Actions

   6. View main logfile
   7. View/Update upgrade parameters
   8. Store configuration files
-- P. Switch to Production Final Data Sync


Please select [0]:
```

Figure 4: Target Upgrade Express Menu

NOTES:

- Steps 1 through 5 are mandatory.

- Step P is mandatory for sites that are in production in 3.13 and would like to go live in version 4.2.x without losing their most recent user data.

Step 1: Check Environment

This step performs the following operations (after a successful MIK installation):

- Checks the existence of mandatory PERL modules.

- Checks whether there is sufficient free space in the Oracle database.

- Checks whether the Oracle 10g listener is up and running.

- Shuts down MetaLib in the target environment (including Web and search servers, Apache, and z39 gate).

To check the environment on the target instance:

1   Enter **1** to start the checks.

If all checks are successful, the following message displays (see **Figure 5**).

```
Check Upgrade Environment
=========================

The environment contains all needed modules and libraries.

There is sufficient space in the MetaLib 4 database to proceed with the
Upgrade Express.

Press Enter to return to the Main Menu
```

Figure 5: Check Upgrade Complete (No Errrors)

If any of the checks fail, a message displays indicating the error. **Figure 6** shows the message provided for insufficient space in the Oracle target database. For more information, see Step **3**.

```
Check Upgrade Environment
=========================
The environment contains all needed modules and libraries.

========== Source ===========
Used by M31_

NAME                    TOTAL USED M
-------------------- ------------
TS0                             851
TS1                             483
==============================

========== Target ===========
Free in M42_

NAME                    TOTAL FREE M
-------------------- ------------
TS0                            4602
TS1                             704

==============================
There is not enough space in the MetaLib database.
Refer to the relevant instructions on how to increase the tablespaces.

Press Enter to return to the Main Menu
```

Figure 6: Check Upgrade Error Message

2   Press **[ENTER]** to return to the main menu.

3 If you receive an error message that there is insufficient space in the MetaLib 4.2.x database (`m4_n`):

    a Check the size of the existing 3.13 database. This can be done using the O/14/8 utility.

    b Open a new session on your server, log on to the new MetaLib 4.2.x environment (`m4_n`), and increase the size of the new database. Change the database size according to the following formula:

        ■ Free space in the `TS0` table of the `m4_n` database after the MIK should be >= 2* Used space in `TS0` of your MetaLib 3.13 database.

        ■ Free space in the `TS1` table of the `m4_n` database after the MIK should be >= 2* Used space in `TS1` of your MetaLib 3.13 database.

    This change can be done using Util O/13/3. For a detailed description of this process, refer to **Managing Oracle (Util O)** section of the *MetaLib System Configuration and Administration Guide (Version 4.x)*.

    c Run this step again to ensure that the appropriate environment is in place. Only then can you proceed with the next step in the target menu.

After successful completion, a ++ indication appears next to the option in the Target menu.

Step 2: Install Customer Data (Initial Round)

This step imports the exported customer data from version 3.13 to version 4.2.x for the Upgrade Express initial round, as follows:

■ The .tar file is opened and the source tree is created in the `kit_root/data/ Source_instance` directory:

■ The target database is backed up so that at any point the instance can be restored.

■ The Oracle source data is imported into temporary Oracle schemas.

The process can be monitored via the `install_customer_data.log` file, which is stored in the `/exlibris/metalib/upgrade_express_313_400/logs` directory.

NOTE:
While the install customer data step is running, other steps from the target menu are disabled.

To install customer data for the initial round:

1   Enter **2** to install customer data. The following message displays:

```
Install Customer Data from 11.3.237.65 m3_1 to 11.3.237.68 m4_2
---------------------------------------------------------------------

This option will install the local customer data from MetaLib 3.13 to
MetaLib 4.00

Do you want to continue Y/N:
```

2   Enter **Y** to continue. Otherwise, enter **N** to return to the Target menu.

    The following message displays:

```
The Install Customer Data step is now running in the background ...
When this step is complete, an e-mail notification will be sent.
Please wait until this step is complete before proceeding with the next
step.
This step will take from half an hour to several hours, depending on
customer data and server.
This step can be monitored via /exlibris/metalib/
upgrade_express_313_400/logs/install_customer_data.log log file.

Press Enter to return to the Main Menu
```

3   Press **[ENTER]** to return to the main menu.

4   Wait until you receive e-mail notification confirming completion of this step before continuing. If any errors are reported, contact your local support office.

After successful completion, a ++ indication appears next to the option in the Target menu.

Step 3: Update Configuration Files

This step is used to update main MetaLib configuration files.

■   The Version 4.2.x `./metalib_conf/metalib_start` and `./metalib_conf/www_server.conf` files are updated with version 3.13 customer configuration values.

■   The PDS MetaLib server host name and port in the `tab_service.<institute>` files are updated.

To update configuration files:

1 Enter option **3** to update the configuration files. The following message displays:

```
Update Configuration Files
-----------------------------------------
This option will update the following configuration files:
metalib_start
www_server.conf
PDS tab_service.<INST>

Do you want to continue Y/N:
```

2 Enter **Y** to confirm the update. Otherwise, enter **N** to return to the Target menu.

The following message displays after updating the configuration files:

```
Update metalib_start configuration file
Update www_server.conf configuration file
Update pds tab_service configuration file

Update configuration files has completed
```

3 Wait until you receive e-mail notification confirming completion of this step before continuing.

After successful completion, a ++ indication appears next to the option in the Target menu.

Step 4: Run Upgrade Express Conversion Steps

This step contains the core of the Upgrade Express, handling the necessary data conversion of both configuration tables and Oracle data. For a detailed description of each of the Upgrade Express steps, see **Appendix C: Description of Upgrade Express Steps**.

This process can be tracked by viewing the `metalib_upgrade_express.log` file in the `/exlibris/metalib/upgrade_express_313_400/logs` directory. It can also be monitored via the `upgrade_express_conversion_step.log` file in the `/exlibris/metalib/upgrade_express_313_400/logs/ conversion_step_logs` directory. If one of the conversion steps fails, this is indicated in an `upgrade_conversion_steps.log` file with a reference to the path of the failed step log.

The name of each log file for a specific conversion step contains the specific step number. The files are stored in the `/exlibris/metalib/ upgrade_express_313_400/logs/conversion_step_logs` directory.

To begin the conversion steps:

1   Enter option **4** to display the Run Upgrade Express Conversion Steps submenu (see **Figure 7**).

```
Run Upgrade Express Conversion Steps
------------------------------------

0. Exit
1. Run all steps
2. Run a specific step (use only if specific step failed)

Please select [0]:
```

Figure 7: Run Upgrade Express Conversion Steps Submenu

2   Enter option **1** to run all steps. The following message displays:

```
   You are about to run Upgrade Express conversion for all steps.
   Are you sure you want to continue? Y/[N]
```

NOTE:

Option 2 should be used only if a particular step fails and you need to rerun it.

3   Enter **Y** to continue. The following message displays:

```
The Upgrade Express conversion is now running in the background ...
When this step is complete, an e-mail notification will be sent.
This step will take from half an hour to several hours, depending on
customer data and server.
This step can be monitored via
/exlibris/metalib/upgrade_express_313_400/logs/conversion_step_log
/upgrade_express_conversion_step.log log file.
```

NOTE:

While the Upgrade Express conversion is running, other steps from the Target menu are disabled.

4   Wait until you receive e-mail confirmation before moving to the next step in the upgrade.

After successful completion, a ++ indication appears next to the option in the Target menu.

Step 5: Perform Post-Upgrade Express Actions

This step must be run after the upgrade steps have been completed successfully and before system testing.

To perform post-upgrade actions:

1   Enter option **5** to display the Perform Post Upgrade Express Actions submenu (see **Figure 8**).

```
Perform Post Upgrade Express Actions
----------------------------------------

   0. Exit
-- 1. Remove UTF files
-- 2. Run clear_vir01
-- 3. Index DAT01
-- 4. Import MetaIndex libraries
-- 5. Drop temporary database schemas ( only before STP )

Please select [0]:
```

Figure 8: Perform Post Upgrade Express Actions Submenu

2   Enter option **1** to remove the `utf` directory in the `/exlibris/metalib/ m4_n` directory so that the old cache files are not used.

NOTE:
In version 4.2.x, the UTF files reside under the instances.

---

3   When the previous action completes, enter option **2** to initialize the tables in `VIR01` and set the counters to zero.

NOTE:
After a successful action, a ++ indication appears in the submenu (see **Figure 9**).

```
   0. Exit
++ 1. Remove UTF files
++ 2. Run clear_vir01
-- 3. Index DAT01
-- 4. Import MetaIndex libraries
-- 5. Drop temporary database schemas (only before STP)

Please select [0]:
```

Figure 9: Post Upgrade Express Actions Menu After Running Steps 1 and 2

4 Enter option **3** to index the KnowledgeBase (`dat01`). The following message displays:

```
The Indexing DAT01 step is now running in the background ...
When Indexing DAT01 step is completed, an e-mail notification will be
sent.
This step will take from half an hour to several hours, depending on
customer data and server.
This step can be monitored via /exlibris/metalib/m4_2/tmp/
p_index_database.DAT01.log log file.
```

NOTE:

Wait for an e-mail confirmation before proceeding with the next step.

5 Enter option **4** to import MetaIndex libraries for sites that have a MetaIndex license and have created MetaIndexes in version 3.13.

Use this option only if you created MetaIndexes in 3.13 and you want to load them into 4.2.x. If there are MetaIndexes from the source, the following message displays:

```
The Import MetaIndex libraries step is now running in the background
...
When Import MetaIndex libraries step is complete, an e-mail
notification will be sent.
This step will take from half an hour to several hours, depending on
customer data and server.
This step can be monitored via /exlibris/metalib/m4_8/tmp/
metaindex_import.log log file.
```

NOTE:

Wait for an e-mail confirmation before proceeding with the next step.

6 After completing the above steps, the system should be tested. (See **Appendix A: Post-Upgrade Checklist**.)

7 Enter option **5** to remove temporary schemas in the Oracle target database.

NOTES:

- **Step 2: Install Customer Data (Initial Round)** imports the Oracle data into temporary schemas, and then **Step 4: Run Upgrade Express Conversion Steps** moves the Oracle data from the temporary schemas to the permanent schemas.

- If you drop the temporary schemas, you will not be able to run **Step 4: Run Upgrade Express Conversion Steps** in the Target menu).

■ If you inadvertently drop the temporary data before the Upgrade Express conversion is complete and before you transfer the MetaIndexes, you will have to rerun **Step 2: Install Customer Data (Initial Round)**.

Step 6: View Main Log File

To view the log file for the target instance, enter option **6** in the Target menu.

NOTE:
If the source and target instances are on the same server, both use the same `upgrade_express_main` log file. If the source and target instances are on different servers, separate `main_upgrade_express` log files are created on each server.

For a detailed description, see **Step 4: View Main Log File** on page **28**.

Step 7: View/Update Upgrade Parameters

This option allows you to view/update parameters that are associated with the upgrade.

NOTE:
Currently, the only parameter that can be updated is the e-mail address used for e-mail notifications on steps performed on the target instance.

To view parameters:

1 Enter option **7** in the Target menu. The following submenu displays:

```
Define upgrade parameters
-------------------------
0. Exit
1. View Current Parameters
2. Update Parameters

Please select [0]:
```

Figure 10: Define Upgrade Parameters Menu

2   Enter option **1** to display the current parameters, which are used by Upgrade Express to run the conversion. The following message displays:

```
---------------------------------------------------------
Institutions to be upgraded:
OPENU SCIENCE HUJI ARTS


---------------------------------------------------------
Instances to be upgraded:
INS01 OPENU HUJI1 INS04 INS02 INS03


---------------------------------------------------------
Notification email address:
admin@mylibrary.com


---------------------------------------------------------
Current Languages:
eng ger
```

To update parameters:

1   Enter option **7** in the Target menu. The Define Upgrade Parameters submenu displays (see **Figure 10**).

2   Enter option **2** to display the Update Upgrade Parameters submenu.

```
Update upgrade parameters
-------------------------
0. Exit
1. Update Notification email Address definition

Please select [0]:
```

Figure 11: Update Upgrade Parameters Menu

3   Enter option **1** to update the notification e-mail address parameter. The following message displays:

```
Notification email address:
admin@mylibrary.com

Enter space delimited list of email addresses , D for default or Q to
quit [Q]:
```

4   Enter the e-mail addresses.

You can specify an individual e-mail address or a list of addresses, delimited by a space. On completion of time-consuming steps that are run in the background, an e-mail is sent to the relevant recipient (usually the person running the Upgrade Express process, but other individuals can be included in the recipient list).

Stage 3: Customization

After completion of the mandatory steps above, sites can proceed with local customization and configuration in preparation for switching to production with version 4.2.x.

> **NOTE:**
>
> A special utility is provided by the Upgrade Express for saving locally customized and configured files. It is highly recommended to save all the files you edit, customize, and configure using this utility (including new images) and either the standard backup routine, or the Store menu option. You can save each file separately or save an entire directory. This utility is used during the customization process, and serves as a local backup repository for customized items. For details, refer to **Step 8: Store Configuration Files** on page **40**.

For details on customization, refer to the *MetaLib User Interface Guide (Version 4.x)*.

Step 8: Store Configuration Files

This step stores files, such as configuration tables, HTML, CSS files, and icons, to the `/exlibris/metalib/upgrade_express_313_400.store` storage directory.

You can store individual files as well as whole directories after customization. For example, the following files can be stored:

- `/exlibris/metalib/m4_2/ins01/www_v_ger`
- `/exlibris/metalib/m4_2/ins01/icon_ger`
- `/exlibris/metalib/m4_2/ins01/tab/www_heading.ger`
- `/exlibris/metalib/m4_2/ins01/tab/www_const.ger`

To store the configuration files:

1   Enter option **8** in the Target menu to display the Store/View/Restore Configuration Files submenu.

```
Store/View/Restore Configuration Files
--------------------------------------

Storage directory is: /exlibris/metalib/upgrade_express_313_400.store

0. Exit
1. Add files to store
2. View list of stored files
3. Create a report of differences
4. (Optional)Restore files from /exlibris/metalib/
upgrade_express_313_400.store

Please select [0]:
```

Figure 12: Store/View/Restore Configuration Files Menu

2   Enter option **1** to add files to the storage directory.

3   When prompted, enter the full path of the file or directory to be saved.

For example, `/exlibris/metalib/m4_2/ins03/tab/`.

NOTE:
The specified file/directory is saved in the storage directory. Files that are stored more than once override previous versions stored in the directory.

To view the list of configuration files in the storage directory:

1   Enter option **8** in the Target menu to display the Store/View/Restore Configuration Files submenu (see **Figure 12**).

2   Enter option **2** to view a list of stored files. The Upgrade Express opens the editor in View mode and displays a list of all stored files/directories. For example:

- `./ins03/tab/edit_field.eng`

- `./ins03/tab/edit_paragraph.eng`

- `./ins03/tab/tab00.eng`

- `./ins03/tab/tab01.eng`

- `./ins03/tab/tab_Source_group_institute-1`

To display a report of the differences:

1   Enter option **8** in the Target menu to display the Store/View/Restore Configuration Files submenu (see **Figure 12**).

2   Enter option **3** to create a report of differences between files in the instance and the files in the storage area. This runs the UNIX diff command on each file in the list of files, and then displays the differences. For example:

```
    ============================================================
File: ./ins03/tab/tab_info.ger


Files are identical


    ============================================================
File: ./ins03/tab/www_const.ger
1 /exlibris/metalib/upgrade_express_313_400.store
2 /exlibris/metalib/m4_2
10c10
1 About MetaLib -- About MetaLib
2 About MetaLib -- About Super MetaLib
```

To restore all backed-up files:

1   Enter option **8** in the Target menu to display the Store/View/Restore Configuration Files submenu (see **Figure 12**).

2   Enter option **4** to restore all the files that are backed up to the storage area to their original location in version 4.2.x. This optional step should be performed only if, due to some unexpected error or problem, the customized version 4.2.x files were lost. If you encounter such a situation, consult your local support office.

3   When prompted, enter **Y** to continue:

Files are restored from the kit storage. Existing files in the version (/exlibris/metalib/m4_2) are overridden without any backup.

NOTE:
When this option is used, files will be restored if confirmed. Existing files will be lost without any backup.

Stage 4: Switch to Production

This part of the procedure is used to install and convert the latest customer data and Local KnowledgeBase from the 3.13 source instance to the customized 4.2.x target instance. Before beginning this part of the procedure, you must once

again export and transfer the customer data by means of the Source menu. This part of the procedure can be run several times, if necessary.

To perform the final UE run in your MetaLib 3.13 instance (before switching to production):

1   Ensure the integrity of the data by performing the following steps:

   a   Take down the Web and search servers.

   b   Stop the Apache processes.

   c   Leave Oracle 9 up and running.

2   Export the customer data from the source instance (see **Step 2: Export Customer Data** on page **26**).

   If the source and target instances are on different servers, see **Step 3: Transfer Customer Data** on page **27** for details.

3   Perform Step P on the target instance when ready to switch to production.

Step P: Switch to Production Final Data Sync

Enter **P** in the Target menu to display the Switch to Production Final Data Sync submenu.

```
Switch to Production Final Data Sync
------------------------------------

   0. Exit
-- 1. Validate local setup
-- 2. Run customer data sync
-- 3. Rollback synchronized customer data

Please select [0]:
```

Figure 13: Switch to Production Final Data Sync Submenu

Step 1: Validate Local Setup

The final data synchronization can be run only if no setup changes have been made either to the 3.13 source or 4.2.x target instances.

Before proceeding with the final data sync, you must confirm that no setup changes have been made. If there were changes, you will need to reapply the full cycle Upgrade Express.

To validate the local setup:

1   Enter option **1** to validate the local setup. The following message displays:

```
The Switch to Production Final Data Sync utility can be used ONLY if
you have NOT added a portal, institution or language to either your
source or target versions after running the first round of Upgrade
Express.

If these changes have been made, you cannot use this utility and you
need to apply the full cycle of Upgrade Express again. Please contact
your local office for instructions.

Have you added a new institution, portal or language to your 3.13
source instance after the first round of Upgrade Express? (Y/N):
```

2   Enter **N** if you have not made any of the listed changes. The following message displays:

```
Press Enter to return to the Menu
```

Otherwise, enter **Y** to display the following message:

```
Because of changes to your local institutional setup, you need to apply
the full cycle of Upgrade Express again.
Please contact your local office for instructions.
```

3   Press **[ENTER]** to return to the Switch to Production submenu.

You may proceed to the next step if the ++ indicator displays for Option 1 on the Switch to Production Final Data Sync submenu.

Step 2: Run Customer Data Sync

This option includes the automatic execution of several steps in order to facilitate the install and conversion of data sub-processes. These steps include the following:

■   Installation of latest customer data.

■   Conversion of the data from version 3.13 format to 4.2.x format.

■   Indexing of `DAT01`.

During the execution of this option, use the following logs to monitor its progress:

■   The sub-processes can be tracked by viewing the `metalib_upgrade_express.log` file in the `/exlibris/metalib/upgrade_express_313_400/logs` directory.

- The `exlibris/metalib/upgrade_express_313_400/logs/ install_customer_data_STP.log` log file allows you to monitor the Install process.

- The data conversion steps can be monitored using the `upgrade_express_conversion_step.log` file in the `/exlibris/metalib/ upgrade_express_313_400/logs/conversion_step_logs` directory.

- If one of the conversion steps fails, a reference to the path of the failed step log is indicated in an `upgrade_conversion_steps.log` file.

- The log files for specific conversion steps are named with numbers and stored in the `/exlibris/metalib/upgrade_express_313_400/logs/ conversion_step_logs` directory.

- The indexing procedure can be monitored using the `p_index_database.DAT01.log` file in the `/exlibris/metalib/m4_3/tmp` directory.

To synchronize the customer data:

1 Enter option **2** to display the Run Customer Data Sync submenu.

```
Run customer data sync
----------------------
This option executes the Final Data Sync for Switch to Production
(STP).
It runs the following STP sub-processes automatically in succession:
 - Install Customer Data for STP
 - Upgrade Express Conversion Steps for STP
 - Index DAT01

Do you want to continue Y/N:
```

Figure 14: Run Customer Data Sync Submenu

2   Enter **Y** to continue with the synchronization.

The following message, which includes the process ID [pid] in the format [n] xxxxx, displays:

```
[1] 21686
The Customer Data Sync step is now running in the background ...
When each sub-process completes, an e-mail notification for that
process is sent.

Please wait until all sub-processes are complete before proceeding
with the next phase.

The whole process will take from half an hour to several hours,
depending on customer data and server.

The sub-processes can be monitored via the following log files:
/exlibris/metalib/upgrade_express_313_400/logs/
install_customer_data_STP.log
/exlibris/metalib/upgrade_express_313_400/logs/
conversion_step_logs/upgrade_express_conversion_step.log
/exlibris/metalib/m4_3/tmp/p_index_database.DAT01.log

Press Enter to return to the Menu
```

3   Press **[ENTER]** to display the Switch to Production submenu (see **Figure 13**).

NOTE:

Wait until you receive an e-mail confirmation before continuing with the upgrade. Do not continue with the next step until a ++ indicator appears next to option 2 in the Switch to Production submenu and Option P in the Target menu.

4   Perform the post-upgrade procedures described in **Post-Upgrade Procedures (STP)** on page **18**.

5   Switch the ports to the new version as described in **Switching Ports** on page **48**.

Step 3: Rollback Synchronized Customer Data (Optional)

NOTE:

This is an optional step. It should be used only if the Run Customer Data Sync option has failed.

This step is used to restore the data in the version 4.2.x instance to the data before the Switch to Production Final data sync was run.

During the execution of this option, use the `uninstall_customer_data_STP.log` file in the `/exlibris/metalib/upgrade_express_313_400/logs` directory to monitor the progress of the rollback.

To roll back the customer data:

1   Enter option **3** in the Switch to Production menu to display the Rollback Synchronized Customer Data submenu.

```
Rollback synchronized customer data
-----------------------------------
This option is used to uninstall the synchronized customer data

Do you want to continue Y/N:
```

Figure 15: Rollback Synchronized Customer Data Submenu

2   Enter **Y** to continue with the rollback. The following message displays:

```
The Rollback synchronized customer data step is now running in the
background ...

When this step is complete, an e-mail notification will be sent.
Please wait until this step is complete before proceeding with the next
step.

This step will take from half an hour to several hours, depending on
customer data and server.

This step can be monitored via /exlibris/metalib/
upgrade_express_313_400/logs/
uninstall_customer_data_STP.log file.

Press Enter to return to the Menu
```

3   Press **[ENTER]** to return to the Switch to Production submenu.

4   Wait until you receive an e-mail confirmation before continuing with the upgrade.

After successful completion, a ++ indicator appears in the Switch to Production submenu.

Switching Ports

After running a final conversion of data to ensure that the user and KnowledgeBase data is fully synchronized between both instances, the upgraded MetaLib 4.2.x instance needs to be defined as the production instance.

Source and Target on the Same Server

Sites that have the source and target instances on the same server need to:

1 Ensure that version 3.13 was shut down as described previously.

2 Log on to the version 3.13 instance on the server, and open the startup script:

```
cd /exlibris/startup
vi init.dat
```

3 Change the active flag from `Y` to `N` in the Apache and MetaLib sections for the relevant version 3.13 instance, as follows:

a Change the following text:

```
# apache
Y:apache:metalib:httpd:/exlibris/metalib/m3_N:../
m3_N:apachectl_auto:apachectl
```

to:

```
# apache
N:apache:metalib:httpd:/exlibris/metalib/m3_N:../
m3_N:apachectl_auto:apachectl
```

b Change the following text::

```
# metalib
Y:metalib:metalib:/exlibris/metalib/
m3_N:metalib_startup:metalib_shutdown
```

to:

```
# metalib
N:metalib:metalib:/exlibris/metalib/
m3_N:metalib_startup:metalib_shutdown
```

4 Log on to the version 4.2.x instance and switch ports using the Util/S/1 command. For details on this utility, refer to the *MetaLib System Configuration and Administration Guide (Version 4.x)*.

NOTE:
If you want to keep version 3.13 up and running, version 3.13 should be redirected to another port before switching the ports in version 4.2.x. For

information on switching ports in version 3.13, contact your local support office.

Source and Target on Different Servers

If the source and target are on different servers:

- If the target server is a new one and is used as the new production server, you need to make the necessary changes to redirect users to the new production instance on the new server.

- If the target server is used as a test server, you need to coordinate a copy installation with your local office from the test server to a different instance on the production server and then run the switch ports utility (Util/S/1).

Full Rerun of Upgrade Express

NOTE:

Before proceeding with a full rerun of the Upgrade Express, you must consult with your local office.

A full rerun of the Upgrade Express is to be executed only in the following situations:

- Changes were made to the local institutional setup (new institution, portal, or language) on either the source or target instances. New resources were configured in the target version 4.2.x DAT01 database.

- The target 4.2.x was rendered unstable because of a system failure (such as a power outage during one of the main target steps).

- You prefer to start the customization from scratch.

Appendixes

This guide contains the following appendixes:

A

Post-Upgrade Checklist

The Server

Open two sessions: one in MetaLib version 3.13 and the other in MetaLib version 4.2.x.

DAT01

To update DAT01:

1   Enter the following commands to navigate to the `./dat01/tab` directory:

```
dlib dat01
dt
```

2   Verify that the following files were transferred as is:

- `./dat01/tab/tab_groups`
- `./dat01/tab/tab_management`

3   In this table, provide super-user permissions to relevant users that have institutional administrator rights by changing their permissions from **Y** to **S**.

VIR00

To verify VIR00:

1   Ensure that the institutional setup was converted correctly by comparing
    `./vir00/tab_institute` from 3.13 with the Institutional Settings
    functionality in the /M that was introduced in version 4.

    a   In the 3.13 session (source), navigate to the `./vir00/tab` directory:

    ```
    dlib vir00
    dt
    vi tab_institute
    ```

    b   In the version 4.2.x instance (target), log on to the /M with the user
        defined in `tab_management` as an institutional administrator.

2   Verify that all institutions in `./vir00/tab/tab_institute` were converted
    correctly. For each institution in `tab_institute`, compare the relevant lines
    to the relevant tab in the Institutional Settings:

    ■   General tab:

        ■   Verify the institute codes.

        ■   Verify that the institute name is the same as the code.

        ■   Verify the portal name.

        ■   Verify that the number of lines in the portal list matches the number
            of portals in the `tab_institute` table.

        ■   Correct the instance mapped to each portal.

    ■   SFX tab:

        ■   Correct the SFX path.

    ■   Proxy tab:

        ■   Correct the proxy details.

        ■   Check that the following files were copied as is:

            `default_z312`

            `tab_z312_limits`

            `proxy_<inst>.config` (if you configured files for the proxy)

Main Configuration Files

On `./metalib_conf`, verify that the customization of the global/display
parameters in the `www_server.conf` and `metalib_start` files was transferred
from version 3.13 to 4.2.x.

Note that the values customized in version 3.13 are added as defaults, and the original values are commented out.

In the following example for the `www_server.conf` file, the `metalib_start` value (`quick-1`) from 3.1.3 is made the default value, and the default value (`home`) for 4.2.x MIK is commented out:

```
#changed by upgrade express
#setenv metalib_entry_page  home
setenv metalib_entry_page  quick-1
```

Instances and Languages

To verify the instances and languages directories:

- Verify that all the relevant instances were copied from version 3.13 to version 4.2.x's `exlibris/metalib/m4_N` directory.

- Where relevant, verify that language directories were copied from version 3.13 to version 4.2.x within the above instances.

PDS

To verify the upgrade of PDS:

1 On the version 4.2.x instance, enter the following commands to navigate to the `.pds` directory:

```
pdsroot
cd conf_table
```

2 Verify that the correct host name and port appear in the `tab_service.<institute>` tables for local authentication. UE does not change any remote authentication definitions.

3 If your authentication uses a CGI or SSO hook, make sure that the page that contains the redirect command was transferred.

General

In the 4.2.x session, enter the following commands to ensure that you can stop and start all the servers:

```
cd $metalib_conf
metalib_shutdown
metalib_startup
stop_apache
start_apache
```

User Interface

Verify the upgrade of the UI:

- Overall functionality – Check the system as a guest user to determine that MetaLib is functional following the Upgrade Express (that is, you can search resources, servers are up, and so forth) .

- Where relevant, the banner should display the customized .gif from version 3.13.

- Categories – Verify that categories and subcategories have been transferred as is for each language, per portal and per institution.

- Verify that you can log on as a local user and as a remote user using a valid user name and password.

- Click **Find e-Journal** and verify that you are redirected to the SFX path specified in the Institutional Settings SFX tab in /M.

- **My Space: eShelf, My Databases, History, Alerts** – Log on as a few users that had personal data in version 3.13.

- **My e-Journals** – Verify that this converted properly by running some comparisons between versions 3.13 and 4.2.x.

- **My Space** – Verify its functionality by creating folders, saving records, and so forth.

- Change the portal/change the language via navigation menus – If the `./insNN/www_v_lng/menu-portal` and `menu-lng` were customized in version 3.13, the customization should be carried over to version 4.2.x.

- Verify that you get the correct SFX menu when clicking an SFX button.

Management Interface

To verify the /M:

- Compare the number of active and inactive resources in the MetaLib institution in version 3 and version 4.

- Verify that the include files display the relevant values for each institution.

- Compare a selection of local IRDs (prefix, status, number, details, type) and the presence of configurations.

- Verify that all the local resources were copied over and that they are searchable.

- Where relevant, verify that all the local configurations were copied over and that they are functional.

- Where relevant, verify that all local external programs and local conversion tables were copied over, and that they are functional.
- Compare a selection of users (details, secondary affiliation).
- On the Find Resource page, verify the drop-down list of institutions, the user group filter, and the new resources user group filter.
- Compare the Browse results for resources starting with any letter.

MetaIndexes

The MetaIndexes are relevant only if you are licensed to use this functionality. If you created MetaIndexes that were functional in 3.13, and you completed step 4 of the post-Upgrade Express actions on the target instance:

- Verify that all the MetaIndex directory trees were created in version 4.2.x instance.
- Verify that the MetaIndexes are searchable.

X-Server

The X-Server is relevant only if you are licensed to use this functionality. Ensure that the X-Services in version 4.2.x function in the same way in which they were implemented in version 3.13.

B

Upgrade Express Implementation Notes

This section includes:

- **General** on page **59**
- **Management Interface Configuration Tables** on page **61**
- **Search Syntax** on page **62**
- **System/Server/Utilities** on page **63**
- **Authentication** on page **63**

General

Make sure to implement all mandatory and relevant optional changes for the service pack applied to your version 4.2.x installation.

User Interface

Re-customize your user interface using the new guidelines provided in the *MetaLib User Interface Guide (Version 4.x)*.

Icons

Localized icons need to be converted to the new PNG (Portable Network Graphics) format.

Textual Customization Table

The textual customization table, `www_const.<lng>`, is located in the `./ins<NN>/tab` directory.

The purpose of this table is to consolidate original labels, terms, alt tags, and so forth ("constants" appearing throughout the user interface in numerous HTML files) and specify the new label, alt tag, or text to be used instead of the original.

To access this file, enter the following commands, where `<lng>` is the language:

```
dlib ins01
dt
vi www_const.<lng>
```

Info Page

The IRD record fields that display on the Info page are defined in a table named `tab_info.<lng>` in the tab directory of the `ins<NN>` library.

The Upgrade Express adds a line to display categories/subcategories on the Info page.

You can customize or translate the `Category/Subcategory` text.

You can remove the following line from the file if you do not want to display categories:

```
Category/Subcategory          CTGRY
```

Messages

Messages were added to the `ins<NN>/tab/www_heading.<lng>` file and may be customized and translated for all instances and all languages.

Global Parameters

For further information, refer to the *MetaLib System Configuration and Administration Guide (Version 4.x).*

You can change default values in the `./metalib_conf/www_server.conf` file:

```
setenv log_level INFO
setenv show_comments_in_html  Y
setenv CLUSTER_FACET Y
setenv direction_support Y
setenv Q_JUMP_TO_RESULTS Y
setenv M_JUMP_TO_RESULTS Y
setenv EXTERNAL_TIMEOUT  Y
```

You can change default values in the `./metalib_conf/metalib_start` file:

```
setenv CJK_LANG       N
setenv email_sender
setenv SMTP_HOST      'localhost'
```

Management Interface Configuration Tables

The following lines were added to the ./dat01/tab/www_heading.eng file.

0129 User cannot be authenticated locally.
0137 You have already merged all records available.
0400 New portal name contains invalid characters.
2105 Error encountered in table 'tab_oai'.
2106 Not Authorized to create new Metaindexes - Check License.
2107 Not Authorized to create new Institution - Check License.
2108 Not Authorized to create new Portal - Check License.
2109 Problems with License - Contact Metalib Support.
2110 Proxy already exists.
2111 Proxy successfully updated.
2112 Portal can't be deleted - a minimum of one Portal is required.
2113 There can only be one active Proxy for Originator.
2114 Warning: License will expire in less than 10 days.
2115 Warning: Exceeded number of allowed METAINDEXES.
2116 Warning: Exceeded number of allowed INSTITUTIONS.
2117 Warning: Exceeded number of allowed CONCURRENT-USERS.
2118 Warning: Exceeded number of allowed PORTALS.
2119 License_error: Your license is not a valid license. Please contact your local support office immediately to issue a valid license
2999 Search request not supported - $1$2$3$4$5
3001 The Information Resource Database is being indexed. No actions are allowed until the indexing process is complete. Please try again in a few minutes.
3105 Invalid Cluster facet Type.
5006 View
5007 Edit
6046 INSTITUTE name must be equal for the user params and the LOCATE_COMMAND
6047 Invalid view $1
6048 No updated records were found for your institution(s).

```
6050 Folder $1 already exists
```

```
6051 Parameter value $1 is limited to length $2
```

```
6052 Folder $1 was successfully created
```

```
6053 Folder name contains invalid characters
```

```
6054 Calling application name contains invalid characters
```

```
6060 INSTITUTE must be given along with the source_id
```

```
6061 Invalid pds_handle
```

```
7001 Sub-category
```

```
7002 Start with
```

```
7001 Sub-Category
```

The following lines were changed in the `./dat01/tab/www_heading.eng` file:

```
0149 No resources were found
```

```
2038 Missing mandatory element from XML request  "$1".
```

```
3100 Your session has timed out.
```

```
6025 Institution '$1' does not exist
```

```
6045 INSTITUTE (NAM=) is mandatory in LOCATE_COMMAND
```

Changes were made to the following `DAT01` tables and files:

- `./dat01/tab/tab00.eng`
- `./dat01/tab/tab01.eng`
- `./dat01/tab/www_tab_present_brief`

NOTE:
> Ex Libris makes changes to the above specified server tables and files in its software updates. These tables and files should not be changed locally unless MetaLib documentation specifically allows it.

Search Syntax

MetaLib customers who have written external programs or created z39.50 configurations to support local resources may need to update these programs and/or configurations to reflect the standard search syntax changes.

For more information, refer to the **MetaLib Standard Search Syntax** appendix in the *MetaLib Resource Management Guide (Version 4.x)*.

System/Server/Utilities

Backup

To activate the standard backup procedure:

1   Log on to the server as a root user.

2   Open the cron table with the relevant UNIX editor command, and remove the comments from the following lines:

- For SUN machines:

```
setenv EDITOR vi
crontab -e
```

- For Linux machines:

```
crontab -e -u metalib
```

3   Remove the # sign and set the appropriate time for the backup:

```
#30 12 * * *  /exlibris/backup/scripts/exec_backup_main m4
```

Cron Jobs

Activate the same cron jobs as in version 3.13. For example::

```
# Run util_x_09.cron every day at 3am:
0 3 * * * /exlibris/metalib/m4_1/aleph/proc/util_x_09.cron
```

Authentication

The following are special cases that require manual conversion:

- PDS authentication that uses any of the following:
    - Shibboleth
    - CAS
    - iChain
    - CGI scripts
- PDS that is installed on a different server than the MetaLib server.

C

Description of Upgrade Express Steps

Steps 1 through 15 handle configuration tables and files, and Steps 1001 through 1007 handle Oracle data.

Step 1: eShelf Full View

For all instances and languages, two new columns were added to the `./ins<NN>/tab/www_tab_basket_short.<lng>` table to prevent duplication of fields in the full view of eShelf records.

Step 2: Thumbnails

For all instances and languages, the following lines are added to the relevant files if the lines are missing:

■ `./ins<NN>/tab/ edit_doc_999.<lng>`

```
## THUMB                    D LThumbnail          Y        E
```

■ `./ins<NN>/tab/edit_field.<lng>`

```
1 # THUMB D
2                           a A
```

Step 3: Info Page

For all instances and languages, the subfield used for defining the Publisher URL in `./ins<NN>/tab/tab_info.<lng>` was changed from "a" to "u" in field 856.

The following line was added to the files in order to display categories and subcategories on the Info page:

```
Category/Subcategory              CTGRY
```

Step 4: Character Conversion

The ASCII character range `0020 20` to `007F 7F` was added to the `./tab_unicode/unicode_to_ksc` table.

The 4.2.x `./tab_unicode/tab_character_conversion_line` file was merged with the corresponding version 3.13 file.

Step 5: Language Customization – Text Labels

For all instances and all languages, all the new labels added to `./ins00/www_const.eng` were merged into the version 3.13 `./ins<NN>/tab/www_const.<lng>` files.

Step 6: X-Server Present Service

The SID field was added to the `./dat01/tab/www_tab_present_brief` for the brief view.

Step 7: HTML Files and Icons

All the obsolete HTML files and icons were removed from all instances and all the languages in the `./ins<NN>/www_v_<lng>` and `./ins<NN>/icon_<lng>` directories.

For all the instances and languages, all the new/updated HTML files and icons were copied from `./ins00/www_v_eng` and `./ins00/icon_eng`.

A new JavaScript directory, `./ins<NN>/js`, was created for all the instances .

Step 8: CKB Update

To implement the mechanism to record IRDs added/updated by the latest CKB update and track deleted IRDs, the following lines were added to the `./dat01/tab/tab00.<lng>` tables. The file is updated on the back end, and no implementation is required.

The following lines are examples, where the `W-nnn` code is incremented according to the library's definitions, based on the existing highest value.

```
H WLSDA W-032   01 00      0000 WLSDA Local System N-Date
H WLSDB W-033   01 00      0000 WLSDB Local System U-Date
H WDEL  W-034   01 00      0000 WDEL  Delete field
```

Step 9: IRD Fields

For all languages, the `./dat01/tab/tab01.<lng>` tables were modified as follows:

The following fields were added:

```
D SPXY      00 0000           SPXY  LSearch Proxy server
D LSD       00 000            LSD   LLocal  System Date
```

The following fields were changed from:

```
D LOC1      00 0000           LOC1  LLocal 1
D LOC2      00 0000           LOC2  LLocal 2
D LOC3      00 0000           LOC3  LLocal 3
D LOC4      00 0000           LOC4  LLocal 4
D LOC5      00 0000           LOC5  LLocal 5
```

to:

```
D LCL1      00 0000           LCL1  LLocal 1
D LCL2      00 0000           LCL2  LLocal 2
D LCL3      00 0000           LCL3  LLocal 3
D LCL4      00 0000           LCL4  LLocal 4
D LCL5      00 0000           LCL5  LLocal 5
```

Step 14: CKB Update Date

The date in the `./dat01/tab/ckb_update_date` file was set to the earliest date between the current version 3.13 date and 12/06/2006.

Step 15: Language Customization – Headings/Error Messages

For all instances and all languages, all messages added to version 4.2.x `./ins00/www_heading.eng` were merged into the version 3.13 `./ins<NN>/tab/www_heading.<lng>` files.

Step 1001: Set Up Table

Conversion of `./vir00/tab/tab_institute` to the following Oracle tables in version 4.2.x.

- INSTITUTE
- EXT_APPL
- PROXY
- PORTAL

Step 1002: VIR00 – Oracle Data

Inserting Oracle data for `vir00` tables from the MetaLib source environment into the MetaLib target environment.

Step 1003: DAT01 – Oracle Data

Inserting Oracle data for `dat01` tables from the MetaLib source environment into the MetaLib target environment.

Steps 1004, 1005, and 1006: Statistics for X-Server Calls

Modification of the following Oracle statistics tables to enable capture of X-Server requests for statistics purposes.

- `Z705`
- `Z715`
- `Z754`

Step 1007: My e-Journals

Conversion of My e-Journals from the version 3.13 format to the version 4.2.x format.