ExLibris

Voyager

Installation and Upgrade Requirements

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Updates to This Guide

This release includes the following changes:

- Updated the server operating system requirements to include Red Hat Enterprise Linux 8 and Oracle Linux 8. RHEL 9 is not yet supported (see **Server Requirements** on page **9**).

- Removed reference to Windows 8.1 from the supported operating systems for Staff PCs (see **Staff PC Voyager Requirements** on page **16**) and Public PCs (see **Public PC Voyager Requirements** on page **17**).

- Removed Chapter 4, which pertains to extension modules that are no longer used in production environments.

- Updated the location of the North American VPN for Ex Libris Support (see **Server Access** on page **20**).

1

Introduction

> This section includes:
> - **About This Guide** on page **7**

About This Guide

This document describes the requirements for installing and working with Voyager.

Before purchasing and installing your hardware and operating system, confirm the hardware and operating system requirements with your Ex Libris representative.

NOTE:
These requirements may change due to Ex Libris development requirements.

To ensure work begins on time, you must make certain that your server requirements are met 10 business days prior to the work scheduled. Details of the requirements can be found in the documents identified below.

Ensure that your system meets the requirements provided the following document:

- *Operating System Requirements Red Hat Enterprise Linux.pdf*

Refer to the Ex Libris Knowledge Center for the Voyager installation forms under `Voyager > Implementation Guides > Installation Request Forms`. You need to complete an installation request form and submit it with your eService request.

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Server Hardware and Software Requirements

This section includes:

- **Server Requirements** on page **9**
- **Operating System/Platform Considerations for Voyager** on page **10**
- **File System and Disk Space Requirements** on page **11**
- **Backup and Recovery Media and Procedures** on page **13**
- **Additional Server Software** on page **13**

Server Requirements

Install Voyager and the Oracle database on dedicated servers with the specifications listed in **Table 1**.

Table 1. Server Specifications

Specification (for each server)	Description
Operating system/ platform	- Linux: - RHEL 7.4 or RHEL 8, 64-bit or Oracle Linux 8, 64-bit
CPUs*	Minimum of 2
RAM*	Minimum of 12 GB

Table 1. Server Specifications

Specification (for each server)	Description
Media for data exchange	■ FTP and Internet connection (see Communication Requirements) ■ CD-ROM drive for data and software exchange (in case FTP is not available temporarily, or if Ex Libris has approved work without an Internet connection)
Database**	■ Oracle 64-bit
Additional server software**	Oracle RDBMS add-on software (installed by Ex Libris to ensure full compatibility with Voyager)
* Consult with Ex Libris Customer Support	
** Installed by Ex Libris to ensure full compatibility with Voyager	

Other Ex Libris Products

Other Ex Libris products can be installed on a server running a Voyager installation when due care and attention are taken to ensure the adequate performance of all applications. Consult with your Ex Libris representative.

If other Ex Libris products are going to be installed on the same server, confirm that your system can handle the requirements of all these products. Refer to the requirements for installation documents available for other Ex Libris products for more details.

> **NOTE:**
> Many of the software and hardware resources are shared by Voyager and other Ex Libris products. However, disk space requirements are accumulative. See **File System and Disk Space Requirements** on page **11**.

Operating System/Platform Considerations for Voyager

> **IMPORTANT:**
> Refer to the Operating System Requirements for Red Hat Enterprise Linux documentation prior to referring to the specific Voyager requirements identified in this section.

For each of the following operating system versions, Ex Libris recommends that you install the latest operating system update level:

■ Linux - RHEL 7.4, RHEL 8 (64 bit) or Oracle Linux 8 (64 bit) based on Intel or AMD 64-bit processors.

The minimum requirement for a Voyager installation is 12 GB RAM. For the exact production server specifications, including the required number of CPUs and required RAM as a function of the database size and the number of concurrent users, contact your Ex Libris representative.

It is recommended that you install a second instance of Voyager on a separate test server. For details, contact your Ex Libris representative regarding a test server license.

Virtual Machine Considerations

Ex Libris supports installations in a virtualized server infrastructure. For more information, refer to *Guidelines for Using Virtual Environments for Ex Libris Products* located in the Knowledge Center.

File System and Disk Space Requirements

Mount each physical disk that is to be used by Voyager on a separate file system.

Define a file system named `/m1`. This mandatory file system is used exclusively for all software and files that are installed by Ex Libris. Mount the `/m1` file system directly on the server.

A `/oracle` file system with a minimum of 16GB can be used to install Oracle Server and database. If `/oracle` is not a separate file system the Oracle software is installed on `/m1` with a symbolic link from `/oracle` to `/m1/oracle`.

The Voyager database files are placed in `/oracle/oradata/VGER`. The Oracle software installation and database creation is performed by Ex Libris staff as a part of the Voyager installation process.

Table 2 lists the minimum disk-space requirements necessary for running and maintaining Voyager software and data.

Table 2. Disk Space Requirements

Voyager Software and Data	Minimum Requirement*	Location	Server
Voyager software	At least 20 GB	/m1	App server Web server
Voyager database (xxxdb) working space	3* (Voyager database space)	/m1	App Server

Table 2. Disk Space Requirements

Voyager Software and Data	Minimum Requirement*	Location	Server
Voyager database (xxxdb) space*	10%* (1.5 KB * # of bibliographic records)	/m1/voyager	App Server
Oracle software	At least 15 GB + (1.5 KB * # of bibliographic records)	/oracle/app	Oracle server App server
Oracle DB size**	At least 10 GB	/oracle/oradata/VGER	Oracle server
RAM*	At least 12 GB		All servers
Swap space (/tmp)*	Linux minimum: 75% of RAM Linux recommended: *Number of Voyager processes x 32 MB + 75% of RAM		All servers
* This space does not include working space used by Global Data Change. For details on disk space usage when working with Global Data Change, see section Disk Space in the *Global Data Change User's Guide* ** Consult with Ex Libris Customer Support			

NOTE:
> The requirements identified in **Table 2** are general guidelines for determining disk-space requirements. To determine the exact amount of disk space required, consult with your Ex Libris representative.

The disk-space requirements specified in **Table 2** do not include:

- System disk-space requirements for operating system overhead
- Disk space necessary for running Oracle in Archive-Log mode (see **Backup and Recovery Media and Procedures**)
- Disk space requirements for backup at large sites (see **Backup and Recovery Media and Procedures**)
- Any type of data redundancy such as RAID 1, 0/1 solutions
- Voyager upgrade requirements

NOTE:
> In special cases, an upgrade may require additional temporary disk space.

Backup and Recovery Media and Procedures

You are responsible for the backup and recovery procedures and selecting the media for performing these procedures.

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

Additional Server Software

The following are add-on software products required for Voyager:

Ex Libris installs all this additional software in order to ensure full compatibility with Voyager.

- Oracle 19c
- Perl
- Apache Server
- Java
- Tomcat

3

Client Hardware and Software Requirements

This section includes:

- **PC Requirements** on page **15**
- **Staff PC Voyager Requirements** on page **16**
- **Public PC Voyager Requirements** on page **17**
- **Monitors** on page **18**

PC Requirements

Ex Libris strongly recommends that the following requirements be met for optimal performance. If you go below the specified requirements, you experience decreased performance, particularly, in Cataloging and Acquisitions. If you have PCs that are below these requirements, we recommend you use them at the Circulation desk rather than in your Cataloging and Acquisitions departments.

PC hardware requirements, for both staff PCs and WebVoyáge PCs, are adequate if minimum requirements for the installed operating system are met.

NOTE:
Operating systems not listed in the tables are not currently supported.

Staff PC Voyager Requirements

Table 3 lists the Voyager staff client PC configuration requirements.

Table 3. Voyager Staff Client PC Requirements

Staff PC Configuration	Staff PC Requirements
Windows 10 Professional/Business/ Enterprise (32-bit or 64-bit)	■ CPU: 2 GHz or higher ■ Memory: 4 GB ■ Disk: 256 MB*
Video card	■ XGA resolution or better ■ 16-bit color or better ■ Maximum total desktop resolution (including across multiple monitors): 2048x2048
Monitor	■ 15-inch or larger display ■ Maximum total desktop resolution (including across multiple monitors): 2048x2048 **NOTE:** 4k and 1440p (QHD) monitor resolutions are NOT supported under any circumstances
Browsers (for end-user interface)	■ Internet Explorer 11 for Windows ■ Firefox for Windows ■ Chrome ■ Edge for Windows
Third-party software	■ Microsoft Office 2013/2016/2019 ■ Microsoft Access 2013/2016/2019 ■ Oracle 10g Client and ODBC
Miscellaneous	■ Network interface card with Internet/LAN connection ■ TCP/IP installed and connection to server tested ■ Telnet or terminal emulator client (administrator's machine only) ■ FTP (administrator's machine only) ■ Mouse, roller ball, or other pointing device ■ Audio card

Table 3. Voyager Staff Client PC Requirements

Staff PC Configuration	Staff PC Requirements
Unicode font	■ An appropriate Unicode font on both the PC and browser ■ Verify that the selected Unicode font includes all required characters
* of the available hard disk space	

IMPORTANT:
Administrative rights are required in order to install or update the Voyager Clients. Windows 64-bit is supported when running the Voyager clients.

Public PC Voyager Requirements

You must set up all client, Web-based workstations to run the minimum supported version of an approved browser on a Windows operating system. Hardware requirements are minimal and are based only on the need to run the browsers in a given operating system.

Table 4 lists the public PC configuration requirements.

Table 4. Public PC Requirements

Public PC Configuration	Public PC Requirements
Windows 10 (32-bit or 64-bit)	■ CPU: 2 GHz or higher ■ Memory: 4 GB ■ Disk: 100 MB*
Video card	■ XGA resolution or better ■ 16-bit color or better
Monitor	■ 15-inch or larger display
Browsers (for end-user interface)	■ Internet Explorer 11 for Windows ■ Firefox for Windows ■ Chrome ■ Edge for Windows

Table 4. Public PC Requirements

Public PC Configuration	Public PC Requirements
Third-party software	■ Microsoft Office 2013/2016/2019 32-bit or 64-bit ■ Microsoft Access 2013/2016/2019 32-bit or 64-bit ■ Oracle 12c Client and ODBC
Miscellaneous	■ Network interface card with Internet/LAN connection ■ TCP/IP installed and connection to server tested ■ Telnet or terminal emulator client (administrator's machine only) ■ FTP (administrator's machine only) ■ Mouse, roller ball, or other pointing device ■ Audio card
Unicode font	■ An appropriate Unicode font on both the PC and browser ■ Verify that the selected Unicode font includes all required characters.
* of the available hard disk space	

NOTE:
If you are working with CJK, the fonts may cause the pages to load slowly. Therefore, if you are using only Latin fonts, select a Latin Unicode font for better performance.

Monitors

To take advantage of Voyager's multi-window capability in the technical modules (Cataloging and Acquisitions):

■ 4k and 1440p (QHD) monitor resolutions are NOT supported under any circumstances.

■ Higher pixel resolution yields an obvious difference. Higher color resolution does not.

■ Using larger fonts to compensate for a marginal display negates the contribution of higher resolution to the multi-window versatility.

4

Communication Requirements

Network Configuration

The Voyager application server should have a fully-qualified host name (both a short host name and domain name) that is registered in the DNS. If you are working with a distributed installation of Voyager, all the application servers should have DNS entries.

Defining the Server Host Name:

In `/etc/hosts`, link both the fully-qualified name and the short host name to a physical IP address (internal). To ensure that the correct name is defined, use the following command:

```
grep `eval hostname` /etc/hosts
```

This command returns a valid entry with a physical IP address.

An internal IP address can also be found using the following commands:

- Linux

```
>> /sbin/ifconfig -a | grep addr: | grep -v 127.0.0.1 | awk
'{print $2}'
```

The following is an example of a `/etc/hosts` configuration:

```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1    localhost.localdomain      localhost
10.1.222.22  ml-inst.corp.metalib.com   ml-ins
```

NOTE:
The first active line should be configured exactly as in the above example.

The second line should contain the internal IP address, followed by the fully-qualified name (host name + domain name), and then the short name and possible aliases.

Server Access

Set up Ex Libris access to the system via the Internet with a minimum bandwidth of 64 K.

Ex Libris requires access to the following:

- The Voyager server for installation of Voyager software, setup, support, and troubleshooting during the implementation and maintenance phases.

- If a firewall is installed, SSH access should be enabled for Ex Libris support and implementation staff for the following IP addresses:

    - Virginia - USA

      54.85.221.162

    - Jerusalem - Israel

      212.179.71.70

Ports and Activity Types

Verify that the ports in **Table 5** are open and can be used by Voyager. These ports are used by library staff and Ex Libris support. This list can be very useful for network configuration and security troubleshooting.

NOTE:
In a multiple server environment, communications on these ports between servers maybe required.

Table 5. Ports for Voyager

Port	Server	Accessed By
xx00 (7000)	OPAC server	Client access by Ex Libris support
xx10 (7010)	Cataloging server	Client access by Ex Libris support
xx15	Global Data Change server	Client access by Ex Libris support
xx20 (7020)	Acquisitions server	Client access by Ex Libris support
xx30 (7030)	Circulation server	Client access by Ex Libris support
xx31 (7031)	Standard Interface Protocol (SIP)	Client access by Ex Libris support
xx38 (7038)	SMS Proxy	Operational, outbound SMS messages
xx40 (7040)	Reporter server	Client access by Ex Libris support
xx50 (7050)	System Administration	Client access by Ex Libris support
xx60 (7060)	Keyword server	Client access by Ex Libris support
xx70 (7070)	File server	Client access by Ex Libris support
xx80 (7080)	Call Slip server	Client access by Ex Libris support
xx81 (7081)	Scandoc / Image server	Client access by Ex Libris support
xx85 (7085)	Media Scheduling server	Client access by Ex Libris support
xx90 (7090)	Z39.50 server	Client access by Ex Libris support
xx97(7097)	Patron Directory Service	Operational, authentication

Table 5. Ports for Voyager

Port	Server	Accessed By
7098	Preview Server Port	Activities performed using the preview server. **NOTE:** This port does not change based on port series. It will be this port by default for all customers. 6008 will no longer be the default port.
7099	AutoUpdate HTTP Server	Client access by Ex Libris support **NOTE:** This port does not change based on port series. It will be this port by default for all customers.
80	World Wide Web (WWW)	
22	SSH	SSH connection from Ex Libris support
25 (outgoing - optional)	Deposit, operational	SMTP outgoing mail
1521 (TCP/IP)	Oracle Listener	Operational, permanent, Ex Libris support (jdbc)
10022	SSH	Outgoing access to downloads-na.hosted.exlibrisgroup.com for downloading software and patches

NOTE:
Coordinate the use of any other ports with Ex Libris.

If you have an additional version of Voyager (for testing or training purposes) on your server, open additional HTTP ports using the `<Port Series>` for `xx` (see **Table 5**).

For example, if you have a training database, use port numbers 8000, 8010, 8020, 8030, 8031, 8040, 8050, 8060, 8070, 8080, 8081, 8085 and 8090.

5

Installation Requirements

This section includes:

- **Schedule the Voyager Installation** on page **25**
- **Installation Preparation** on page **25**
- **sudo Preparation** on page **26**

Schedule the Voyager Installation

Whether a change of platform, data move to a new server, or installation of Voyager into a virtual environment is needed, schedule the installation of Voyager and its related components by opening an Install incident via eService. Due to the complex nature of the interactions between our software and the environment, Ex Libris restricts ongoing support to installations performed by Ex Libris staff. This may include cloning a new VM or zone. Check with your account manager to plan for any fees associated with this work.

Installation Preparation

To log on to the Voyager server, an initial user by the name of `exlibris`, with access to `su` or `sudo`, is required. This user can be deleted after the installation.

Ex Libris requires a root password in order to:

- Create the following users:
    - Voyager with the group ID `exlibris`
    - Oracle with the group ID `dba`
- Enable the users (`exlibris` and `dba`) to create directories and files under the following file systems:

    `/m1`, `/oracle`, and so on

- Install Voyager and the additional software detailed in **Server Requirements** starting on page **9**

- Add automatic activation of Voyager servers and Oracle to the machine's boot process

- Reboot the machine to make the new values of system parameters that were modified during the installation process effective and to test the automatic activation of Voyager and Oracle

NOTE:
The reboot is coordinated with the customer.

- Work under `ksh`

NOTE:
Ex Libris products and the users, `exlibris` and `dba`, work under `ksh`.

IMPORTANT:
The system manager must 1) define an alias for the host name in `/etc/hosts` and 2) must be available throughout the Voyager installation process.

sudo Preparation

Verify that the operations identified in **Table 6** are available for `sudo`:

Table 6. sudo Requirements

Operation	Description
Create users and groups	■ `useradd` ■ `groupadd` ■ `vipw`
Change system parameters	■ Linux: `/etc/rc.d/rc.local` and `/etc/security/limits.conf` files
Create directories and change permissions	■ `mkdir` ■ `chown`
Create files	`/etc` directory (necessary for autostartup mechanism)

6

Upgrade Requirements

This section includes:

- **Duration** on page **27**
- **Extension Modules** on page **28**
- **Upgrade Options** on page **28**

Duration

Timing estimates for the upgrade process depend on the number of records per database.

NOTE:
The estimates below include time for any necessary regen(s) for a few production databases.

For consortia with multiple or large databases or with multiple servers, consult with an Ex Libris engineer for specific upgrade duration estimates for your site.

Table 7. Duration Estimates

Size	Timing
< 500,000 bibliographic records	1 day
500,000 - 3,000,000 bibliographic records	2 days
> 3,000,000 bibliographic records	Consult with the Ex Libris installation team

> **IMPORTANT:**
> If you have full Library of Congress Authority Headings, you must add one additional day to the upgrade timing estimates in **Table 7**.

> **IMPORTANT:**
> If you have Analyzer for Voyager, you must add one additional day to the upgrade timing estimates in **Table 7**. This is in addition to the LC Authority Headings if you also have them.

Extension Modules

Universal Borrowing (UB) and Universal Catalog (UC)

Ex Libris recommends that:

- Sites with Universal Borrowing (UB) or Universal Cataloging (UC) should upgrade at the same time with their UB/UC partners.

  Ex Libris does not recommend running cross versions.

- Everyone in a group run the same user interface (WebVoyáge Classic or WebVoyáge Tomcat).

- Each UB and UC customer test his specific work flows prior to upgrading.

- Each UB and UC customer review the known UB and UC issues logged in Salesforce to assess the impact on specific UB and UC local policies, environments, and workflows.

Analyzer

Analyzer must be upgraded to the latest version.

Web Cataloging

Web cataloging remains available in WebVoyáge Classic.

Upgrade Options

Voyager Installation Kit (VIK)

You can obtain the latest version of Voyager software and perform the upgrade without a need for certification. The Voyager Installation Kit (VIK) is a menu-driven program that steps you through the upgrade for your servers.

To get started, begin by reading the VIK documentation located in the Ex Libris Knowledge Center under `Voyager > Product Documentation > Voyager Installation Kit.`

Ex Libris Upgrade

If you want to have Ex Libris perform your upgrade, open an e-Service ticket with several scheduling date options to suggest. This initiates the upgrade process for you.

7

Data Move Requirements

This section includes:

This section pertains only to the work involved with the data move. You must review this document to understand the requirements for the Voyager server setup, software requirements, and work required prior to performing the move.

Data Move Outline

A data move is required if you want to move your current system to a different system. Data moves, for example, may be used to migrate from Solaris to Linux or from Linux to Linux. You may consider a data move if your current hardware is failing, aging, or needs replacement. Data moves must be performed by Ex Libris. Check with your account manager to plan for any fees associated with this work.

Server Hardware and Software Requirements

The new hardware must meet the standard server hardware and software requirements (see **Server Hardware and Software Requirements** on page **9**). If you are setting up this environment for production use, make sure that you consult with Ex Libris Customer Support for appropriate sizing.

Duration

The following table displays the approximate number of days it will take to perform a data move.

Table 8. Duration Estimates

Size	Timing
< 500,000 bibliographic records	2 days
500,000 - 3,000,000 bibliographic records	3 days
> 3,000,000 bibliographic records	Consult with the Ex Libris installation team

NOTE:

If you plan to upgrade your Voyager software at the same time as your data move, make sure the that you add the data move duration to the Voyager upgrade duration for an accurate calculation of project time.

Downtime Considerations

For test environment data moves, there may be no downtime required. A current working backup maybe used to ensure that the test server has a current copy of your production data. If you want to use your production server as the master copy, then downtime would be required while the data is exported from your production server to your test environment.

Generally, downtime is dependent upon the size of the Voyager database being migrated, but you should expect and prepare for at least two hours of interruption in service while performing a production data move.

For special circumstances, consult with the Ex Libris Installation team to determine the actual downtime for your site.

Disk Space Requirements

To perform the data move, there must be additional disk space available. If necessary, it can be temporary space. This space is required for your data to be copied and installed on the new server.

The following tables show examples of how much disk space may be required for your data move.

Table 9. Example 1: Disk Space on the New Server

Voyager Software and Data	Minimum Requirement	Location
Voyager Software	Equal to or greater than /m1 data on current environment	/m1
Oracle Software	Equal to or greater than /oracle data on current environment	/oracle
Migration Space	Equal to or greater than /m1 + /oracle in current environment	/temporary

Table 10. Example 2: Disk Space on the New Server

Voyager Software and Data	Minimum Requirement	Location
Voyager Software	Equal to or greater than 2* /m1 data on current environment	/m1
Oracle Software	Equal to or greater than 2 * /oracle data on current environment	/oracle

Table 11. Example 3: Disk Space on the New Server

Voyager Software and Data	Minimum Requirement	Location
Voyager Software	Equal to or greater than 2* /m1 + /oracle data on current environment	/m1
Oracle Software	Equal to or greater than /oracle data on current environment	/oracle

Server Communications Setup

In addition to the server access requirements described in **Server Access** on page **20**, you must have SSH access between the current environment and the environment to which you are performing the data move. FTP access would also be encouraged, but is not required.

Requesting a Data Move

To request a data move:

1   Open an e-Service ticket that includes several dates on which you want the data move performed.

2   At least 10 days prior to the scheduled date of the move, fill out the `Request_for_Voyager_Data_Move_Form.doc` file and attach it to the SI in e-Service. This form is stored in the following folder in the Knowledge Center:

Voyager > Implementation Guides > Installation Request Forms

Considerations for Production Environments

During a production environment data move, no add or update activities are permitted on the existing environment to prevent data loss. Through coordination with your installation engineer, your current system can be made available after the initial interruption of service for patrons to use the OPAC to locate and retrieve the status of items in your institution's catalog.

Off-line circulation can be used to permit circulation activities to take place during your production environment move. If an upgrade is being performed during this time, make sure that you are running circulation in off-line mode, using the version of the Voyager clients to which your institution is upgrading.

Data Migration Process

During the data migration, a copy of your data will be setup on the new environment. This data includes all customizations and tuning of the system for optimum performance. This process also includes maintaining read-only access to the original server during the database move when migration of a production environment occurs.

Basic Functionality Testing

Ex Libris will perform basic functionality tests to ensure at a high level that the data has been migrated as expected.

Detailed Functionality Testing

After the move, you will need to perform full system testing to make sure your environment is working as expected. If something is not working as it did in the previous environment, make sure that you report the problem.

If your site uses specific workflows, make sure that they are tested immediately after the move.

Set Up and Confirm Working Backups

Testing backups for your new server (regardless of whether it is a test or production environment) is important because it ensures that your software is restored properly in the event of a hardware failure or data loss.

8

Upgrade Planning/Worksheets

> This section includes:
>
> - **Before Your Upgrade** on page **37**
> - **Day of/Before Upgrade** on page **40**
> - **After You Upgrade** on page **41**

Before Your Upgrade

Before you upgrade:

1 Confirm your contact, upgrade date, duration estimate, and start time with the upgrade engineer. When running the VIK yourself, ensure that you have confirmed with your staff the dates and times when the VIK is to be run.

2 Ensure a testing plan has been created to test institution workflows, standard operating processes, and extension modules with special consideration for Universal Borrowing (UB) and Universal Catalog (UC).

3 Determine if new prepackaged reports and/or Microsoft Access queries are required.

Prepackaged Voyager reports (`c:\voyager\AccessReports\reports.mdb`) use Microsoft Access.

Refer to the documented database schema changes located in the Knowledge Center under Voyager > Product Documentation > Voyager Data Dictionaries and ER Diagrams.

4 Upgrade ODBC drivers, if applicable.

If Oracle is being upgraded on your server, you may need new ODBC drivers.

5 Archive existing cataloging tag tables.

If you have any customizations to your current tag tables, save them (in a directory that is not `C:\VOYAGER`) prior to the upgrade and, subsequently,

run `VoyagerInstall.exe` or `VoyagerInstall.msi` on each Cataloging PC during the Voyager client installation. Afterward, incorporate your changes into the new files. See the Knowledge Center article *How do I update tag tables?*, for more information.

6   Process all reports and notices.

All previous version reports and notice `.inp` files must be processed through that version's Reporter before the upgrade takes place. The Reporter client only processes reports and notices produced with the same server version.

7   Run Unauthorized Headings Reports (Pcatjob 1 - 4).

The unauthorized headings reports (Pcatjob 1 through 4) require a date range. In the upgrade process, if a Headings regen is run, the Create Date of the headings changes to the date of the upgrade. If these reports are not part of your normal work flow, this is not an issue. However, if these are key to your work flow, carefully plan how the reports are run to get meaningful data.

Immediately prior to your upgrade, run the reports with the date range from the beginning of your reporting period to the current date such as the day before the upgrade. At the end of the reporting period (which includes the date of your upgrade), run the reports again with a begin date as the first full day after the upgrade and the end date as the last day of the reporting period.

Do not perform any work that would generate data for these reports on the actual upgrade day(s).

For example, when reports are run to cover a calendar month and the upgrade occurs on 15 August:

- On 14 August, end all cataloging activity. Run the reports with a start date of 1 August and and end date of 14 August.

- On 15 August, the upgrade is performed. No cataloging work is to be done. All existing headings have a Create Date of 15 August as a result of the upgrade.

- On 1 September, reports are run again with a start date of 16 August and an end date of 31 August.

8   Process the global headings change queue.

Before an upgrade begins, the global headings change queue must be processed.

NOTE:
The global headings change queue may not be preserved during the upgrade.

9   Process any outstanding Electronic Data Interchange (EDI) messages.

10 Download Voyager clients.

11 Determine if offline circulation is to be used.

12 Install the Preview Server to review customizations prior to the upgrade.

13 Confirm you have verified and successful backups prior to the upgrade.

One week prior to the scheduled upgrade, have the system administrator verify the backup procedure of the Voyager server(s).

Verify the output.

See **Table 12** for your planning checklist.

Table 12. Before You Upgrade Checklist

Complete (√)	Task
	Confirm your contact, upgrade date, duration estimate, and start time with the upgrade engineer
	Ensure a testing plan has been created to test institution workflows, standard operating processes, and extension modules with special consideration for Universal Borrowing (UB) and Universal Catalog (UC)
	Determine if new prepackaged reports and Microsoft Access queries are required
	Upgrade ODBC drivers, if applicable
	Archive existing cataloging tag tables
	Process all reports and notices
	Run Unauthorized Headings Reports (Pcatjob 1 - 4)
	Process the global headings change queue
	Process any outstanding Electronic Data Interchange (EDI) messages
	Download Voyager clients
	Determine if offline circulation is to be used
	Install the Preview Server to review customizations prior to the upgrade.
	Confirm you have verified and successful backups prior to the upgrade

Day of/Before Upgrade

On the day of/before you upgrade:

1 Confirm you have a successful backup prior to the upgrade.

   The evening prior to the scheduled upgrade, the server(s) should be backed up. The engineer cannot perform the upgrade without written verification that a successful backup has been completed. When running the VIK, ensure that you have obtained verification that a backup has been completed successfully.

2 Enable offline circulation, if applicable.

3 Inform your upgrade engineer that you have a successful backup and that you are ready to begin the upgrade. When running the VIK, ensure that the appropriate persons have been notified that you are ready to run the VIK.

4 Install Voyager clients.

5 Be available during the upgrade. When running the VIK, use the supplied Voyager Installation Kit instructions to upgrade your environment to the latest version of Voyager.

   Someone must be available (not necessarily on-site) for the engineer to call as necessary.

6 Ensure that updates between you and the upgrade engineer have been arranged based on agreed-upon intervals.

See **Table 13** for your planning checklist.

Table 13. Day of/Before You Upgrade Checklist

Complete (√)	Task
	Confirm you have a successful backup prior to the upgrade
	Enable offline circulation, if applicable
	Inform your upgrade engineer that you have a successful backup and that you are ready to begin the upgrade
	Install Voyager clients
	Be available during the upgrade
	Ensure that updates between you and the upgrade engineer have been arranged based on agreed-upon intervals.

After You Upgrade

After you upgrade:

1 The Ex Libris engineer contacts you to report that the upgrade has been completed.

2 Confirm a full Voyager system backup has been completed successfully.

   The system administrator conducts a Voyager system backup to include all Oracle files.

3 Coordinate a server reboot with the upgrade engineer to catch any problems with startup.

4 Use the testing plan created to test workflows, processes, and extension modules to ensure that the Voyager upgrade was successful.

   Workflows for each module are tested, including:

   - Acquisitions
   - Cataloging
   - Circulation
   - System Administration
   - WebAdmin (if used)
   - WebVoyáge

5 Relink existing Microsoft Access Voyager tables.

   All Voyager sites need to relink their Microsoft Access Voyager tables.

6 Inform your upgrade engineer that your upgrade is tested and that a successful upgrade has been confirmed.

7 Restore customizations for WebVoyáge.

   a Move in customized WebVoyáge files.

   b Copy in your preview server WebVoyáge files or begin recustomizing WebVoyáge files.

      If a WebVoyáge test area pointing to the preview server has not been prepared, WebVoyáge customizations must be moved in manually.

      The old WebVoyáge files are found under `/m1/upgrade/2010.5.0/pre201050/voyager/*db/`.

8 Test the new ODBC drivers, if applicable.

9 Begin general use of the new version of Voyager.

See **Table 14** for your planning checklist.

Table 14. After You Upgrade Checklist

Complete (√)	Task
	The Ex Libris engineer contacts you to report that the upgrade has been completed
	Confirm a full Voyager system backup has been completed successfully
	Coordinate a server reboot with the upgrade engineer to catch any problems with startup
	Use the testing plan created to test workflows, processes, and extension modules to ensure Voyager was upgraded successfully
	Relink existing Microsoft Access Voyager tables
	Inform your upgrade engineer that your upgrade is tested and that a successful upgrade has been confirmed
	Restore customizations for WebVoyáge
	Test new ODBC drivers, if applicable
	Begin general use of the new version of Voyager

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Data Move Planning/Worksheets

This section includes:

- **Before Your Data Move** on page **43**
- **Day of/Before Your Data Move** on page **44**
- **After Your Data Move** on page **45**

Before Your Data Move

Before you move:

1 Confirm your contact, upgrade date, duration estimate, and start time with the installation engineer.

2 Ensure a testing plan has been created to test institutional workflows, standard operating processes, and extension modules with special consideration for Universal Borrowing (UB) and Universal Catalog (UC).

3 Determine if off-line circulation is to be used.

4 Set up the new hardware according to the standard Voyager hardware and software requirements. Ensure that the data move requirements are also satisfied.

5 Ensure that `Request_for_Voyager_Data_Move_Form.doc` file is filled out 10 days prior to the scheduled date of work and attached to the SI.

6 Ensure that there is access between the new environment and the current environment 10 days prior to the scheduled work date.

7 Ensure that the Ex Libris engineer has access to both environments 10 days prior to the scheduled work date.

8   Confirm that you have verified and had successful backups prior to the upgrade.

One week prior to the scheduled data move, have the system administrator verify the backup procedure of the Voyager servers.

Verify the output.

See **Table 15** for your planning checklist.

Table 15. Before You Move Checklist

Complete (√)	Task
	Confirm your contact, upgrade date, duration estimate, and start time with the installation engineer.
	Ensure a testing plan has been created to test institutional workflows, standard operating processes, and extension modules with special consideration for UB and UC.
	Determine if off-line circulation is to be used.
	Set up the new hardware according to the standard Voyager hardware and software requirements.
	Ensure that `Request_for_Voyager_Data_Move_Form.doc` file is filled out 10 days prior to the scheduled date of work and attached to the SI.
	Ensure that there is access between the new environment and the current environment 10 days prior to the scheduled work date.
	Ensure that the Ex Libris engineer has access to both environments 10 days prior to the scheduled work date.
	Confirm that you have verified and had successful backups prior to the upgrade.

Day of/Before Your Data Move

On the day of/before you move:

1   Confirm your contact, data move date, duration estimate, and start time with the upgrade engineer. Coordinate down time to your production environment with the installation engineer if necessary.

2   Ensure a testing plan has been created to test institution workflows, standard operating processes, and extension modules with special consideration for Universal Borrowing (UB) and Universal Catalog (UC).

3 Update the ODBC drivers if applicable. Ensure that they are referring to the new environment.

4 If the IP address or the DNS name of the server has changed, update the `voyager.ini` file in the Voyager Clients installation directory to point at the new server.

5 Ensure that updates between you and the installation engineer have been scheduled for agreed upon intervals.

See **Table 16** for your planning checklist.

Table 16. Day of/Before You Move Checklist

Complete (√)	Task
	Confirm your contact, data move date, duration estimate, and start time with the upgrade engineer. Coordinate down time to your production environment with the installation engineer if necessary.
	Ensure a testing plan has been created to test institutional workflows, standard operating processes, and extension modules with special consideration for UB and UC.
	Update the ODBC drivers if applicable.
	If the IP address or the DNS name of the server has changed, update the `voyager.ini` file in the Voyager Clients installation directory to point at the new server.
	Ensure that updates between you and the installation engineer have been scheduled for agreed upon intervals.

After Your Data Move

After you move:

1 The Ex Libris engineer will contact you to report that the data move has been completed.

2 Confirm a full Voyager system backup has been completed successfully. The system administrator conducts a Voyager system backup to include all Oracle files.

3 Coordinate a server reboot with the installation engineer to catch any problems with startup.

4 Use the testing plan created to test workflows, processes, and extension modules to ensure that the Voyager data move was successful. Workflows for each of the following modules should be tested:

- ■ Acquisitions

- ■ Cataloging

- ■ Circulation

- ■ System Administration

- ■ WebAdmin (if used)

- ■ WebVoyáge

5 Ensure that customizations are preserved to your satisfaction.

6 Inform your installation engineer that your data move is tested and that a successful data move has been confirmed.

7 Test the new ODBC drivers if applicable.

8 Begin general use of the new environment.

See **Table 17** for your planning checklist.

Table 17. After You Move Checklist

Complete (√)	Task
	The Ex Libris engineer will contact you to report that the data move has been completed.
	Confirm a full Voyager system backup has been completed successfully.
	Coordinate a server reboot with the installation engineer to catch any problems with startup.
	Use the testing plan created to test workflows, processes, and extension modules to ensure that the Voyager data move was successful.
	Ensure that customizations are preserved to your satisfaction.
	Inform your installation engineer that your data move is tested and that a successful data move has been confirmed.
	Test the new ODBC drivers if applicable.
	Begin general use of the new environment.

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Responsibilities Checklist

> This section includes:
> - **Upgrade and Installation Responsibilities Checklist Reference** on page **47**
> - **Data Move Responsibilities Checklist Reference** on page **48**

Upgrade and Installation Responsibilities Checklist Reference

Use the checklist provided in **Table 18** to identify the tasks for which you are responsible.

Table 18. Upgrade and Installation Responsibilities Checklist

Section/Title	Responsibility
Server Hardware and Software Requirements	Customer
Server Requirements and **Additional Server Software**	Customer Ex Libris
File System and Disk Space Requirements	Customer
Backup and Recovery Media and Procedures	Customer
Client Hardware and Software Requirements	Customer
Communication Requirements	Customer
Installation Requirements	Customer
Upgrade Requirements	Customer
Extension Module Requirements	Customer

Testing backups on your new server, regardless of it being a test or production environment is important. Backups permit an immediate restore of software in case of hardware failure or data loss.

Data Move Responsibilities Checklist Reference

Use the checklist provided in **Table 19** to identify the tasks for which you are responsible.

Table 19. Data Move Responsibilities Checklist

Work Description	Responsibility
Acquire new hardware	Customer
Setup Server Hardware according to requirements	Customer
Filesystem and Disk Space	Customer
Server Communications Setup	Customer
Request data move	Customer
Downtime Considerations	Customer
Considerations for Production Environments	Customer
Install Voyager in new environment	Ex Libris
Data Migration Process	Ex Libris
Basic Functionality Testing	Ex Libris
Detailed Functionality Testing	Customer
Setup and Confirm working backups	Customer