



# Installation Kit

Version 9.0

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## Updates to This Guide

The VIK guide has been updated to reflect the following change:

- The document has been updated to reflect the changes for Voyager 9.0.



# 1

---

## Introduction

This section includes:

- **Installation Kit Introduction** on page 11
- **Installation Overview** on page 12
- **Can I Run the VIK?** on page 13
- **Before You Run the VIK** on page 15
- **Support Policy for the Voyager Installation Kit** on page 16
- **Conventions of the VIK** on page 17

## Installation Kit Introduction

Ex Libris provides an automated Voyager Installation Kit (VIK) for customer self-installation. The installation should be performed by a local System Administrator.

The length of time it takes to run the VIK to completion depends on the number of bibliographic records in the database and from which version you are upgrading. Refer to the *Voyager Road To and Installation and Upgrade Requirements* guides located in the Ex Libris Documentation Center for upgrade duration estimates.

Ex Libris offers installation services to interested customers. Contact your local office to schedule a time for installation by creating a Support Incident via the eService at <http://support.exlibrisgroup.com>. Select Upgrade as the response to the “What type of difficulty are you experiencing?” question.

This document provides instructions for the automatic installation of Voyager version 9.0.0 and later using the Voyager Installation Kit (VIK). The VIK package facilitates installation to Voyager version 7.2.0 and later.

The VIK includes the following components:

- Installation package
  - Scripts and init files
- Oracle software
- Voyager software
  - Voyager application and pre-generated, third-party products (Java, Tomcat, Perl, Apache, and so on)

The Voyager installation using the VIK involves the following steps:

- Preinstallation tasks
- Download the software from the FTP server
- Create/restore temporary backups
- Third-party product installations
- Oracle software installation and configuration
- Voyager software installation and configuration
- Post-installation tasks

---

**NOTE:**

During the Voyager installation, one reboot of the server is required to test start-up scripts.

Other Ex Libris applications on the server using Oracle experience a short downtime during this reboot process at the end of the installation process.

---

## Installation Overview

The VIK can be downloaded from the Ex Libris FTP server or, in special circumstances, supplied as a DVD package for customers with strict security policies.

Refer to KCS Article 000005297 in Salesforce (<http://support.exlibrisgroup.com>) for the usernames and passwords to access the Ex Libris FTP server.

The Voyager installation is performed in the following standard directories:

- Voyager software under the directory `/m1/voyager`
- Oracle software under the directory `/oracle/app/oracle/product/11.2.0.3/db_1`

## Can I Run the VIK?

Review the information below to help you decide whether you should run the VIK on your own or schedule Ex Libris to run it for you.

### Current Voyager Version

Only customers running Voyager with Oracle 10.2.0.3 can run the VIK. To check your version of Oracle, as the `voyager` user, enter the following command:

```
sqlplus -v
```

If you are running Voyager 5 or lower and/or Oracle 9i you cannot run the VIK. Schedule an Ex Libris Installation Engineer to run the upgrade. Use the eService to open an incident to schedule the upgrade. Under the **What type of difficulty are you experiencing?** field, select **Upgrade**.

### Extension Modules

Review the list of Voyager extension modules below. There are some extension modules that are not upgraded via the VIK; and therefore, you should schedule the upgrade with Ex Libris. If you are not sure which extension modules you have, you can look at your product registration information in the eService.

Table 1. Voyager Extension Modules

Extension Module	Upgraded by VIK?
Analyzer	No
Aurora Export	Yes
Automatic Retrieval System (ARS)	Yes
Bridge to INN-Reach	No
Circulation Clusters	Yes
Citation Server	Yes
Geospatial Search	Yes
ILL - Interlibrary Loan	Yes
ILL Web (LFP-ILL)	No
ImageServer	Yes
InterCirc - INN-Reach	No
InterCirc-U (InterCirc with NCIP)	Yes
Media Scheduling	Yes

Table 1. Voyager Extension Modules

Extension Module	Upgraded by VIK?
SelfCheck	Yes
Swedish Character Setting	Yes
Universal Borrowing - UB	Yes
Universal Catalog - UC	Yes
VDX Interface	Yes
Voyager-Primo integration	Yes
Voyager-Rosetta integration	Yes
Voyager-Verde integration	Yes
WebAuthorities	Yes
Web Cataloging	Yes

## Server Types

There are the following predefined server types:

- Single-server installation (Oracle + App + Web)
- Oracle and application server (Oracle + App)
- Oracle-only server
- Voyager application and Web server (App + Web)
- Voyager application-only server
- Web server

If your server is not one of these predefined server types, the VIK may not configure your server correctly. Contact the installation team for more details on whether you should use the VIK. Proceeding without advice may result in a non-working environment since your configuration may not be supported or is untested with the VIK.

## Access to the server

You must have `root` access to the server(s).

## System Requirements

Before installing Voyager, verify that all operating system components comply with the Voyager requirements as outlined in the Voyager Installation and

Upgrade Requirements document located in the Ex Libris Documentation Center.

If you are currently on Voyager 6.5.x or later and using Oracle 10.2.0.3, you are able to upgrade directly to Oracle 11.2.0.3 using the VIK. If you choose you to upgrade Oracle manually, refer to *How to Upgrade Oracle from Version 10.2.0.3, 10.2.0.4, and 11.2.0.1 to 11.2.0.3*, available in the Ex Libris Documentation Center, that provides the necessary steps to patch your database. If you are currently on Voyager 6.5.x or a previous version and using Oracle 9i, you should not run the VIK.

---

**IMPORTANT:**

Do not proceed with running the VIK until Oracle has been upgraded to 10.2.0.3 or 10.2.0.4.

---

## Before You Run the VIK

### Licensing

Before running the VIK, you must have a Voyager License Key. Open an SI via the eService to request your Key. Under the What type of difficulty are you experiencing? field, select Upgrade. The Licensing Manager sends you a long string of characters (this is your Key). The VIK prompts you to enter the Key. Make sure to paste in the whole string including any final symbols. This authorizes and properly tunes your system.

---

**NOTE:**

If you have run the VIK previously, you may not need to obtain a new license file. You can run step 1.11 to find out if you need a new license file.

---

### Backup

It is required that a full, cold-tape working backup of the Voyager system be performed prior to beginning the upgrade process. While the VIK has the ability to perform a backup, this backup allows an immediate rollback of an inoperable system. The VIK backup tool is optional since it requires available space on the local system. The VIK backup tool is not an acceptable replacement to a full cold-tape backup.

### Archiving Voyager Permissions

Some consortia manage Unix system security by creating separate users that only have access to one specific database directory. If your site requires this, you can have the VIK remember the existing ownership of directories in `/m1/voyager` and then reapply those settings after upgrade. If you only have one

production database, or everyone uses the `voyager` user, you can safely ignore this option.

## Support Policy for the Voyager Installation Kit

The Voyager Installation Kit (VIK) was created to give customers more flexibility, power, and consistency when upgrading. With that in mind, Ex Libris has tried to create a support policy for the VIK that addresses the likely needs of customers.

### Categories of VIK Problems

Because the VIK was designed to be modular and flexible, you can safely exit and restart it without losing the state of your work. If you run into a problem or question when using the VIK, see the following categories that they can fall into:

- **Preinstall Problems**

All of the preinstallation tasks, including checks, downloads, and backups, can be done at any time. If they fail, they can be retried. If there is a problem, the Voyager system is still running, and, at worst, the upgrade has to be delayed. This includes all items in the VIK until Apache and Voyager are stopped (4.2 and 4.3) except for step 3 Create/Restore Backup. Step 3 requires stopping and starting Voyager and/or Oracle.

- **Install Problems**

Once Apache and Voyager are stopped, any problems running the VIK or its component scripts have the potential to prolong the downtime and prevent the system from being used.

### Support for the VIK Problems

See the following description of support provided for VIK problems:

- **Preinstall Problems**

If you experience a preinstall problem, open an SI via the eService as you would with other Voyager problems or questions. These SIs fall under the standard Level 3 or 4 as outlined in the Ex Libris Service Level Agreement.



### ■ Install Problems

If you experience an install problem that renders your system down during the standard hours of 7am to 7pm (Central), open a Down System SI and call the Support line, 877-445-5693.

If the problem occurs outside of the support hours, open an SI and use the VIK Restore feature to roll back the upgrade to the previous version. The problem can then be addressed when the office opens.

If the Restore feature does not work, follow the standard emergency, after-hours Down System procedure for Ex Libris assistance to either restore or go forward. Use of this emergency, after-hours pager service may be a billable event.

## The Importance of Backing Up

Every Voyager system should have a tested working backup and recovery system. When using the VIK, it is especially important to have a full backup and a plan for restoring before starting an upgrade.

The VIK includes a method to easily back up and restore your Voyager system configuration without having to exit, but it is not foolproof and is not a substitute for a standard full backup. However, it is extremely helpful if something goes wrong during an after-hours VIK upgrade.

## Conventions of the VIK

### The VIK Menu

Each section and task in the VIK has an associated number. In the menu, you can enter that number to go to a section or start a task. Entering `q` takes you up a level or exits the VIK from the main menu.

It is safe to exit and rerun the VIK. It remembers what has been completed. Also, if something unexpected happens, exit the VIK and restart where you left off. You can't hurt anything if you restart. Below is an example of a VIK menu.

```
Voyager Installation Kit
-----

Date:      <DATE>
OS:        SunOS
Server:    myserver
```

```

User:      <USER>
Version:   <VIK VERSION>
Voyager:   <VOYAGER VERSION>

-----

FAILED  1. Complete the preinstallation tasks
OK 2. Download the software
? 3. Create / Restore Backup
- 4. Complete Third Party Software Upgrade / Installation
- 5. Complete the Oracle Software Upgrade / Installation
- 6. Complete the Voyager Software Upgrade / Installation
- 7. Complete the postinstallation tasks
Enter an Option (q to Quit)[q]:

```

Upon completing the steps in the VIK, the status of a step change displays.

- OK  
The step completed successfully.
- FAILED  
An issue occurred. More details about the error can be found in the installation log.
- IN-PROCESS  
This is used during the client download portion of the VIK. This step can be rerun periodically since it is waiting for the status of processes on the server to change to OK or FAILED.
- SKIP  
This means that the step can be skipped, and you can move on to the next step. If you run the step anyway, it reports back to you that it should be skipped.
- ?  
An abnormal exit occurred. This could result from exiting a step prematurely or from an undetermined status of a step. Run the step again.
- -  
The minus sign (-) means that the step has not been run and needs to be run prior to proceeding to the next step.

If all the steps in a section are OK, press the Enter key to get to the next section. See below for an example:

```
2. Download the software
-----
OK  1. Download ftp configuration file
OK  2. Download Oracle software
OK  3. Download Oracle Critical Patch Update
OK  4. Download the Voyager software
OK  5. Download the Voyager Extension Modules
OK  6. Download Voyager Service Pack
OK  7. Download the third-party products
OK  8. Check for Completion of Downloads
OK  9. Check for the successful/correct download of the Oracle
Software
OK 10. Check for the successful/correct download of the Oracle CPU
OK 11. Check for the successful/correct download of the Voyager
software
OK 12. Check for the successful/correct download of the Voyager
Extension Modules
OK 13. Check for the successful/correct download of the Voyager
Service Pack(s)
OK 14. Check for the successful/correct download of the third-
party products
```

## Supply a Value or Press Enter

Many times in the VIK, you are asked to supply a value. If there is an option inside square brackets, or sometimes parentheses, you can press Enter to accept that value instead of supplying a value. If you're unsure of a setting, this default value should be the safest option.

## Be Patient While the VIK is Working

Some tasks in the VIK take time; and after starting one, you may not get any further feedback until it's done. We've tried to indicate if a task takes a while to complete so that you know that you can let it wait.

## Re-Entering the VIK

If you exit/quit and want to get back into the VIK, from `/m1/incoming/vik` enter:

```
./ikit_menu
```

## VIK Log

A single log file containing confirmation and feedback on the installation, the status of each step, and reporting errors is created. This log file is placed in `/m1/incoming/vik/log/voyager_installation.log`.

## After Completion

Upon completing the VIK, Voyager clients need to be installed on each PC that uses the new version of Voyager. You can find these clients on your Voyager server in `/m1/voyager/clients/<version>`. You must use either an FTP or SFTP client depending on your server's configuration. The clients can also be found in the Ex Libris Documentation Center in the Download Center section.

If your institution is upgrading from Voyager 8.0.0 or higher, Client Autoupdate is a feature that can automatically update your staff PCs with the new client software. See the *Voyager Technical User's Guide* for more details.

Customizations for Classic WebVoyage are restored and work immediately following your upgrade.

If you are upgrading from a release of Tomcat WebVoyage earlier than Voyager 8.0.0, customized skins are not restored and are not available for immediate use after the upgrade. Customizations to WebVoyage must be applied manually. Use of the preview server is recommended prior to the upgrade. This helps ensure that downtime is minimal upon upgrading to your production environment. After the upgrade, backups of your customizations can be found in `/m1/upgrade/<VERSION>/pre<VERSION>/voyager/<db>/tomcat/vwebv/context/vwebv/`.

Refer to the Voyager Upgrade Release Planning section of the Ex Libris Documentation Center for documents (for each version) that identify the WebVoyage files that have changed in the skin directories (*WebVoyage <version>-<version> GR Changed Files*) and a description of the changes in the skin files (*WebVoyage Changes to Skin Files from <version> to <version>*).

# 2

---

## Preparation

This section includes:

- **Voyager Installation Kit Requirements** on page 21
- **Creating the incoming Directory** on page 22
- **Download VIK from the Ex Libris FTP Server** on page 22

## Voyager Installation Kit Requirements

You must run the VIK as the root user.

The VIK supports the following extension modules:

- Automated Retrieval System (ARS)
- Citation Server
- ILL
- ImageServer
- Voyager Self Check
- Swedish Character Setting
- Voyager Primo Interoperability
- Media Scheduling

If the Voyager installation is a multi-tier installation such as application/ database and Web server, it is required that the VIK be run on all servers in the multi-tier environment.

If you have a test server, it is not recommended to run the installation on your production environment and test environment simultaneously. Begin with your test environment. When the installation has been confirmed working in the test environment, proceed with the installation in your production environment.

---

**IMPORTANT:**

It is required that a full, cold-tape working backup of the Voyager system be performed prior to beginning the upgrade process. More information about the Voyager backup is available in Chapter 3 of the *Voyager Technical User's Guide*.

While the VIK has the ability to perform a backup, this backup allows an immediate rollback of an inoperable system. The VIK backup tool is optional since it requires available space on the local system.

The VIK backup tool is not an acceptable replacement to a full cold-tape backup.

---

## Creating the incoming Directory

**Create the `/m1/incoming` directory (if it does not exist) under the `/m1` directory:**

```
1 cd /m1
2 ls -l
3 mkdir -p incoming
4 chmod 777 incoming
```

## Download VIK from the Ex Libris FTP Server

**To download the installation package from the Ex Libris FTP server, execute the following commands:**

```
1 Log into the server as root
2 cd /m1/incoming
3 Rename the existing v900 directory if it already exists:
  mv v900 v900.$$
4 mkdir -p v900
5 cd v900
```

```
6 ftp downloads.exlibrisgroup.com [<username>:voyager;
  <password>]
```

Refer to KCS Article 000005297 in Salesforce (<http://support.exlibrisgroup.com>) for the usernames and passwords to access the Ex Libris FTP server.

```
7 cd 2009.0.0
8 bin
9 get vik.9.0.0.tar.bz2
10 quit
```

**Extract the VIK package with the following commands:**

```
1 bzip2 -dc vik.9.0.0.tar.bz2 | tar -xvf -
2 cd vik
3 ./ikit_menu
```

The main menu of the VIK displays.

4 Enter 1 or q if you want to exit the installation.

```

                                Voyager Installation Kit
-----

Date:      <DATE>
OS:        <OS>
Server:    myserver
User:      root
Version:   <VIK VERSION>
Voyager:   <VOYAGER VERSION>

-----

?  1. Complete the preinstallation tasks
   - 2. Download the software
   - 3. Create / Restore Backup
   - 4. Complete Third Party Software Upgrade / Installation
   - 5. Complete the Oracle Software Upgrade / Installation
   - 6. Complete the Voyager Software Upgrade / Installation

```

- 7. Complete the postinstallation tasks

Enter an Option (q to Quit)[q]:



# 3

---

## Running the Installation Kit

This section includes:

- **Run Overview** on page 25
- **1 Preinstallation Tasks** on page 27
- **2 Download the Software** on page 31
- **3 Create/Restore Backup** on page 36
- **4 Complete the Third-Party Software Upgrade/Installation** on page 40
- **5 Complete the Oracle Software Upgrade/Installation** on page 42
- **6 Complete the Voyager Software Upgrade/Installation** on page 48
- **7 Post-Installation Tasks** on page 52

### Run Overview

Perform all VIK steps in the order displayed on the menu. That is, first complete the steps under number 1 in the ordered listed. When those steps are complete, proceed to step number 2, and so on.

Upon completing the steps in the VIK, you see the status of a step change:

- OK
- FAILED
- ?
- -

OK means that the step completed successfully.

FAILED means an issue occurred. More details about the error can be found in the installation log.

The question mark (?) means that an abnormal exit occurred. This could result from exiting a step prematurely or from an undetermined status of a step.

The minus sign (-) means that the step has not been run and needs to be run prior to proceeding to the next step.

You can exit the VIK at any stage of the installation. The VIK and the upgrade remain in the state you left it. To begin again, you need to restart the VIK, navigate to where you ran the last step, and continue completing the necessary steps.

**To restart the process, do the following:**

**1** `cd /m1/incoming/vik`

**2** `./ikit_menu`

A single log file containing confirmation and feedback on the installation, the status of each step, and reporting errors can be found under `/m1/incoming/vik/log/voyager_installation.log`.

The following main menu is used throughout the Voyager installation, outlining the main steps. The main menu has a header including the current date and operating system used.

```
Voyager Installation Kit
-----

Date:      <DATE>
OS:        SunOS
Server:    myserver
User:      root
Version:   <VIK VERSION>
Voyager:   <VOYAGER VERSION>

-----

? 1. Complete the preinstallation tasks
- 2. Download the software
- 3. Create / Restore Backup
- 4. Complete Third Party Software Upgrade / Installation
- 5. Complete the Oracle Software Upgrade / Installation
- 6. Complete the Voyager Software Upgrade / Installation
```

```
- 7. Complete the postinstallation tasks  
Enter an Option (q to Quit) [q]:
```

## 1 Preinstallation Tasks

After you enter 1 for Complete the preinstallation tasks from the top VIK menu, the following screen displays:

```
1. Complete the preinstallation tasks  
-----  
- 1. Configure the VIK Environment  
- 2. Complete the pre-installation system checks  
- 3. Create / Update the site information  
- 4. View Site  
- 5. Create / Update the server information  
- 6. View Server(s) Information  
- 7. Create exlibris group  
- 8. Create dba group  
- 9. Create oracle user  
- 10. Create voyager user  
- 11. Run Pre-Installation Setup  
- 12. Install Voyager License  
- 13. Run OS Tuning Setup  
  
Enter an Option (q to Quit) [q]:
```

### 1.1 Configuring the VIK Environment

This step sets up the environment for running the VIK. You are prompted to enter parameters such as e-mail address, the FTP server to download the files, the local software repository directory, and other default values used throughout the VIK.

If at any point a variable is not defined or needs to be changed, this step can be rerun to change those parameters.

```
1. Complete the preinstallation tasks
1.1. Configure the VIK Environment
-----
Set Local Software Repository Directory(LSWR) [/ml/incoming/v720]:
Set Backup / Restore Directory []:
Set Voyager Base [/ml/voyager]:
Use Passive FTP [N]:
Set ftp Server [downloads.exlibrisgroup.com]:
Set Email Address []:email.address@institution.edu
```

## 1.2 Complete the Preinstallation System Checks

This step checks whether the server meets the specifications required for the Voyager version 9.0.0. It checks to ensure that you have the minimum requirements for installing Voyager 9.0.0 on the servers.

If you have a multi-server environment, this step should be run on all servers prior to proceeding with the remainder of the installation to ensure that your servers meet the requirements for Voyager 9.0.0.

If there are any warnings during the third-party product checks, this is acceptable since the VIK upgrades the third-party products that are not at the recommended version. This is much more important during the system check at the end of the installation.

During the extension modules checks, you may find "WARNING CHECK LICENSING FOR" with a list of databases specified. This means that the extension module seems to be partially installed according to the installation checks. It is safe to proceed since the VIK upgrades the components it finds. It also displays when this is run on a Web server since it cannot connect to the database to check schema for all of the extension modules.

At the end of the summary, the script determines if you are okay to proceed to the next version of Voyager. If for any reason the check script reports FAILED, you need to resolve any problems prior to continuing. This ensures that your system meets the requirements.

---

### NOTE:

The pre-installation checks generate a new `SEARCHPARM_conflicts.xls` file that is used as part of the Voyager upgrade. If you have not already addressed this conflicts file, see the *Voyager Index Changes* document for more information.

---

**IMPORTANT:**

Resolve any FAILED items prior to resuming the VIK installation for Voyager. This step can be run as many times as necessary to check all issues and confirm that all criteria have been met.

---

### 1.3 Create/Update the Site Information

This step creates the required site for the VIK to work properly. It automatically selects the local server for running the VIK.

You are prompted to Enter Customer Initials (no spaces). This can be your initials or your institution's initials. There is a 10-character maximum limit.

### 1.4 View Site

This step displays your Site Code as well as your server name. Press Enter and continue.

### 1.5 Create/Update the Server Information

Once the site is created, you move onto the creation of the server configuration. The user defines the IP, Fully Qualified Domain Name (FQDN), hostname, and so on. This process sets up the VOYAGER\_BASE, where voyager is installed, and other configurations specific to a Voyager server.

There are six predefined server types:

- Single Server Installation (Oracle + App + Web)
- Oracle and Application Server (Oracle + App)
- Oracle Only Server
- Voyager Application and Web Server (App + Web)
- Voyager Application Only Server
- Web Server

---

**NOTE:**

If your server is not one of these predefined server types, the VIK may not configure your server correctly. Stop immediately and contact the installation team for more details regarding how to proceed with this installation. Proceeding without advice may result in a non-working environment since your configuration may not be supported or is untested with the VIK.

---

```
Server Hostname [xxx.xxx]:
```

```
Hit enter

Server IP Address []:

Enter the IP Address, External IP address is preferred, of the
server that you are running the VIK on.
```

## 1.6 View the Server(s) Information

This step displays the server that is currently configured for the VIK. To change any of the values you need to run the `Create/Update the server information` step.

## 1.7 Create the `exlibris` Group

This step creates the `exlibris` group if it does not exist.

---

**NOTE:**

If the `endeavor` group already exists from your previous installation, it creates an additional group for `exlibris`. The `endeavor` group is removed at the end of the installation process.

---

---

**NOTE:**

If you have any backup scripts/tools that rely upon the `endeavor` group as a display text, you need to ensure that they are updated to use `exlibris` by the end of the upgrade process; or your tools may not work after this process is complete.

---

## 1.8 Create the `dba` Group

This step creates the `dba` group if it does not exist.

## 1.9 Create the `oracle` User

This step checks or creates the `oracle` user for managing the oracle software with the user home of `/export/home/oracle` on SunOS and `/home/oracle` on Linux and AIX. The user shell is `/bin/ksh`.

When creating the new user, if needed, you are prompted for a new unix password.

## 1.10 Create the `voyager` User

This step checks or creates the `voyager` user for managing and using the `voyager` software with the user home of `/export/home/voyager` on SunOS and `/home/voyager` on Linux and AIX. The user shell `/bin/ksh`.

When creating the new user, if needed, you are prompted for a new unix password.

## 1.11 Run Preinstallation Setup

This step checks the permissions setup of required directories for the VIK to perform a successful installation.

## 1.12 Install Voyager License

Before running the VIK, you must have a Voyager License Key. If you haven't done so already, open an SI via the eService to request your Key. The Licensing Manager sends you a long string of characters (this is your Key). The VIK prompts you to enter the Key. Make sure you paste in the whole string including any final symbols. This authorizes and properly tunes your system.

---

**NOTE:**

If you have run the VIK previously and have entered the Voyager license key, you most likely do not need a new key. The VIK lets you know if you need a new key before you proceed.

---

## 1.13 Run OS Tuning Setup

This step checks the system for values used for tuning your voyager system. If the values are not correct, the step updates the values appropriately.

# 2 Download the Software

---

**NOTE:**

This step requires wget access to the FTP server where the packages are stored. By default, that location is `downloads.exlibrisgroup.com`. If you do not have outbound access from this server, the packages can be downloaded manually and stored in the local software repository directory previously defined in **1.1 Configuring the VIK Environment** on page 27. Once the packages are on the server, Step 2 can be skipped entirely.

---

The second step in the main menu is to download the software.

Enter the number 2 to display the submenu for Download the software from the FTP server:

```
2. Download the software
```

- ```
-----
```
- 1. Download ftp configuration file
  - 2. Download Oracle software
  - 3. Download Oracle Critical Patch Update
  - 4. Download the Voyager software
  - 5. Download the Voyager Extension Modules
  - 6. Download Voyager Service Pack
  - 7. Download the third-party products
  - 8. Check for Completion of Downloads
  - 9. Check for the successful/correct download of the Oracle Software
  - 10. Check for the successful/correct download of the Oracle CPU
  - 11. Check for the successful/correct download of the Voyager software
  - 12. Check for the successful/correct download of the Voyager Extension Modules
  - 13. Check for the successful/correct download of the Voyager Service Pack(s)
  - 14. Check for the successful/correct download of the third-party products

## 2.1 Download the FTP Configuration File

Enter the number 1 to download the latest version of the configuration file used for downloading the Voyager, Oracle, and third-party software.

The target directory on your local server is the location setup in [1.1 Configuring the VIK Environment](#) on page 27. If you need to change the location of the target directory, do so in that step

This utility uses the wget client for downloading configuration file from the Ex Libris FTP server.

An e-mail message is sent to the address you entered when the FTP download is started and completed.

---

### NOTE:

If you fail to run this step the first time the VIK process is completed (when downloading the files using the VIK), it results in no files downloaded from the FTP server when proceeding to the next steps. This step initially obtains the full FTP file list available for Voyager 9.0.x.

---



## 2.2 Download Oracle Software

The next step is to download the Oracle software. You see the packages being downloaded.

The target directory on your local server is the location setup in [1.1 Configuring the VIK Environment](#) on page 27. Change the location in that step.

This utility uses the wget client for downloading the Voyager software from the Ex Libris FTP server.

An e-mail is sent to the address specified in the [1.1 Configuring the VIK Environment](#) step when the FTP download is complete. The e-mail address used can be changed. See [1.1 Configuring the VIK Environment](#) on page 27.

## 2.3 Download Oracle Critical Patch Update

The next step is to download the Oracle critical patch update software. You see the packages being downloaded.

The target directory on your local server is the location setup in [1.1 Configuring the VIK Environment](#) on page 27. Change the location in that step.

This utility uses the wget client for downloading the Voyager software from the Ex Libris FTP server.

An e-mail is sent to the address specified in the [1.1 Configuring the VIK Environment](#) step when the FTP download is complete. The e-mail address used can be changed. See [1.1 Configuring the VIK Environment](#) on page 27.

## 2.4 Download Voyager Software

The next step is to download the Voyager software. You see the packages being downloaded.

The target directory on your local server is the location setup in [1.1 Configuring the VIK Environment](#) on page 27. Change the location in that step.

This utility uses the wget client for downloading the Voyager software from the Ex Libris FTP server.

An e-mail is sent to the address specified in the [1.1 Configuring the VIK Environment](#) step when the FTP download is complete. The e-mail address used can be changed. See [1.1 Configuring the VIK Environment](#) on page 27.

## 2.5 Download Voyager Extension Modules

The next step is to download the Voyager extension modules. You are prompted to select the extension modules that you have licensed and configured on your server.

---

**NOTE:**

If you know you have an extension module installed that is not on this list, you are required to coordinate the installation of this extension module with the installation team to ensure that your extension module is properly installed and configured. For example, Analyzer is not supported with VIK.

---

---

**NOTE:**

You are required to obtain the password(s) from the e-Service in order to download the extension modules you have chosen. Refer to KCS Article 000009981 (Media) and 000002188 (ILL) in Salesforce (<http://support.exlibrisgroup.com>) for the usernames and passwords to access the Ex Libris FTP server. If you do not have access to a password for a particular extension module and you feel this is an error, open a Salesforce case and support can assist you in resolving this issue.

---

The target directory on your local server is the location setup in **1.1 Configuring the VIK Environment** on page 27. Change the location in that step.

This utility uses the wget client for downloading the Voyager extension modules software from the Ex Libris FTP server.

An e-mail is sent to the specified address in the **1.1 Configuring the VIK Environment** step when the FTP download is complete. The e-mail address used can be changed in that step, too.

## 2.6 Download the Voyager Service Pack

To continue downloading the Voyager software, you need to download any service packs that have been released.

```
2. Download the software
2.6. Download Voyager Service Pack
-----

No Files to Download

Press Enter to Continue:
```

## 2.7 Download the Third-Party Products

Once the Voyager software downloads are completed, you need to download any necessary third-party packages.

The target directory on your local server is the location setup in [1.1 Configuring the VIK Environment](#) on page 27. Change the location in that step.

This utility uses the wget client for downloading the third-party products from the Ex Libris FTP server.

An e-mail is sent to the specified address in the [1.1 Configuring the VIK Environment](#) step when the FTP download is complete. The e-mail address used can be changed in that step, too.

## 2.8 Check for Completion of Downloads

This step checks for the completion of the Voyager software, Voyager third-party software, Voyager extensions software, and service pack downloads.

## 2.9 Check for the Successful/Correct Download of the Oracle Software

This step checks the checksum of the Oracle software downloaded with a known correct size of the packages. If you encounter any problems with the download and you cannot resolve the problem yourself, contact your local support office.

## 2.10 Check for the Successful/Correct Download of the Oracle CPU

This step checks the checksum of the Oracle critical patch update software downloaded with a known correct size of the packages. If you encounter any problems with the download and you cannot resolve the problem yourself, contact your local support office.

## 2.11 Check for the Successful/Correct Download of the Voyager Software

This step checks the checksum of the Voyager software downloaded with a known correct size of the packages.

If you encounter any problems with the download and you cannot resolve the problem yourself, contact your local support office.

## 2.12 Check for the Successful/Correct Download of the Voyager Extension Modules

This step checks the checksum of the Voyager extension module software downloaded with a known correct size of the packages.

If you encounter any problems with the download and you cannot resolve the problem yourself, contact your local support office.

## 2.13 Check for the Successful/Correct Download of the Voyager Service Pack(s)

This step checks the checksum of the Voyager service pack software downloaded with a known correct size of the packages.

## 2.14 Check for the Successful/Correct Download of the Third-Party Products

This step checks the checksum of the third-party software downloaded with a known correct size of the packages.

If you encounter any problems with the download and you cannot resolve the problem yourself, contact your local support office.

# 3 Create/Restore Backup

The create/restore backup facility is available with the Voyager installation kit. If you want the VIK to run a backup of the Voyager database, run this step. If you need to back up the database, this step needs to run.

This process is not recommended for customers with a large amount of data that do not have enough disk space to hold a tarball of /ml and /oracle.

This backup/restore process also does NOT replace the need to have a backup of the Voyager server on an external device prior to starting. If you are uncertain as to the status of your system backup, consult with your system administrators that manage the Voyager backups, prior to starting the upgrade.

### 3. Create / Restore Backup

- 1. Voyager / Oracle Backups
- 2. Voyager / Oracle Restore

## 3.1 Voyager/Oracle Backups

Before performing the Voyager / Oracle backup using the VIK, make sure that your system has sufficient disk space and that you have sufficient time to run the backup. Then run the following steps.

```
3. Create / Restore Backup
3.1.  Voyager / Oracle Backups
-----

Voyager Backup
-----
- 1. Check Voyager Backup Space (root)
- 2. Stop Voyager (root)
- 3. Perform Voyager Backup (root)
- 4. Start Voyager - Optional (root)

Oracle Backup
-----
- 5. Check Oracle Backup Space (root)
- 6. Stop Voyager and Oracle (root)
- 7. Perform Oracle Backup (root)
- 8. Start Voyager and Oracle (root)

Enter an Option (q to Quit) [q]:
```

### 3.1.1 Check Voyager Backup Space

This step checks the backup directory defined in the configure VIK environment and ensures that there is enough space to take a backup of your Voyager application. There must be enough space in this directory to store all of /m1/voyager. If you do not have enough space, the backup and restore process does not need to be completed. It is your responsibility to ensure that you can roll back your installation from a successful backup prior to the upgrade.

---

**NOTE:**

This process is not a substitute for a successful cold backup to tape based on your existing backup configuration.

---

### **3.1.2 Stop Voyager**

To take a backup of your Voyager application, Voyager must be stopped. This step ensures that Voyager is stopped prior to taking the backup.

### **3.1.3 Perform Voyager Backup**

This step makes a copy of your `/m1/voyager` directory and stores it in the backup directory previously defined. This backup can be used in case of emergency to restore your Voyager application prior to starting the Voyager upgrade.

### **3.1.4 Start Voyager (Optional)**

Voyager can be restarted if you desire, but Voyager will be stopped when proceeding with the VIK.

### **3.1.5 Check Oracle Backup Space**

This step checks the backup directory defined in the configure VIK environment and ensures that there is enough space to take a backup of your Oracle Database. There must be enough space in this directory to store all of `/oracle/oradata/VGER`. If you do not have enough space, the backup and restore process does not need to be completed. It is your responsibility to ensure that you can roll back your installation from a successful backup prior to the upgrade.

### **3.1.6 Stop Voyager and Oracle**

To take a backup of your Oracle Database, Voyager and Oracle must be stopped. This step ensures that Voyager and Oracle are stopped prior to taking the backup.

### **3.1.7 Perform Oracle Backup**

This step makes a copy of your `/oracle/oradata/VGER` directory and stores it in the backup directory previously defined. This backup can be used to restore your Oracle Database prior to starting the Voyager upgrade.

### **3.1.8 Start Voyager and Oracle**

This step starts Voyager and Oracle to resume operation and allows the clients to begin connecting to the database.

## **3.2. Voyager / Oracle Restore**

Before you can perform a restore using the VIK, you must first perform a backup. It is recommended to perform the backup at the beginning of the

upgrade. If you want perform a restore at a later time, you can use the backup that you create now.

You are only able to restore the software that you back up in step 3.1.

```
3. Create / Restore Backup
3.2.  Voyager / Oracle Restore
-----

Voyager Restore
-----

- 1. Stop Voyager (root)
- 2. Perform Voyager Restore (root)
- 3. Start Voyager (root)

Oracle Restore
-----

- 4. Stop Voyager and Oracle (root)
- 5. Perform Oracle Restore (root)
- 6. Start Voyager and Oracle (root)

Enter an Option (q to Quit) [q]:
```

### **3.2.1 Stop Voyager**

Prior to running a restore of your Voyager environment, Voyager must be stopped. This step stops Voyager.

### **3.2.2 Perform Voyager Restore**

This step takes the backup file previously created and puts it into place so that all changes made previously are reverted to the time the backup was taken using the VIK backup step.

### **3.2.3 Start Voyager**

Since the restore has finished, you need to restart Voyager.

### 3.2.4. Stop Voyager and Oracle

Prior to running a restore of your Oracle environment, Voyager and Oracle must be stopped. This step stops Voyager and Oracle.

### 3.2.5 Perform Oracle Restore

This step takes the backup file previously created and puts it into place so that all changes made previously are reverted to the time the backup was taken using the VIK backup step for Oracle.

### 3.2.6 Start Voyager and Oracle

Since the restore has finished, you need to restart Voyager and Oracle.

## 4 Complete the Third-Party Software Upgrade/Installation

This VIK component installs third-party software such as Apache, Java, Tomcat, and Perl.

---

**NOTE:**

root access is required to perform the Complete Third-Party Software Upgrade / Installation tasks.

---

```
Voyager Installation Kit

4. Complete Third Party Software Upgrade / Installation
-----
- 1. Extract the third-party software
- 2. Stop Voyager Software
- 3. Stop Apache Software
- 4. Install / Upgrade third-party software
- 5. Configure third-party software
Enter an Option (q to Quit)[q]:
```

### 4.1 Extract the Third-Party Software

This step extracts the third-party packages into the local software repository.



## 4.2 Stop the Voyager Software

In order to begin the upgrade of the Voyager `xxxxdb` and schema and perform the necessary regens for `voyager`, it is required that `voyager` be stopped.

This step stops `voyager` and the current processes. It prevents any new connections from being made to the database, also.

## 4.3 Stop Apache Software

After stopping the Voyager software, it is important to stop the Apache software being used by `voyager`.

This step stops the Voyager Web server and prevents connections from being made to Voyager software via the Web.

## 4.4 Install/Upgrade the Third-Party Software

This step upgrades the existing Java, Perl, and Tomcat, or installs a new version of the software if it is required by the release of the software in `/ml/shared`.

## 4.5 Configure the Third-Party Software

This step ensures that the correct paths are set up correctly in `/ml/shared/bin`. It sets up the new version of Apache if there is one. Ensure that permissions are set up correctly on the `/ml/shared` directories.

## 5 Complete the Oracle Software Upgrade/Installation

```
5. Complete the Oracle Software Upgrade / Installation
-----
- 1. Shut down Oracle (root)

    Install New Oracle Binaries
    -----
- 2. Create and prepare required directories (root)
- 3. Extract the Oracle software (oracle)
- 4. Check and repair OS files for Oracle. Remove SHM
constraints (root)
- 5. Add Oracle 11 to the Oracle Inventory (oracle)

    Pre-Upgrade Activities
    -----
- 6. Disable Oracle Archive Logging (oracle)
- 7. Tune Oracle for upgrade (oracle)
- 8. Remove unlicensed Oracle Modules (oracle)

    Upgrade Oracle
    -----
- 9. Migrate oracle configuration files (oracle)
- 10. Oracle Upgrade Pre-checks (oracle)
- 11. Migrate spfile to Oracle 11 (oracle)
- 12. Shut down Oracle, Unload shared objects (root)
- 13. Update oratab, Oracle user .profile (oracle)
- 14. Upgrade the Oracle Catalog (oracle)
- 15. Post Upgrade schema changes (oracle)
- 16. Recompile invalid Oracle objects (oracle)
- 17. Update Oracle Time Zone file (oracle)
- 18. Set Miscellaneous Oracle permissions (oracle)

    Oracle Patches
    -----
- 19. Extract Oracle Patches (oracle)
- 20. Install the Oracle Patch Set Update (oracle)
- 21. Patch the Oracle Catalog for PSU (oracle)

    Maintenance
    ---
- 22. Recompile invalid Oracle objects (oracle)
- 23. Start Oracle (oracle)
- 24. Update Voyager application for Oracle 11 (voyager)
- 25. Tune Oracle (oracle)
- 26. Check Voyager Tablespace Size (oracle)
```

## 5.1 Shut Down Oracle

This step ensures that Oracle is shut down in such a way that its state can be managed by the VIK.

## 5.2 Create and Prepare Required Directories

This step creates:

- `/var/opt/oracle` on Solaris (Linux and AIX use `/etc`)  
Permissions are corrected as needed.
- `oratab` and `oraInst.loc` in their proper locations, if needed
- `/oracle` and sets permissions, as needed

## 5.3 Extract the Oracle Software

This step extracts the necessary components of the Oracle server package under the `/oracle` directory.

## 5.4 Check and Repair OS Files for Oracle

This step sets special permissions and ownerships on a few files for `$ORACLE_HOME` not to be owned by the `oracle` user. If `/oracle/rootpre/rootpre.sh` exists, it is run. `$ORACLE_HOME/root.sh` is run.

## 5.5 Add Oracle 11 to the Oracle Inventory

Run the necessary Oracle tools and utilities to add the new Oracle home to the existing Oracle inventory, if it is not already present.

## 5.6 Disable Oracle Archive Logging

This step checks the Oracle database and determines if Oracle Archive Logging is enabled. If it finds it enabled, it is disabled for the duration of the Oracle and Voyager application upgrades. Doing this improves performance and prevents technical difficulties with Oracle Archive Logging. Oracle Archive Logging is re-enabled in the section, [7 Post-Installation Tasks](#) on page [52](#), after the Voyager upgrade.

## 5.7 Tune Oracle for Upgrade

This step analyzes your system and makes tuning calculations to tune Oracle prior to the upgrade.

When you see:

```
Press return to continue...  
To Save the file and continue  
type :wq!
```

You use `vi` to edit the Oracle spfile. Unless you know what you are doing, it is okay to save the file and quit (`:wq!`) the file.

## 5.8 Remove Unlicensed Oracle Modules

This step removes Oracle components from the Oracle installation that are not used by the Voyager software that were previously delivered as part of the voyager installation.

The following components are removed:

- ODM
- OLAP
- ORDIM
- OWB
- SDO

The following is an example of a list of Oracle components:

```
=== Listing of Oracle components in dba_registry ===  
APEX      Oracle Application Express      3.2.1.00.10  VALID  
CATALOG   Oracle Database Catalog Views    11.2.0.1.0   VALID  
CATJAVA   Oracle Database Java Packages    11.2.0.1.0   VALID  
CATPROC   Oracle Database Packages and Types 11.2.0.1.0   VALID  
CONTEXT   Oracle Text                       11.2.0.1.0   VALID  
EXF        Oracle Expression Filter          11.2.0.1.0   VALID  
JAVAVM    JServer JAVA Virtual Machine     11.2.0.1.0   VALID  
OWM        Oracle Workspace Manager          11.2.0.1.0   VALID  
RUL        Oracle Rule Manager               11.2.0.1.0   VALID  
XDB        Oracle XML Database               11.2.0.1.0   VALID  
XML        Oracle XDK                         11.2.0.1.0   VALID
```

## 5.9 Migrate Oracle Configuration Files

This step migrates the existing `listener.ora`, `tnsnames.ora`, and `orapwVGER` files to the new Oracle installation.

## 5.10 Oracle Upgrade Prechecks

This step prepares Oracle for upgrade and checks that the upgrade requirements are met for the Oracle instance.

## 5.11 Migrate spfile to Oracle 11

In order to preserve the Oracle parameters that are properly tuned for the upgrade, this step copies the existing `spfile` to the Oracle 11 installation.

## 5.12 Shut Down Oracle, Unload Shared Objects

To begin the upgrade process, Oracle must be shut down and cleaned up. This step performs those necessary tasks prior to starting the upgrade.

## 5.13 Update oratab, Oracle User Profile

This step updates the `oracle` user's profile and updates the `oratab` configuration file to use the new version of Oracle.

## 5.14 Upgrade the Oracle Catalog

This step takes some time to complete. This step uses the Oracle upgrade utilities to upgrade the existing Oracle catalog from the current version to the new version of Oracle. During this step, you notice that large amounts of data are displayed. This is normal.

The catalog update is `nohup`d. If the user's connection fails, they may tail the file `$ORACLE_HOME/rdbms/log/upgrade.log` to watch the ongoing progress of the work. When the log indicates that the upgrade is complete, perform the following `grep` to search for Oracle errors during the upgrade:

```
grep "^ORA-" $ORACLE_HOME/rdbms/log/upgrade.log | uniq -c
```

## 5.15 Post Upgrade Schema Changes

This step checks the Oracle registry status. The user is asked to confirm that each step registry entry displayed is valid. A few additional Oracle catalog updates are performed.

## 5.16 Recompile Invalid Oracle Objects

This step recompiles all invalid Oracle objects.

## 5.17 Update the Oracle Time Zone File

If the Oracle Time Zone information is outdated, this step ensures that Oracle is patched with a current, time-zone configuration.

## 5.18 Set Miscellaneous Oracle Permissions

This step sets default passwords for the `dbstmp`, `ctxsys`, and `mgmt_view` accounts in Oracle; revokes public execution permissions from certain potentially problematic packages in the database; and extends them to specific schemas as necessary.

## 5.19 Extract Oracle Patches

This step extracts the necessary Oracle patches to apply the Oracle installation. This includes any Patch Security Updates (PSU) and Critical Patch Updates (CPU).

## 5.20 Install the Oracle Patch Set Update

This step installs the Oracle Patch Set Update (PSU) to the Oracle database environment.

---

### NOTE:

When applying the patch set update, do not enter an e-mail address if you are prompted to do so. This service is disabled by default and causes inconsistent results in your environment if it is enabled.

---

## 5.21 Patch the Oracle Catalog for PSU

This step updates the VGER instance with the PSU that was previously extracted and installed.

## 5.22 Recompile Invalid Oracle Objects

This step recompiles all Oracle objects and attempts to remove the status of invalid from any Oracle objects and change their status to valid.

## 5.23 Start Oracle

This step starts Oracle to resume operation and allows connections to be made to the database.

## 5.24 Update Voyager Application for Oracle 11

This step ensures that the Voyager application is updated to use Oracle 11. It updates files such as the `voyager.env` to ensure that the voyager databases can communicate with the database after the upgrade. If this step is not run successfully, the VIK may not work correctly when running the Voyager upgrade in step 6.

## 5.25 Tune Oracle

This step tunes Oracle to ensure that it is ready for production use. It ensures that any parameters needed during the Oracle upgrade are reset to their correct values.

When you see:

```
Press return to continue...  
To Save the file and continue  
type :wq!
```

You use `vi` to edit the Oracle spfile. Unless you know what you are doing, it is okay to save the file and quit (`:wq!`) the file.

## 5.26 Check Voyager Tablespace Size

This step checks the tablespace for all voyager databases to ensure that they are less than 80% utilized. If they are more than 80% utilized a new datafile is added to the tablespace to ensure that there is enough room to grow indexes during the voyager upgrade process and add new records after the upgrade.

## 6 Complete the Voyager Software Upgrade/Installation

### 6. Complete the Voyager Software Upgrade / Installation

#### Install

- 1. Extract the Voyager software (voyager)
- 2. Install the Voyager Software (voyager)

#### Upgrade

- 3. Setup Pre-Upgrade Configuration (voyager)
- 4. View Database Configuration
- 5. Perform Integrity Checks (voyager)
- 6. Perform Pre-Upgrade Tasks (voyager)
- 7. Preserve and Prepare Voyager Permissions
- 8. Upgrade Voyager (xxxdb) directory (voyager)
- 9. Upgrade Voyager (xxxdb) schema (voyager)
- 10. Training Database Refresh (voyager)
- 11. Upgrade Voyager (xxxdb) Extension Modules (voyager)
- 12. Restore Voyager (xxxdb) custom files (voyager)

#### Service Pack

- 13. Apply the Service Pack (voyager)

#### Maintenance

- 14. Check / Setup Authority Heading Index(es) (oracle)
- 15. Setup Voyager Regens (voyager)
- 16. Run Voyager (xxxdb) Regens (voyager)
- 17. Run Voyager (xxxdb) DBCompare (voyager)
- 18. Tune Voyager Application (voyager)

### 6.1 Extract the Voyager Software

This step extracts the Voyager packages into the local software repository. This may take some time. The cursor blinks while the process is running. You are notified when it is complete.

### 6.2 Install the Voyager Software

Once the software is extracted, this step installs the new version of the Voyager binaries, libraries, upgrade scripts, and utilities into /m1/voyager. The files are installed into the respective directories separated by version such as /m1/voyager/bin/<version>. This may take some time. The cursor blinks while the process is running. You are notified when it is complete.



## 6.3 Set Up the Pre-Upgrade Configuration

This step walks you through selecting the databases you need to upgrade on this server.

From this step forward the only databases that are available for processing are the databases selected in this step. To change the databases to work with, you must revisit this step and change the database selection(s). You must reselect the databases that were previously selected if you want to work with them again.

Once the databases have been selected, the VIK aggregates critical data for each database. Record counts, database port series, username and password, and database type.

## 6.4 View the Database Configuration

This step shows you the databases you selected and the important information gathered in [6.3 Set Up the Pre-Upgrade Configuration](#).

| Database                 | User/Pass              | Port      | Version    | Type      |           |
|--------------------------|------------------------|-----------|------------|-----------|-----------|
| train710db               | train710db/Ttrain710db | 80        | 2007.1.0   | T         |           |
| -----                    |                        |           |            |           |           |
| Database Size Stats      |                        |           |            |           |           |
| Database                 | Auth Count             | Bib Count | MFHD Count | Size (MB) | % TS Used |
| train710db               | 62305                  | 60804     | 61387      | 900       | 22        |
| -----                    |                        |           |            |           |           |
| Press Enter to Continue: |                        |           |            |           |           |

## 6.5 Perform the Integrity Checks

This step checks for any inconsistencies in the voyager database. It checks the integrity of several different tables that have had issues in the past. It also ensures that any upgrade-specific issues are caught and brought to the attention of the person performing the upgrade.

## 6.6 Perform the Pre-Upgrade Tasks

This step sets up/configures the necessary regen, upgrade, and pre-upgrade tasks associated with the type of server the VIK is being run on. Upgrades are configured based on the type of server the VIK is being run on.

## 6.7 Preserve and Prepare Voyager Permissions

This step takes a snapshot of the permissions found in `/m1/voyager` prior to the upgrade. This can be important for institutions that use specific permissions based on distributed tasks.

## 6.8 Upgrade the Voyager (xxxdb) Directory

This step upgrades the `xxxdb` directory in `/m1/voyager`. It ensures that the appropriate files are updated with your existing configurations. It ensures that each `xxxdb` that is selected is upgraded to the latest files released for 2009.0.0 and higher. Select the database(s) from the list that you want to upgrade.

## 6.9 Upgrade the Voyager (xxxdb) Schema

Once the `xxxdb` directory is on the latest release, the Voyager database schema must also be upgraded. This step ensures that any schema updates, data adjustments, or configuration scripts are run for the database and upgraded to the 2009.0.0 and higher level.

This step only runs for the databases previously selected in the [6.3 Set Up the Pre-Upgrade Configuration](#) step.

## 6.10 Training Database Refresh

The training database refresh gives you the option to refresh your data in your training database environment. All Oracle database changes and configurations are removed and a fresh training database schema is imported. The only way to recover any data in this environment is to do a full Oracle restoration.

---

**NOTE:**

This is a destructive action to the training database environment and must not be used for your production environments.

---

## 6.11 Upgrade Voyager (xxxdb) Extension Modules

This step examines your database and ensures that extension modules found and supported by the VIK are upgraded and working after the completion of the VIK.

## 6.12 Restore Voyager (xxxdb) Custom Files

This step first checks to make sure that there is enough space available on `/m1` to restore key files and directories. One key directory it checks is the `/m1/upgrade/2009.0.0/pre200900/<db>` directory. If there is not enough space to copy the `<db>` directory back into the new `/m1/voyager/<db>/` directory, this step fails. This step also restores the classic WebVoyage and Tomcat

WebVoyage customizations as well the `<db>/local` directory and other customer created files.

### 6.13 Apply the Service Pack

This step runs the service pack that was downloaded during step 2.4. The service pack applied is the latest service pack available. If another version of a Voyager service pack is preferred, this service pack must be downloaded and executed manually.

### 6.14 Check / Setup Authority Heading Index(es)

To ensure that Authority Headings Keyword is configured and working, this step ensures that the necessary Oracle objects are in place. If it does not find the required objects, it sets them up for you.

### 6.15 Setup Voyager Regens

This step sets up the necessary regens by identifying the version of Voyager from which you are coming and to which you are upgrading.

### 6.16 Run Voyager (xxxdb) Regens

With the changing of the schema and changes to the data, some changes require keyword index, voyager primary indexes, and tables to be repopulated. This step runs the required regens necessary to have the data changes appropriately propagated throughout the database.

For a list of the required regens, refer to the *Voyager Road To* guide and locate the version of Voyager from which you are upgrading.

The regen times for any given database can vary greatly based on the size of the database, the performance of the hard disks, and the types of regens performed.

During this step, all databases selected have their regens performed. You receive a progress meter for each database and its regen being performed. The VIK performs all regens for a single database. When it has completed, it continues to the next database until the regens have been completed for all databases.

Once all database regens have been completed, you return to the VIK menus. You are not able to proceed with the VIK until control is returned to the VIK menu.

### 6.17 Run Voyager (xxxdb) DBCompare

This step compares the current Voyager schema with a known schema provided by Ex Libris. If it finds any views missing or indexes, this utility attempts to fix

them. It reports if it was successful or a failure. If it reports a failure, contact Ex Libris Support immediately for further analysis.

## 6.18 Tune Voyager Application

This step tunes the Voyager application to the recommended standard for 9.0.0 and higher. It ensures that WebVoyage meets the minimum recommended tuning levels.

# 7 Post-Installation Tasks

---

**NOTE:**

`root` access is required to complete some of the post-installation tasks.

Oracle access is also required to complete some of the post-installation tasks.

---

### 7. Complete the postinstallation tasks

-----

- 1. Install updated .profiles for Voyager and Oracle Users
- 2. Install / Upgrade the Start / Stop Scripts
- 3. Restore Voyager Permissions
- 4. Update Apache Configuration
- 5. Enable Oracle Archive Logging
- 6. Start Apache
- 7. Start Oracle
- 8. Start Voyager
- 9. Update utility scripts
- 10. Setup System Statistics & Accounting
- 11. Create / Recreate Voyager (xxxdb) Read Only Users (oracle)

### Maintenance

-----

- 12. Remove endeavor group
- 13. Cleanup Regen Directories (voyager)

- 14. Cleanup Local Software Repository
- 15. Cleanup Old Voyager Binaries, Libraries and Upgrade files (voyager)
- 16. Uninstall old Oracle files (oracle)
- 17. Reboot the Server
- 18. Run System Check Script - Post Upgrade
- 19. Test WebVoyage and list regen warnings

Enter an Option (q to Quit) [q]:

## 7.1 Install the Updated Profiles for Voyager and Oracle Users

This step installs the updated user profiles for the Voyager and Oracle users. With a new release, changes to these files are possible. It is important to ensure that you have the latest `.profiles` installed.

If your institution has any customizations set up in either profile you need to ensure you update the user `.profiles` with your custom settings and configurations.

## 7.2 Install/Upgrade the Start/Stop Scripts

This step creates the main startup/shutdown scripts in the `/etc/init.d/` directory if required. Refer to Chapter 3 of the *Technical User's Guide* for more information regarding startup/shutdown scripts.

Required links for automatic startup and shutdown of Voyager and the database (when rebooting) are also created, if necessary.

---

**NOTE:**

If the startup mechanism already exists, VIK only updates files in the `/etc/init.d/` directory and checks if relevant files/links in the system directories exist.

---

## 7.3 Restore Voyager Permissions

This step restores the permissions snapshot that was taken in 5.7. If the snapshot was not taken, it cannot restore permissions.

## 7.4. Update the Apache Configuration

This step updates or sets up a new apache configuration that must be done at the end of the upgrade.

## 7.5 Enable Oracle Archive Logging

If Oracle archive logging was enabled prior to the upgrade, this step re-enables Oracle archive logging.

## 7.6 Start Apache

This starts the Apache processes that were stopped during the upgrade.

## 7.7 Start Oracle

Prior to testing the application, it is necessary to ensure that Oracle is up and working. This step starts the Oracle database when it is installed on this server.

## 7.8 Start Voyager

This starts the Voyager software processes that were stopped during the upgrade.

## 7.9 Update the Utility Scripts

This step updates the `/m1/utility` directory with updated scripts and utilities. Most importantly it delivers the latest daily backup script that is released for your operating system.

---

### NOTE:

The daily backup script is archived and replaced with a new version.

If you have made any changes to your daily backup script in the `/m1/utility` directory, you might need to either review your changes and insert them into the new daily backup script, revert to your previous one, or use the new one without any of your customizations.

---

## 7.10 Set Up the System Statistics and Accounting (Sun OS Only)

This step sets up of some statistics gathering and accounting on SunOS systems only. It helps Ex Libris evaluate how the application is performing and gives Ex Libris information for feature changes to the software.

The aggregate of this information can be effective for troubleshooting difficult technical problems.

## 7.11 Create/Recreate the Voyager (xxxdb) Read-Only Users

When regens have been performed as part of a Voyager upgrade, read-only users may no longer function correctly. This step refreshes read-only users that are used with the Microsoft Access report database.

This step can be run without any impact on your Voyager database.

```
Enter RO Username for "xxxdb" [ro_xxldb]:  
hit enter  
Enter RO password for "xxxdb" [ro_xxldb]:  
hit enter
```

---

**NOTE:**

If running reports in Microsoft Access or another tool that uses the read-only user and password begins to fail after the installation, use this step to ensure that the read-only users are set up correctly.

---

## 7.12 Remove endeavor Group

This step cleans up the `endeavor` group from your server.

## 7.13 Cleanup Regen Directories

This step cleans up your regen directories and recovers space that was consumed during the regen process during the VIK upgrade process.

The directories affected are the `/m1/voyager/utility/<VERSION>/db` directories used for the regens.

## 7.14 Clean Up Local Software Repository

This step cleans up the local software repository directory. It deletes unnecessary files and packages that were extracted during the upgrade processes.

The directory affected is `/m1/incoming/v900` or the local software directory defined in step 1.1.

## 7.15 Cleanup Old Voyager Binaries, Libraries, and Upgrade Files

This step deletes all binary, library, and upgrade files that have been left on the server from previous service packs, upgrades, and work performed by

Ex Libris. It recovers space used by files no longer used by your Voyager application.

The directories affected are:

- /m1/voyager/bin/<OLDVERSIONS>
- /m1/voyager/lib/<OLDVERSIONS>
- /m1/voyager/utility/<OLDVERSIONS>

---

**NOTE:**

The only way to recover files cleaned up by this step is by restoring from your backup.

---

## 7.16. Uninstall Old Oracle Files (Oracle)

This step removes all files related to your Oracle 10.2.0.x installation.

---

**NOTE:**

The only way to recover files cleaned up by this step is by restoring from your backup.

---

---

**NOTE:**

If the Oracle database for Analyzer (MRDN instance) is running on the same server as your Oracle database for Voyager, you do not want to uninstall the old Oracle files until Analyzer is upgraded.

---

## 7.17 Reboot the Server (Root)

This step ensures that your server starts up correctly after the upgrade has been completed.

If there are problems after the server reboot, open an SI using e-Service and assistance can be provided.

## 7.18 Run the System Check Script (Post Upgrade)

This step is run just like the step in the pre-installation checks. This step is to ensure that all of the requirements are met and complete.

## 7.19 Test WebVoyage and List Regen Warnings

This step performs basic tests for OPAC functionality and ensures that results are returned. It also reviews the regen logs for anything that may need to be brought to your attention.



---

**NOTE:**

The testing of the OPAC performed in this step should not replace a full application testing. This step ensures that ports are responding appropriately prior to accessing the OPAC via a Web browser.

---



# 4

---

## After Running the VIK

This section includes:

- **Custom Backup Scripts** on page 59
- **Download the Clients** on page 59
- **Log into Each Module and Test** on page 59
- **WebVoyage Files** on page 60

### Custom Backup Scripts

The upgrade to Voyager 8.2.0 and later updates the endeavor group to exlibris. Therefore, if you have any backup scripts/tools that rely upon the endeavor group as a display text, you need to ensure that they are updated to use exlibris.

### Download the Clients

Upon completing the VIK, Voyager clients need to be installed on each PC that uses the new version of Voyager. You can find these clients on your Voyager server in `/ml/voyager/clients/<version>`. You must use either an FTP or SFTP client depending on your server's configuration. The clients can also be found in the Ex Libris Documentation Center in the Download Center section.

If your institution is upgrading from Voyager 8.0.0 or higher, Client Autoupdate is a feature that can automatically update your staff PCs with the new client software. See the *Voyager Technical User's Guide* for more details.

### Log into Each Module and Test

Log onto Cataloging, for example, and do a keyword, left-anchored, and headings search. Save a bib, mfhd, and item record to the database.

Log onto Acquisitions and create and approve a PO and Invoice.

Log onto Circulation and charge an item, create a patron record, and place a hold.

In WebVoyage, do each type of search, log onto a patron account, and place a request.

## Backup Files

When the VIK is run and updates application, system, and custom files, these files are archived for reference after the upgrade.

All files can be found in `/m1/upgrade/2009.0.0/pre200900`.

## WebVoyage Files

Customizations for Classic WebVoyage are restored and work immediately following your upgrade.

If you are upgrading from a release of Tomcat WebVoyage earlier than Voyager 8.0.0, customized skins are not restored and are not available for immediate use after the upgrade. Customizations to WebVoyage must be applied manually. Use of the preview server is recommended prior to the upgrade. This helps ensure that downtime is minimal upon upgrading to your production environment. After the upgrade, backups of your customizations can be found in `/m1/upgrade/2009.0.0/pre200900/voyager/<db>/tomcat/vwebv/context/vwebv/`.

Refer to the Voyager Upgrade Release Planning section of the Ex Libris Documentation Center for documents (for each version) that identify the WebVoyage files that have changed in the skin directories (*WebVoyage <version>-<version> GR Changed Files*) and a description of the changes in the skin files (*WebVoyage Changes to Skin Files from <version> to <version>*).

## Post VIK Clean-Up and Disk Space Recovery

After you upgrade you may want to clean up extra files to make more disk space available.

**To perform a clean up and disk space recovery:**

- 1 Perform a full system backup, in case you delete a file unintentionally during the clean up.
- 2 Run the following steps from the VIK:
  - **7.13 Cleanup Regen Directories** on page 55
  - **7.14 Clean Up Local Software Repository** on page 55
  - **7.15 Cleanup Old Voyager Binaries, Libraries, and Upgrade Files** on page 55
  - **7.16. Uninstall Old Oracle Files (Oracle)** on page 56
- 3 Review and manually delete the following directories:
  - /m1/incoming/v900
  - /m1/incoming/v900.\*
  - /m1/upgrade/<VERSION>



# Glossary

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|                                           |                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>App Server</b>                         | The server in a split server environment that actually runs Voyager, as opposed to Oracle and Apache, that could technically be run on separate servers.                                                                                                                                                                                   |
| <b>DB Server</b>                          | The server in a split server environment that runs Oracle, as opposed to Voyager and Apache, that could technically be run on separate servers.                                                                                                                                                                                            |
| <b>dba group</b>                          | The group that the oracle user belongs to. Membership in this group allows sysdba access to Oracle.                                                                                                                                                                                                                                        |
| <b>endeavor group</b>                     | Until Voyager 7.2, this was the default Unix group that the voyager user belonged to.                                                                                                                                                                                                                                                      |
| <b>exlibris group</b>                     | Starting with Voyager 7.2, this is the default group that the voyager user belongs to.                                                                                                                                                                                                                                                     |
| <b>Fully Qualified Domain Name (FQDN)</b> | <p>The hostname plus the network domain name. Examples include:</p> <ul style="list-style-type: none"><li>■ <code>voyager.college.edu</code></li><li>■ <code>library.university.ac.uk</code></li><li>■ <code>catalog.research.company.com</code></li></ul>                                                                                 |
| <b>Hostname</b>                           | <p>The name of your server. This is often printed on the command prompt. You may use this to refer to the machine in conversation with IT. Examples include:</p> <ul style="list-style-type: none"><li>■ <code>voyager</code></li><li>■ <code>library</code></li><li>■ <code>catalog</code></li><li>■ a character from mythology</li></ul> |

|                                            |                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IP Address</b>                          | The four, dot-separated numbers that locate your server on the network. If you have different internal and external IP addresses, use the internal one (usually starts with 10. or 172.).                                                                                                                                                      |
| <b>Local Software Repository Directory</b> | The location to download packages for installation. The standard has been <code>/m1/incoming</code> for years so this is a safe choice for almost everyone.                                                                                                                                                                                    |
| <b>Schema</b>                              | The logical layout of tables and columns in a database or a particular instance of Voyager in the Oracle database.                                                                                                                                                                                                                             |
| <b>Shell</b>                               | The Unix process that presents a command prompt and interprets your input. It can also run scripts written for it. The default shell for voyager is Korn Shell (ksh). The default shell in Linux is Bash (bash). As a result, many people are more familiar with it. However, the voyager and oracle users must have ksh set as their default. |
| <b>VOYAGER_BASE</b>                        | The base installation directory for all Voyager components. This is almost always <code>/m1/voyager/</code> , but in rare cases, can be slightly different.                                                                                                                                                                                    |
| <b>Web Server</b>                          | The server in a split server environment that runs Apache, vwebv, and sometimes vxws, as opposed to Oracle and Voyager, that could technically be run on separate servers.                                                                                                                                                                     |