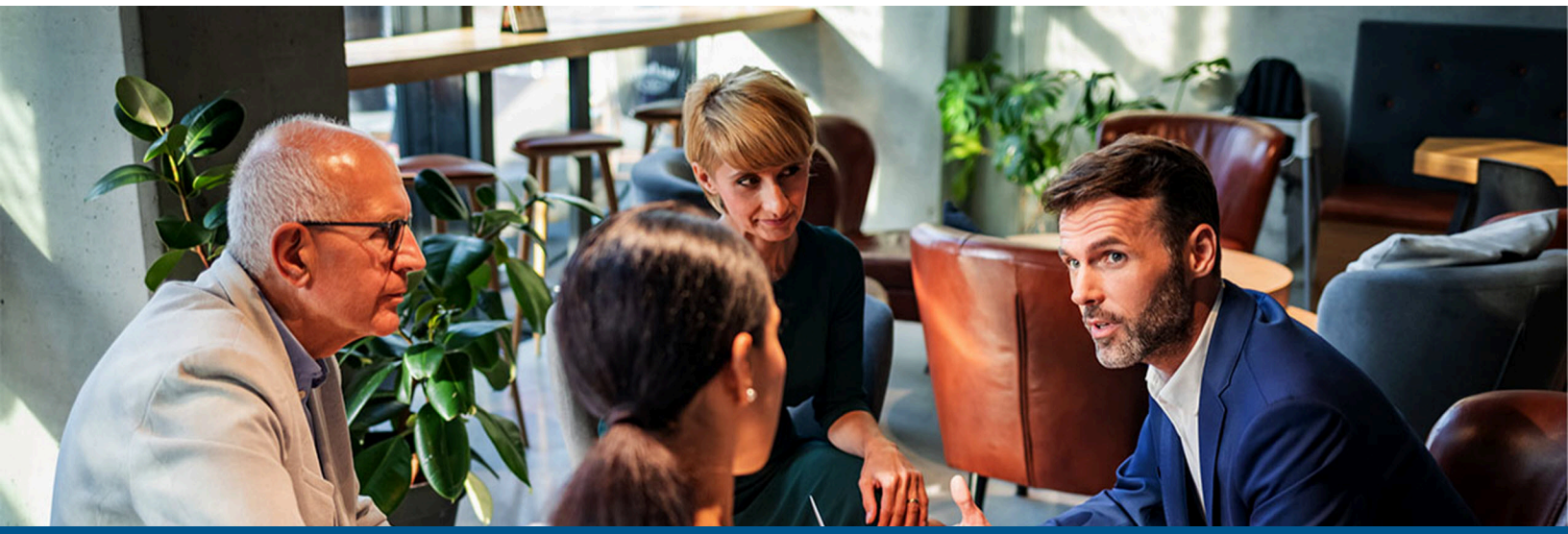


Kofax MarkView

Installation Guide for Oracle E-Business Suite

Version: 10.5.0

Date: 2023-12-01

KOFAX

Table of Contents

Preface

Who should read this guide

The audience for this document includes:

- Oracle Database Administrators who are experienced with Oracle Relational Database Management System (RDBMS), can edit and run PL/SQL scripts, and are familiar with their ERP system.
- Application Server Administrators who have J2EE technology knowledge.
- Windows Server Administrators who have Microsoft Windows experience and who can install and configure Windows applications and hardware.
- Customers who are planning a new installation or a migration from a previous release of any MarkView product.

Administrators should be familiar with MarkView system operation.

Related documentation

The documentation set for Kofax MarkView is available online:[1]

https://docshield.kofax.com/Portal/Products/MarkView/10.5.0-yw2qf8m7r6/MarkView.htm

In addition to this guide, the documentation set includes the following items:

Kofax MarkView Features Guide

Use this guide to learn about the features included and options available with MarkView; to become familiar with MarkView products; and to decide which are important to the business challenges you face and best suit your site. This guide includes information about how features impact the workflow, the interaction between features, the touch points with the ERP system, and how features address business problems.

[1] You must be connected to the Internet to access the full documentation set online. If the security policy for your organization requires offline access (without an Internet connection), see Offline documentation.

Kofax MarkView Planning Guide

Use this guide to learn about the prerequisites for implementing MarkView products. This guide includes system information, such as the protocols required for communication between servers, hardware and software prerequisites, and minimum RAM requirements.

Use this guide in conjunction with the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site to prepare a site for product installation.

Kofax MarkView Installation Worksheet

Use this worksheet to collect and record the information you need to install or upgrade MarkView products.

Kofax MarkView Upgrade Guide

Use this guide in conjunction with the *Kofax MarkView Installation Worksheet* to upgrade and configure MarkView products.

Kofax MarkView Integration Guide

Use this guide in conjunction with the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site to learn about the prerequisites for implementing Kofax products and preparing a site for product installation.

Kofax MarkView Reintegration Guide for Upgrades to Oracle E-Business Suite R12 or 12.2

Use this guide to reintegrate MarkView after an upgrade to Oracle E-Business Suite R12 or 12.2.

Kofax MarkView Administrator's Guide, Volume 1

Use this guide to administer the MarkView system. This guide describes how to configure and maintain the applications, solutions, and users that make up the MarkView Suite. The guide also describes how MarkView influences the administration of other servers and software that interface with MarkView applications.

The MarkView Administrator should be well-versed in database administration, application server setup, tuning and maintenance, or should know where to get such information. The administrator's guide does not replicate this information, but conveys MarkView product-specific information.

Kofax MarkView Administrator's Guide, Volume 2

Use this guide to maintain MarkView components that are administered outside of the MarkView interface. This guide includes advanced administrative tasks and describes MarkView custom packages and join points.

Kofax MarkView Release Notes

Use this document to learn what is new with the latest MarkView release, identify outstanding defects and workaround solutions where applicable, and learn which defects the release fixes.

Kofax MarkView Technical Specifications
Use this document to learn about supported operating systems and other system requirements.

Offline documentation

To make the documentation available for use in offline mode, obtain the documentation files from the Kofax MarkView product package that you downloaded from the Kofax Fulfillment Site. The product package includes the following documentation files for offline use:

- KofaxMarkViewDocumentation_10.5.0_EN.zip contains the entire Kofax MarkView documentation set in English. This file is required for all users who work in offline mode. The .zip file includes both help and print folders. The print folder contains all MarkView guides in PDF format.
- Individual documentation .zip file for each of the following languages: Simplified Chinese, Brazilian Portuguese, Polish, Japanese, Italian, French, Spanish, and German. Contain only the localized MarkView Viewer help files.

For more information about accessing the MarkView help in offline mode, see Access the MarkView help.

Getting help with Kofax products

The Kofax Knowledge Portal repository contains articles that are updated on a regular basis to keep you informed about Kofax products. We encourage you to use the Knowledge Portal to obtain answers to your product questions.

To access the Kofax Knowledge Portal, go to https://knowledge.kofax.com.

The Kofax Knowledge Portal is optimized for use with Google Chrome, Mozilla Firefox, or Microsoft Edge.

The Kofax Knowledge Portal provides:

- Powerful search capabilities to help you quickly locate the information you need.
  Type your search terms or phrase into the **Search** box, and then click the search icon.
- Product information, configuration details and documentation, including release news.
  To locate articles, go to the Knowledge Portal home page and select the applicable Solution Family for your product, or click the View All Products button.

From the Knowledge Portal home page, you can:

- Access the Kofax Community (for all customers).
  On the Resources menu, click the **Community** link.
- Access the Kofax Customer Portal (for eligible customers).
  Go to the Support Portal Information page and click **Log in to the Customer Portal**.
- Access the Kofax Partner Portal (for eligible partners).
  Go to the Support Portal Information page and click **Log in to the Partner Portal**.
- Access Kofax support commitments, lifecycle policies, electronic fulfillment details, and self-service tools.
  Go to the Support Details page and select the appropriate article.

Chapter 1

Introduction

With the Kofax MarkView solution, your employees can capture invoice images from multiple sources through Kofax Capture and move those electronic images into MarkView workflows for processing. Using electronic images eliminates the time that paperwork spends in paper mailing systems.

This guide provides important information about installing MarkView, including:

- System requirements that must be met to successfully install MarkView
- Database management requirements
- Preparations, decisions, precautions, settings, and tips to help you successfully and efficiently install MarkView
- Instructions for installing MarkView in silent mode
- Information about integration with other Kofax products used with MarkView

Chapter 2

MarkView system requirements

The primary source of information about supported operating systems and other MarkView requirements is the *Kofax MarkView Technical Specifications* document which is available on the Kofax MarkView Product Documentation site.

Oracle patches

Oracle Accounts Payable processing requires Oracle patch 20725445:R12.AP.

If you plan to use the WebLogic application server with Oracle JDBC drivers version 12.1, apply Oracle patches 21043834, 20692348, and 19028811 on WebLogic. If you plan to use WebLogic with Oracle JDBC drivers version 11.2, verify that you use Oracle JDBC drivers 11.2.0.3 or higher.

See the Oracle website for more information.

WebLogic JDK for 64-bit WebLogic servers

The 32-bit versions of the WebLogic client come with a bundled JDK. For the 64-bit WebLogic client, you need a separate 64-bit JDK.

See the Oracle website for more information.

Chapter 3

Plan your MarkView installation

If you are installing a Service Pack or a Fix Pack as well as MarkView, procedures may have changed since this guide was published. See the Service Pack Release Notes for the latest installation and configuration information. Also see the readme.txt file included in the Service Pack or Fix Pack software distribution for a list of required installers and scripts.

Install other Kofax products

Before you install MarkView, install and configure these other Kofax products:

- Kofax Capture: See the *Kofax Capture Installation Guide*.
- If you use Kofax Transformation Modules, also install Kofax Transformation Modules and create the Kofax Transformation Modules schema user. See the *Kofax Transformation Modules Installation Guide* and *Help for Kofax Transformation Modules*.

MarkView automatically installs the default Kofax Transformation Modules project in C:\KTM \Markview. When you follow the instructions in this guide to customize the project, you create a new runtime version of the project directory that stores the Kofax Transformation Modules project fpr file and all the files needed for the project.

Complete the Kofax MarkView installation worksheet

The installation worksheet is a Microsoft Word document that helps you gather and record the information to install and configure MarkView. Before you proceed, verify that you have completed all the applicable fields in the worksheet. Have the worksheet available as you install.

Installation checklist

Use this checklist to track the installation steps for your system.

Task	Section	Notes	Done?
Prerequisites	Install other Kofax products	Install and configure other Kofax products, such as Kofax Capture, before you install MarkView. For MarkView for Account Payable (AP) with Transformation, also install Kofax Transformation Modules and create the Kofax Transformation Modules schema user.	
	MarkView system requirements		
	Complete the Kofax MarkView installation worksheet		
	Download and decompress distribution files		
	Set locale-sensitive environment variables		
	Create and configure schema user		
	Designate an Oracle user for MarkView Invoice Import for Oracle Open Interface (for Kofax Transformation Modules only)		

Verify and Install	Either:
	• To use the MarkView silent installer, see Silent verification and installation.
	• To use the MarkView interactive mode, see:
	  • Verify your environment
	  • Install MarkView		

Set up Your Oracle Environment	Set up your environment and install MarkView Oracle Objects		
Configure the Oracle Forms	Configure Oracle Forms		
(Optional) Install Capture and Output modules to control how documents enter into and are output from the MarkView system.	Capture and Output modules	Capture and Output components include: • MarkView Bar Code Server • MarkView Mail Gateway • MarkView Import Server • MarkView Data Export Server (for MarkView with Kofax Transformation Modules)	

Task	Section	Notes	Done?
(Optional) Configure MarkView for Accounts Payable.	Configure MarkView for Accounts Payable	Follow the steps in this section if your system includes MarkView for Accounts Payable.	
(Optional) Configure the integration between MarkView and Oracle Internet Expenses.	Expense Management Configuration	To configure MarkView for Expense Management, you must have Oracle Workflow Builder installed and your system must include data.	
(Optional) Configure Self-Service Invoice.	Configure Self-Service Invoice	Follow the instructions in this section only if you have Self-Service Invoice installed.	
(Optional) Integrate with other Kofax products.	Integration with other Kofax products	Follow the steps in this chapter to integrate with other Kofax products, such as Kofax Capture or Kofax Transformation Modules.	
(Optional) Migrate Data	Migrate environments Customization migration tools	If you are migrating your environment, review the information in these appendices.	

When installing Kofax MarkView, the existing Oracle personalizations get overwritten. To prevent data loss, back up your existing personalizations and after the installation is complete, restore the backup manually.

Download and decompress distribution files

Your Kofax representative will give you the location from which to download the compressed MarkView system setup files.

1. Log in to the application server host operating system as the application server owner.
2. Create the MarkView installation directory, for example `<home_directory>/markview` where `<home_directory>` is the user home directory. This guide refers to the installation directory as `<installation_directory>`.
3. Create a temporary distribution directory for the compressed MarkView installer and verification files. For example, `<home_directory>/mvdist` where `<home_directory>` is the user home directory.
4. In the distribution directory, create the following subdirectories:
   - `<distribution_directory>/verify`
   - `<distribution_directory>/installer`

   Where `<distribution_directory>` is the name of the directory you just created.
5. Download the following file into the verify directory:

KofaxMarkView-<version_number>_Oracle_Verify.zip

6. Download the following file into the installer directory:
   KofaxMarkView-<version_number>_Oracle.zip
7. Extract the files.

   The built-in ZIP utilities in certain versions of Windows have issues with lengthy directory paths. Kofax recommends using a third-party extraction utility to decompress the distribution files.

Pre-installation tasks

Set locale-sensitive environment variables

To avoid or resolve SQLExceptions that can occur with the MarkView verify or install program, adjust the locale settings on the application server.

The following is an example of an exception that may be logged in the installer log file when the verify or install program fails:

```
java.sql.SQLException: ORA-01403: no data found
 ORA-06512: at "APPS.FND_DOC_CATEGORIES_PKG", line 345
 ORA-06512: at line 68
 ORA-06510: PL/SQL: unhandled user-defined exception
```

Such exceptions can occur when the language setting in the session on the application server where the MarkView verify or install program executes does not match any language in the Oracle EBS tables (for example, FND_LOOKUP_VALUES). Ensure that the locale-sensitive environment variables in the session on the application server are set to the primary language used in the Oracle EBS tables. For example, if the primary language used in the EBS tables is en-GB, set the LANG environment variable on the application server to en-GB before you run the install or verify program.

Depending on the operating system of the application server, other locale-sensitive environment variables may be defined. Ensure that any of these variables that is defined is set to the EBS language:

- NLS_LANG
- LC_TYPE
- LC_TIME
- LC_MONETARY
- LC_NUMERIC
- LC_MESSAGES
- LC_COLLATE

Create and configure schema user

The MarkView schema user is the MarkView database administrator.

The scripts directory includes automated SQL scripts to help you create and configure the MarkView schema user. This directory may also include other scripts that you do not need to run. The steps in this section describe how to use each installation script.

The scripts directory is `<distribution_directory>/installer/scripts` (where `<distribution_directory>` is the location where you downloaded and decompressed the installation files). The scripts directory includes:

- create_account.sql (for installations): Creates the MarkView schema user.
- create_tablespace.sql (for installation): Creates data and index tablespaces.
- gencomp.sql (for installations and upgrades): Checks for invalid packages, recompiles objects and resolves dependencies between objects. You will use this script after you install.
- markview_grant_privileges.sql (for installations and upgrades): Assigns grants and privileges to the MarkView schema user.

Create tablespaces

The data tablespace contains the MarkView database objects for the MarkView schema user. The index tablespace contains the MarkView database indexes. Use the create_tablespace.sql script to create data and index tablespaces for the MarkView schema user before you install.

This script grants autoextend and maxsize unlimited to the tablespace. If you do not use this script to create tablespaces, ensure that autoextend is enabled.

1. Log in to the MarkView database as the SYSDBA.
2. Navigate to `<distribution_directory>\installer\scripts`, where `<distribution_directory>` is the location where you downloaded and decompressed the installation files.
3. Create the data tablespace for MarkView. See the *Kofax MarkView Planning Guide* for information about database sizes.
   a. Run create_tablespace.sql.
   b. At the script prompts, enter the following information and make note of the values you enter:
      - Tablespace name: The data tablespace name, for example MVD.
      - Initial size (MB): The initial tablespace size.
      - Max size (MB): Use the default to make the maximum tablespace size unlimited.
      - Full pathname of the location of the tablespace: The full path and file name where the MarkView schema will reside.
4. Create the index tablespace for MarkView:
   a. Rerun create_tablespace.sql.
   b. At the script prompts, enter the following information and make note of the values you enter:
      - Tablespace name: The index tablespace name, for example MVX.
      - Initial size (MB): The initial tablespace size.
      - Max size (MB): Use the default to make the maximum tablespace size unlimited.

- Full pathname of the location of the tablespace: The full path and file name where the MarkView schema will reside.

Create schema users

Use create_account.sql as a guideline for creating the MarkView schema user. Run it as written or modify it to suit your purposes.

1. Log in to the MarkView database as SYSDBA.
2. Navigate to `<distribution_directory>\installer\scripts`, where `<distribution_directory>` is the location where you downloaded and decompressed the installation files.
3. Run create_account.sql.
   A list of available tablespaces appears.
4. At the script prompts, enter the following information and make note of the values you enter:
   - Username: The user name for the MarkView schema user.
   - Password: The password for the MarkView schema user.
   - Database data tablespace name: The data tablespace for MarkView you created in Create tablespaces on page 18.
   - Database index tablespace name: The index tablespace for MarkView you created in Create tablespaces on page 18.
   - Name of the temporary tablespace: The name of the temporary tablespace.

Enable editions (for Oracle EBS 12.2 only)

Only enable editions if you are integrating MarkView with Oracle E-Business Suite 12.2 or higher. Running this script with earlier versions of Oracle E-Business Suite will corrupt MarkView.

Use enable_editions.sql to make the MarkView schema editionable. Do not modify this script.

1. Log in to the MarkView database as SYSDBA.
2. Navigate to `<distribution_directory>\installer\scripts`, where `<distribution_directory>` is the location where you downloaded and decompressed the installation files.
3. Run enable_editions.sql.
4. At the system prompt for the user name, enter the MarkView database schema name, for example, markview.

Assign grants and privileges to the MarkView schema user

The markview_grant_privileges.sql script assigns grants and privileges to the schema user. Do not modify this script.

1. Log in to the MarkView database as SYSDBA.
2. Navigate to `<distribution_directory>\installer\scripts`, where `<distribution_directory>` is the location where you downloaded and decompressed the installation files.
3. Run markview_grant_privileges.sql.

4. At the prompt, enter the MarkView schema user name you created in Create schema users.

Designate an Oracle user for MarkView Invoice Import for Oracle Open Interface (for Kofax Transformation Modules only)

The MarkView User must have a corresponding Oracle Security (FND_USER) record. The FND_USER should have privileges to create invoices; the MarkView Connector system uses FND_USER to submit invoices from the Kofax Transformation Modules process into the Oracle Payables Open Interface process. Invoices created from the MarkView Connector process list the FND_USER as the "AP Creating User" in Oracle.

Configure database logging directory

The MarkView schema requires a logging directory. There must either be a database utl_file_dir or you must have a directory for which the MarkView schema has write privileges. When running the installer, you will see a prompt on the MarkView schema window.

To configure the database logging directory:

1. Log in to the database host as the operating system user who owns the database for the MarkView schema.
2. Create a directory accessible by the database, for example, `/<installation_directory>/markview/markview_logs` where `<installation_directory>` is the MarkView installation directory.
3. Grant write permissions to the directory, for example, `chmod 1777 /<installation_directory>/markview/markview_logs`.
4. Log in to the RDBMS as SYSDBA.
5. Run the following SQL commands:

```
SQL> create directory mv_logs as '/<installation_directory>/markview/
markview_logs';
SQL> grant read, write on directory mv_logs to <markview_schema_name>;
```

A Grant Succeeded message appears.

Add SSL certificate to Oracle Wallet (for SSL only)

Skip this section if you do not plan to use Secure Sockets Layer (SSL) to provide secure web communications for the application server.

1. Log in to the Oracle EBS server as the EBS user.
2. If you do not have an Oracle Wallet, from the command line, run the following command to create Oracle Wallet and set the Oracle Wallet location:

```
orapki wallet create -wallet <WalletFolder> -pwd <WalletPasswd> -auto_login
```

3. Add the SSL certificate to the Oracle Wallet:

```
orapki wallet add -wallet <WalletFolder> -trusted_cert -cert "<certificate>" -pwd
 <WalletPasswd>
```

Where:

- `<WalletFolder>` is a directory where Oracle Wallet files are located.

- <certificate> is a file that contains the self-signed certificate or any other certificate received from the certificate authority.

  If you have a certificate received from the certificate authority, verify that root and intermediate certificates from the certification chain are in the Oracle Wallet and run the indicated command to add the missing certificates.
- <WalletPasswd> is a password for the Oracle Wallet.

Add SSL certificate to the RDBMS Java truststore (for SSL only)

Skip this section if you do not plan to use SSL to provide secure web communications for the application server.

1. Log in to the RDBMS as SYSDBA.
2. Run the following SQL command to get the <java_home> value:

   ```
   SELECT  dbms_java.get_ojvm_property(PROPSTRING=>'java.home') FROM dual
   ```
3. From the command line, run the following command to add the certificate to the RDBMS Java truststore:

   ```
   keytool -import -alias <alias> -keystore <java_home>/jre/lib/security/cacerts -
   file <certificate>
   ```

   Where:

   - <alias> is a keystore entry unique name.
   - <java_home> is a Java installation directory.
   - <certificate> is a file that contains the self-signed certificate or any other certificate received from the certificate authority.

     If you have a certificate received from the certificate authority, verify that root and intermediate certificates from the certification chain are in the RDBMS Java truststore and run the indicated command to add the missing certificates.

   The default Java certificate authority keystore is cacerts. The default password for cacerts is <changeit>.
4. If you use Oracle EBS 19c database with SSL, perform the following procedure.

   a. Check if <java_home>/jdk/jdk8/lib/security/ contains the cacerts.alt file. If the file exists, add a certificate to the cacerts.alt file as follows:

      ```
      keytool -importcert -trustcacerts -keystore <java_home>/jdk/jdk8/lib/
      security/cacerts.alt -storepass <password> -file <certificate> -alias
      <alias>
      ```

      Where:

      - <alias> is a keystore entry unique name.
      - <certificate> is a file that contains the self-signed certificate or any other certificate received from the certificate authority.

        If you have a certificate received from the certificate authority, verify that root and intermediate certificates from the certification chain are in the RDBMS Java truststore.
      - <password> is a password. The default password for cacerts is <changeit>.

   b. If the file does not exist, copy the cacerts file created on step 3 to <java_home>/jdk/jdk8/lib/security/ and rename it to cacerts.alt.

c. Log in to the RDBMS as SYSDBA.

d. If you use a pluggable database, switch to the PDB where the MarkView schema resides.

e. Run the following command to add the `cacert.alt` file to the RDBMS:

```
exec dbms_java.loadjava('-schema SYS -grant PUBLIC -dirprefix
<java_home>/jdk/jdk8 <java_home>/jdk/jdk8/lib/security/cacerts.alt');
```

Create the certificate keystore (for SSL only)

Skip this section if you are not using SSL.

Run one of the following commands to create the certificate keystore:

- If you have a self-signed certificate for the application server, import the certificate to the JKS format keystore:

```
keytool -import -v -alias selfsigned -file <certificate> -keystore <keystore> -
storepass <keystorepassword>
```

- If you have any other certificate received from the certificate authority, import the certificate to the JKS format keystore:

```
keytool -importkeystore -srckeystore <certificate> -srcstoretype pkcs12 -
destkeystore <keystore> -deststoretype JKS -storepass <keystorepassword>
```

Where:

- `<certificate>` is a file that contains the self-signed certificate or any other certificate received from the certificate authority.
- `<keystore>` is a repository that contains your security certificate or certificates.
- `<keystorepassword>` is a password of the keystore.

Configure the WebLogic environment

If you plan to use the WildFly or JBoss EAP application servers, skip this section and continue with Configure WildFly or JBoss EAP environments on page 29.

Before you proceed, verify that your system meets the MarkView system requirements.

Install WebLogic

To install and configure the WebLogic application server, refer to the WebLogic documentation.

Configure environment variables for WebLogic

Configure the environment variables for your WebLogic application server.

Set WL_HOME, MW_HOME, and ORACLE_HOME to your WebLogic installation directory. Set the JAVA_HOME variable and point it to the Java SDK installation directory.

For WebLogic 12.1 only, run the installation configuration script to configure the WebLogic installation:

1. Run the installation configuration script.
   - Windows: `%MW_HOME%\configure.cmd`
   - UNIX: `$MW_HOME/configure.sh`
2. When prompted if you want to configure a new domain, enter N and press Enter to complete the configuration.

Create a new WebLogic domain and machine

1. Start the configuration wizard:
   - Windows: `%ORACLE_HOME%\oracle_common\common\bin\config.cmd`
   - UNIX: `$ORACLE_HOME/oracle_common/common/bin/config.sh`
2. Select **Create a new domain** and click **Next**.
3. Select **Create Domain using Product Templates** and **Basic WebLogic Server Domain**, and click **Next**.
4. In the **Administrator Account** window, specify the administrator's credentials and click **Next**.
5. In the **Domain Mode** field, select either the **Production** or **Development** environment.
6. Specify the appropriate **JDK** and click **Next**.
7. In the **Advanced Configuration** window, select the following check boxes:
   - **Administration Server**
   - **Node Manager**
   - **Managed Servers, Clusters, and Coherence** (or **Topology** for WebLogic 12.2)
8. In the **Administration Server** window, specify **Server name** and **Listen Address and Port**. Select **Enable SSL**, if required.
9. In the **Node Manager** window, specify **Domain Location** and **Node Manager credentials**.
10. In the **Managed Servers** window, leave the fields blank and click **Next**.
11. In the **Clusters** window, leave the fields blank unless you are deploying to a cluster and click **Next**.
12. For WebLogic 12.2 only: In the **Server Templates** window, leave the fields blank and click **Next**.
13. In the **Machines** window, click **Add**, enter the following information for the machine, and click **Next**:
    - Name: markview_machine
    - Node manager listen address: <HOSTNAME>
    - Node manager listen port: <NODE_MANAGER_PORT>
14. For WebLogic 12.2 only: In **Assign Servers To Machines**:
    a. In the column on the right, select **Machine**.
    b. In the column on the left, select **Server**.
    c. Use the arrow button to move the Server under the Machine and assign the server to the Machine.
    d. Click **Next**.

15. For WebLogic 12.2 only:
    a. In the **Virtual Targets** window, leave the fields blank and click **Next**.
    b. In the **Partitions** window, leave the fields blank and click **Next**.
16. In the **Configuration Summary** window, verify that all information is correct and click **Create**. When the creation of the domain is complete, click **Next**.
17. In the **End Of Configuration** window, check **Domain Location** and **Admin Server URL**, and click **Finish**.
    For WebLogic 12.2, verify that **Start Admin Server** is not selected.
18. Start Node Manager:
    - Windows: `<markview_domain>\bin\startNodeManager.cmd`
    - UNIX: `<markview_domain>/bin/startNodeManager.sh`
19. Start the domain:
    - Windows: `<markview_domain>\bin\startWebLogic.cmd`
    - UNIX: `<markview_domain>/bin/startWebLogic.sh`

Verify that WebLogic components are running

Verify that the NodeManager is running on every platform and that the WebLogic user has the permissions required for access.

1. Log in to the WebLogic Server Administration Console.
2. Go to **Environment** > **Machines** and click **markview_machine**.
3. On the **Monitoring** tab, verify that **Status** is **Reachable**.

Set up memory properties

For UNIX:

1. In `<markview_domain>/bin/startWebLogic.sh`, locate the following strings:

```
# Call setDomainEnv here.
DOMAIN_HOME=
```

2. Immediately before these strings, add the command to set the `USER_MEM_ARGS` parameter or replace the existing command with the following:

```
USER_MEM_ARGS="-Xms8g -Xmx8g -XX:CompileThreshold=8000 -XX:MetaspaceSize=1g -
XX:MaxMetaspaceSize=2g -Djava.net.preferIPv4Stack=true" export USER_MEM_ARGS
```

3. Log in to the WebLogic Server Administration Console.
4. Go to **Environment** > **Servers**.
5. On the list of servers, click **AdminServer** and go to **Configuration** > **Server Start** tab.
6. In the **Arguments** field, remove the following arguments, if any:

```
-Xms1024m -Xmx1400m -XX:CompileThreshold=8000 -XX:MetaspaceSize=128m -
XX:MaxMetaspaceSize=256m
```

   The values for your environment may differ.

   Do not remove other arguments in order for MarkView to function correctly.

7. Restart WebLogic.

For Windows:

On Windows, select one of the following procedures to set up the memory properties for the WebLogic application:

- Use the command line start script
- Use Windows Service

Use the command line start script

1. In `<markview_domain>\bin\startWebLogic.cmd`, locate the following strings:

   ```
   @REM Call setDomainEnv here.
           set DOMAIN_HOME=
   ```

2. Immediately before these strings, add the command to set the `USER_MEM_ARGS` parameter:

   ```
   set USER_MEM_ARGS=-Xms8g -Xmx8g -XX:CompileThreshold=8000 -XX:MetaspaceSize=1g -
   XX:MaxMetaspaceSize=2g
   ```

3. Log in to the WebLogic Server Administration Console.
4. Go to **Environment** > **Servers**.
5. On the list of servers, click **AdminServer** and go to **Configuration** > **Server Start** tab.
6. In the **Arguments** field, remove the following arguments, if any:

   ```
   -Xms1024m -Xmx1400m -XX:CompileThreshold=8000 -XX:MetaspaceSize=128m -
   XX:MaxMetaspaceSize=256m
   ```

   The values for your environment may differ.

   Do not remove other arguments in order for MarkView to function correctly.

7. Restart WebLogic.

Use Windows Service

1. Log in to the WebLogic Server Administration Console.
2. Go to **Environment** > **Servers**.
3. On the list of servers, click **AdminServer** and go to **Configuration** > **Server Start** tab.
4. In the **Arguments** field, remove the following arguments, if any:

   ```
   -Xms1024m -Xmx1400m -XX:CompileThreshold=8000 -XX:MetaspaceSize=128m -
   XX:MaxMetaspaceSize=256m
   ```

   The values for your environment may differ.

   Do not remove other arguments in order for MarkView to function correctly.

5. Select one of the following options to set up the memory properties:
   - Uninstall your current WebLogic Windows Service and before creating your new WebLogic Windows Service, verify that the following parameter is set up correctly in the start script:

     ```
     set USER_MEM_ARGS=-Xms8g -Xmx8g -XX:CompileThreshold=8000 -XX:MetaspaceSize=1g -
     XX:MaxMetaspaceSize=2g
     ```

   - Back up your current version of the Windows Registry and update the `HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\services\<WebLogic_Service_name>\Parameters\CmdLine` key that contains memory options for your service as follows:

```
-server -Xms8g -Xmx8g -XX:CompileThreshold=8000 -XX:MetaspaceSize=1g -
XX:MaxMetaspaceSize=2g
```

Verify the JDK version and Java virtual machine availability for WebLogic

For the Java JDK version supported, see the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site.

To check the JDK version, and if necessary, add Java to your path:

1. In the JDK installation directory, open the bin directory.
2. Run `java -version` to verify the installed JDK version.
3. Set JAVA_HOME to the JDK installation directory.
4. Add `JAVA_HOME/bin` to your path.

JDBC driver version (for WebLogic 12.1.3)

Before you proceed, to verify that you use the appropriate JDBC driver version compatible with your environment, see the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site.

Replace the JDBC driver version 12.1.0.1 with the recommended version.

1. Download the JDBC driver from the Oracle website.
2. Stop the WebLogic servers.
3. Navigate to `$MW_HOME/oracle_common/modules/oracle.jdbc_12.1.0` and make a backup copy of the existing JDBC driver.
4. Copy the recommended JDBC driver version to:
   `$MW_HOME/oracle_common/modules/oracle.jdbc_12.1.0`
5. Restart the WebLogic servers.

Configure SSL for WebLogic 12c (for SSL only)

Skip this section if you are not using SSL.

1. Log in to the WebLogic Server Administration Console using a non-SSL port.
2. Go to **Environment** > **Servers**.
3. On the list of servers, click the administration server to configure and go to **Configuration** > **Keystores** tab.
4. If you are on the production mode, click **Lock & Edit**.
   a. In the **Keystores** field, click **Change** and select **Custom Identity and Custom Trust**. Click **Save**.
   b. In the **Identity** section, enter the required identity information such as:
      - **Custom Identity Keystore**: <keystore>
      - **Custom Identity Keystore Type**: JKS
      - **Custom Identity Keystore Passphrase**: <keystorepassword>
      - **Confirm Custom Identity Keystore Passphrase**: <keystorepassword>

Where:

- <keystore> is a certificate repository that you created or imported in Create the certificate keystore (for SSL only).
- <keystorepassword> is a password of the keystore.

c. In the **Trust** section, enter the required trust information such as:

- **Custom Identity Keystore**: <truststore>
- **Custom Identity Keystore Type**: JKS
- **Custom Identity Keystore Passphrase**: <truststorepassword>
- **Confirm Custom Identity Keystore Passphrase**: <truststorepassword>

Where:

- <truststore> is a repository that contains a trusted certificate or certificates.
- <truststorepassword> is a password of the truststore.

d. Click **Save**.

5. Click the **SSL** tab, enter the required information and save changes:
   - **Private Key Alias**: <alias>
   - **Private Key Passphrase**: <keypassphrase>
   - **Confirm Private Key Passphrase**: <keypassphrase>

   Where:
   - <alias> is a keystore entry unique name.
   - <keypassphrase> is a password of the certificate.
6. Click the **General** tab, clear **Listen Port Enabled** and select **SSL Listen Port Enabled**. Click **Save**.
7. If you are on the production mode, click **Activate Changes**.
8. Restart the Node Manager and the WebLogic application server.

Set up Node Manager (for SSL only)

1. Open `<markview_domain>/nodemanager.properties` for editing.
2. Enter the following information:

```
KeyStores=CustomIdentityAndCustomTrust
CustomIdentityKeystoreType=jks
CustomIdentityKeyStoreFileName=<keystore>
CustomIdentityKeyStorePassPhrase=<keystorepassword>
CustomIdentityPrivateKeyPassPhrase=<keypassphrase>
CustomIdentityAlias=<alias>
CustomTrustKeystoreType=jks
CustomTrustKeyStoreFileName=<truststore>
CustomTrustKeyStorePassPhrase=<truststorepassword>
```

3. Restart the Node Manager and the WebLogic application server.

Enable secure session cookies (for SSL only)

To enable MarkView to securely work over SSL, enable the cookie-secure flag by modifying the weblogic.xml file. The weblogic.xml file is located in the \WEB-INF directories on all web

applications. You must perform the following procedure for all weblogic.xml files within the specified path.

1. In the `<installation_directory>\applications\<ear_file>\<war_file>\WEB-INF` directories, locate the weblogic.xml file.
   - `<installation_directory>`: MarkView installation directory.
   - `<ear_file>`: All .ear files located in the MarkView installation directory.
   - `<war_file>`: All .war files located within the .ear file.
2. In weblogic.xml, locate the `<session-descriptor>` element.
3. Add the `<cookie-secure>true</cookie-secure>` tag inside the `<session-descriptor>` element and save the file.

Disable WebLogic basic authentication

1. Log in to the WebLogic host as the WebLogic owner.
2. Open the domain configuration file, which is located in the directory specified when you created the domain, for example:

   `/<WL_home>/../user_projects/domains/<markview domain>/config/config.xml`
3. Add the following XML code immediately before the close tag for the security configuration:

```
<enforce-valid-basic-auth-credentials>false
</enforce-valid-basic-auth-credentials>
```

4. Restart the server.

Exclude conflicting libraries (WebLogic 12.2 only)

1. Locate the file:

   `<WL_HOME>/modules/com.oracle.weblogic.security.opensaml2.jar`

   The `WL_HOME` environment variable points to the directory where you installed the WebLogic server.
2. Change the file name, or back up and remove the file.
3. If you need to apply a patch on the WebLogic server after the preceding procedure, perform the following steps:
   a. Restore the file `<WL_HOME>/modules/com.oracle.weblogic.security.opensaml2.jar`.
   b. Apply the WebLogic patch.
   c. Change the file name, or back up and remove the file.

Set up Java Options for WebLogic on AIX

Skip this section, if you do not use AIX platform.

1. Log in to the WebLogic Server Administration Console.
2. Go to **Environment** > **Servers**.
3. On the list of servers, click **markview_server** and go to **Configuration** > **Server Start** tab.
4. In the **Arguments** field, add the following to the end of the line:
   `-XX:+PositiveIdentityHash -XX:-IgnoreUnrecognizedVMOptions -XX:+UnlockExperimentalVMOptions`

5. Restart **markview_server**.

Configure WildFly or JBoss EAP environments

Kofax MarkView supports the WildFly application server, formerly known as JBoss, and JBoss Enterprise Application Platform, known as JBoss EAP.

The MarkView installer has the option to install and configure Wildfly as part of the MarkView installation process, so that you do not need to install WildFly before running the MarkView installer. Alternatively, you can manually install and configure the WildFly environment.

Kofax MarkView supports MarkView installation on the WildFly application server and JBoss EAP in both standalone mode and domain mode.

The WildFly application server in the silent-mode installation files is referred to as JBoss.

Skip this section, if you plan to use the MarkView installer to install and configure WildFly.

For information about downloading and installing both the WildFly and JBoss EAP application servers, see the corresponding documentation on the WildFly website.

Complete the following procedures to configure the JBoss EAP environment or to manually set up WildFly.

- Configure environment variables on page 29.
- Set up memory properties (standalone mode only) on page 30.
- Set up memory properties (domain mode only) on page 30.
- Create WildFly or JBoss EAP users on page 31.
- Configure ports and hosts on page 32.
- Start WildFly or JBoss EAP application servers on page 33.
- Configure SSL for WildFly and JBoss EAP (for SSL only) on page 33.
- Create a new WildFly or JBoss EAP server for the MarkView instance (domain mode only) on page 37 .
- Set up Java Options for WildFly or JBoss EAP (standalone mode only) on AIX on page 37.
- Set up Java Options for WildFly or JBoss EAP (domain mode only) on AIX on page 38.

Install WildFly or JBoss EAP

1. Download the WildFly or JBoss EAP server from the WildFly website.
2. Extract the downloaded ZIP file to JBOSS_HOME,
   where JBOSS_HOME is the WildFly or JBoss EAP installation directory.

Configure environment variables

Configure the environment variables for your WildFly or JBoss EAP application servers. Set JBOSS_HOME to your WildFly or JBoss EAP installation directory and ensure that the JBOSS_HOME environment variable persists with the shell profile, such as export `JBOSS_HOME=<drive&path>/wildfly`.

For more information about setting JBOSS_HOME for UNIX or Windows, see the installation guide on the WildFly website.

Set up memory properties (standalone mode only)

Skip this section if you configure the WildFly or JBoss EAP application servers in domain mode.

For UNIX:

1. For standalone mode, open `JBOSS_HOME/bin/standalone.conf` for editing.
2. Locate the string similar to the following:

```
JBOSS_JAVA_SIZING="-Xms64m -Xmx512m -XX:MetaspaceSize=96M -
XX:MaxMetaspaceSize=256m"
```

Change the string to:

```
JBOSS_JAVA_SIZING="-Xms8g -Xmx8g -XX:CompileThreshold=8000 -XX:MetaspaceSize=1g -
XX:MaxMetaspaceSize=2g"
```

This command must be run on a single line. If you cut and paste from this guide, remove any line breaks.

For Windows:

1. For standalone mode, open `JBOSS_HOME\bin\standalone.conf.bat` for editing.
2. Locate the following string:

```
set "JBOSS_JAVA_SIZING=-Xms64M -Xmx512M -XX:MaxMetaspaceSize=256m"
```

Change the string to:

```
set "JBOSS_JAVA_SIZING=-Xms8g -Xmx8g -XX:CompileThreshold=8000 -
XX:MetaspaceSize=1g -XX:MaxMetaspaceSize=2g"
```

This command must be run on a single line. If you cut and paste from this guide, remove any line breaks.

Set up memory properties (domain mode only)

Skip this section if you configure the WildFly or JBoss EAP application servers in standalone mode.

For UNIX:

1. For domain mode, open `JBOSS_HOME/bin/domain.conf` for editing.
2. Locate the string similar to the following:

```
JBOSS_JAVA_SIZING="-Xms64m -Xmx512m -XX:MetaspaceSize=96M -
XX:MaxMetaspaceSize=256m"
```

Change the string to:

```
JBOSS_JAVA_SIZING="-Xms2g -Xmx2g -XX:CompileThreshold=8000 -XX:MetaspaceSize=1g -
XX:MaxMetaspaceSize=2g"
```

This command must be run on a single line. If you cut and paste from this guide, remove any line breaks.

For Windows:

1. For domain mode, open `JBOSS_HOME\bin\domain.conf.bat` for editing.
2. Locate the following string:

```
set "JBOSS_JAVA_SIZING=-Xms64M -Xmx512M -XX:MaxMetaspaceSize=256m"
```

Change the string to:

```
set "JBOSS_JAVA_SIZING=-Xms2g -Xmx2g -XX:CompileThreshold=8000 -
XX:MetaspaceSize=1g -XX:MaxMetaspaceSize=2g"
```

This command must be run on a single line. If you cut and paste from this guide, remove any line breaks.

For Unix and Windows:

1. Log in to WildFly or JBoss EAP Administration Console.
2. On the **Runtime** tab, select **Server Groups**.
3. On the **Server Group** menu, select **Server Group Name**.
4. In the **Server Group Name** box, click the **View** button.
5. On the left pane, select **JVMs**, and add a new **JVM** configuration.
6. Click **Edit**, and set the following memory properties for your application server. Suggested values are:
   a. **Heap Size** to

   ```
   8g
   ```

   b. **JVM Options** to

   ```
   -XX:MetaspaceSize=1g
   ```

   ```
   -XX:MaxMetaspaceSize=2g
   ```

7. Click **Save**.

Create WildFly or JBoss EAP users

1. Navigate to `JBOSS_HOME\bin`.
2. Run either:
   - Windows: add-user.bat
   - UNIX: add-user.sh

For more information about creating both the WildFly and JBoss EAP users, see the administrator's guide on the WildFly website.

Configure ports and hosts

The configuration process varies depending on the mode you use for running the application server.

1. For standalone mode: In `JBOSS_HOME\standalone\configuration`, do the following:
   a. Rename `standalone.xml` to `standalone_old.xml`.
   b. Rename `standalone-full.xml` to `standalone.xml`.
   c. Open `standalone.xml` for editing and do the following to configure the host on the server:
      - Locate `<inet-address value="${jboss.bind.address.management:127.0.0.1}"/>` and change the default value `127.0.0.1` to the appropriate host name.
      - Locate `<inet-address value="${jboss.bind.address:127.0.0.1}"/>` and change the default value `127.0.0.1` to the appropriate host name.
   d. In `stanalone.xml`, locate the following string to configure the admin port on the server:
      `<socket-binding name="management-http" interface="management" port="${jboss.management.http.port:9990}"/>`
      Change the default value `9990` to the appropriate port value.
   e. In `standalone.xml`, locate the following string to configure the HTTP port on the server:
      `<socket-binding name="http" port="${jboss.http.port:8080}"/>`
      Change the default value `8080` to the appropriate port value.
2. For domain mode: In `JBOSS_HOME\domain\configuration`, do the following:
   a. Open `host.xml` for editing and do the following to configure the host on the server:
      - Locate `<inet-address value="${jboss.bind.address.management:127.0.0.1}"/>` and change the default value `127.0.0.1` to the appropriate host name.
      - Locate `<inet-address value="${jboss.bind.address:127.0.0.1}"/>` and change the default value `127.0.0.1` to the appropriate host name.
   b. In `host.xml`, locate the following string to configure the port:
      `<socket interface="management" port="${jboss.management.http.port:9990}"/>`
      Change the default value `9990` to the appropriate port value.
   c. In `domain.xml`, configure the HTTP port on the server:
      - In the `<socket-binding-groups>` section, locate socket binding group with the name of your MarkView profile, such as `<socket-binding-group name="full-ha-sockets" default-interface="public">`
      - In `<socket-binding name="http" port="8080"/>`, change the default value `8080` to the appropriate port value.

Start WildFly or JBoss EAP application servers

Start the WildFly or JBoss EAP application servers in standalone or domain modes. For more information about the operating modes, see the WildFly website.

If the JBoss EAP or WildFly application servers fail to start, check the application server log file for TimeoutException. For JBoss EAP and WildFly, the timeout parameter default value is 300. To increase the timeout parameter, add the blocking.timeout Java option:

1. Open the file for your configuration:
   - Standalone mode: `bin/standalone.conf.bat` or `bin/standalone.conf`.
   - Domain mode: `bin/domain.conf.bat` or `bin/domain.conf`.
2. Add the following line:
   - For Windows: `set "JAVA_OPTS=%JAVA_OPTS% -Djboss.as.management.blocking.timeout=600"`
   - For Unix: `JAVA_OPTS="$JAVA_OPTS -Djboss.as.management.blocking.timeout=600"`

Configure SSL for WildFly and JBoss EAP (for SSL only)

Skip this section if you are not using SSL.

Select one of the following procedures depending on the mode:

- Standalone mode
- Domain mode

Standalone mode

1. Open `JBOSS_HOME/standalone/configuration/standalone.xml` for editing.
2. Locate the `<key-stores>` line and add the following strings right after the line:

```
<key-store name="<keystorename>">
   <credential-reference clear-text="<keystorepassword>"/>
   <file path="<keystore>" relative-to="jboss.server.config.dir"/>
  </key-store>
  <key-store name="<truststorename>">
   <credential-reference clear-text="<truststorepassword>"/>
   <file path="<truststore>" relative-to="jboss.server.config.dir"/>
  </key-store>
```

   Where:

   - `<keystorename>` is a name of the repository that contains your security certificate or certificates.
   - `<keystorepassword>` is a password of the keystore.
   - `<truststorename>` is a name of the repository that contains a trusted certificate or certificates.
   - `<truststorepassword>` is a password of the truststore.
3. Locate the `<key-managers>` line and add the following strings right after the line:

```
<key-manager name="<keymanagername>" key-store="<keystorename>">
   <credential-reference clear-text="<keystorepassword>"/>
  </key-manager>
```

Where:

- <keymanagername> is a name of the repository that contains a trusted certificate or certificates.
- <keystorename> is a name of the repository that contains your security certificate or certificates.
- <keystorepassword> is a password of the keystore.

4. Right after the <key-managers>..</key-managers> tag, add the following strings:

```
<trust-managers>
   <trust-manager name="<trustmanagername>" key-store="<truststorename>"/>
  </trust-managers>
```

5. Locate the <server-ssl-contexts> line and add the following strings right after the line:

```
<server-ssl-context name="<managementsslcontextname>" key-
manager="<keymanagername>" trust-manager="<trustmanagername>"/>
  <server-ssl-context name="<applicationsslcontextname>" key-
manager="<keymanagername>" trust-manager="<trustmanagername>"/>
```

Where:

- <managementsslcontextname> is a management SSL context name
- <keymanagername> is a key manager name.
- <trustmanagername> is a trust manager name.
- <applicationsslcontextname> is an application SSL context name.

6. Locate the following line:

```
<http-interface http-authentication-factory="management-http-authentication">
   <http-upgrade enabled="true" sasl-authentication-factory="management-sasl-
authentication"/>
   <socket-binding http="management-http"/>
  </http-interface>
```

Change the line to:

```
<http-interface http-authentication-factory="management-http-authentication" ssl-
context="<managementsslcontextname>">
   <http-upgrade enabled="true" sasl-authentication-factory="management-sasl-
authentication"/>
   <socket-binding https="management-https"/>
  </http-interface>
```

7. Locate the following line:

```
<https-listener name="https" socket-binding="https" ssl-context="applicationSSC"
 enable-http2="true"/>
```

Change the line to:

```
<https-listener name="https" socket-binding="https" ssl-
context="<applicationsslcontextname>" enable-http2="true"/>
```

8. Locate the following string:

```
<socket-binding name="management-https" interface="management"
port="${jboss.management.https.port:9993}"/>
```

Change the default value 9993 to the appropriate port value.

9. Locate the following string:

```
<socket-binding name="https" port="${jboss.https.port:8443}"/>
```

Change the default value 8443 to the appropriate port value.

10. Copy the <keystore> and <truststore> JKS files to JBOSS_HOME/standalone/configuration.
11. Restart the WildFly or JBoss EAP application server.

Domain mode

1. Open JBOSS_HOME/domain/configuration/host.xml for editing.
2. Right after the <sasl>..</sasl> tag, add the following strings:

```
<tls>
   <key-stores>
    <key-store name="<keystorename>">
     <credential-reference clear-text="<keystorepassword>"/>
     <implementation type="JKS"/>
     <file path="<keystore>" relative-to="jboss.domain.config.dir"/>
    </key-store>
    <key-store name="<truststorename>">
     <credential-reference clear-text="<truststorepassword>"/>
     <implementation type="JKS"/>
     <file path="<truststore>" relative-to="jboss.domain.config.dir"/>
    </key-store>
   </key-stores>
   <key-managers>
    <key-manager name="<keymanagername>" key-store="<keystorename>">
     <credential-reference clear-text="<keystorepassword>"/>
    </key-manager>
   </key-managers>
   <trust-managers>
    <trust-manager name="<trustmanagername>" key-store="<truststorename>"/>
   </trust-managers>
   <server-ssl-contexts>
    <server-ssl-context name="<managementsslcontextname>" key-
manager="<keymanagername>" trust-manager="<trustmanagername>"/>
   </server-ssl-contexts>
  </tls>
```

Where:

- <keystorename> is a name of the repository that contains your security certificate or certificates.
- <keystorepassword> is a password of the keystore.
- <truststorename> is a name of the repository that contains a trusted certificate or certificates.
- <truststorepassword> is a password of the truststore.
- <keymanagername> is a key manager name.
- <trustmanagername> is a trust manager name.
- <managementsslcontextname> is a management SSL context name.

3. Locate the following line:

```
<http-interface http-authentication-factory="management-http-authentication">
```

Change the line to:

```
<http-interface http-authentication-factory="management-http-authentication" ssl-
context="<managementsslcontextname>">
```

4. Locate the following line:

```
<socket interface="management" port="${jboss.management.http.port:9990}"/>
```

Change the line to:

```
<socket interface="management" secure-port="<securemangementport>"/>
```

5. Open `JBOSS_HOME/domain/configuration/domain.xml` for editing and locate `<profile name="full-ha">`

   a. Within `<profile name="full-ha">`, locate the `<key-stores>` line and add the following strings right after the line :

   ```
   <key-store name="<keystorename>">
       <credential-reference clear-text="<keystorepassword>"/>
       <file path="<keystore>" relative-to="jboss.domain.config.dir"/>
     </key-store>
     <key-store name="<truststorename>">
       <credential-reference clear-text="<truststorepassword>"/>
       <file path="<truststore>" relative-to="jboss.domain.config.dir"/>
     </key-store>
   ```

   b. Locate the `<key-managers>` line and add the following strings right after the line:

   ```
   <key-manager name="<keymanagername>" key-store="<keystorename>">
       <credential-reference clear-text="<keystorepassword>"/>
     </key-manager>
   ```

   c. Right after the `<key-managers>..</key-managers>` tag, add the following strings:

   ```
   <trust-managers>
       <trust-manager name="<trustmanagername>" key-store="<truststorename>"/>
     </trust-managers>
   ```

   d. Locate the `<server-ssl-contexts>` line and add the following strings right after the line:

   ```
   <server-ssl-context name="<sslcontextname>" key-manager="<keymanagername>"
    trust-manager="<trustmanagername>"/>
   ```

   e. Locate the following line:

   ```
   <https-listener name="https" socket-binding="https" ssl-
   context="applicationSSC" enable-http2="true"/>
   ```

   Change the line to:

   ```
   <https-listener name="https" socket-binding="https" ssl-
   context="<applicationsslcontextname>" enable-http2="true"/>
   ```

   f. Locate the `<servlet-container name="default">` tag and add the following string between `<jsp-config/>` and `<websockets/>`:

   ```
   <session-cookie http-only="true" secure="true"/>
   ```

6. Locate the `<socket-binding-group name="full-ha-sockets"` line and then locate the following string:

   ```
   <socket-binding name="https" port="${jboss.https.port:8443}"/>
   ```

   Change the default value `8443` to the appropriate port value.

7. Copy the `<keystore>` and `<truststore>` JKS files to `JBOSS_HOME/domain/configuration`.
8. Restart the WildFly or JBoss EAP application server.

Create a new WildFly or JBoss EAP server for the MarkView instance (domain mode only)

Create a new domain

1. Log in to the WildFly or JBoss EAP Administration Console.
2. Select the **Runtime** tab.
3. On the **Browser By** menu, select **Server Groups** and click **Add Server Group**.
4. In the **Add Server Group** window, enter the following information and click **Add**:
   - **Name**: <domain_name>
   - **Profile**: full-ha
   - **Socket Binding Group**: full-ha-sockets

Create a new server

1. In the WildFly or JBoss EAP Administration Console, select the **Runtime** tab.
2. On the **Browser By** menu, select **Server Groups**.
3. On the **Server Group** menu, select the newly created server group and click **Add Server**.
4. In the **Add Server** window, enter the following information and click **Add**:
   - **Name**: <domain_name>_server, where <domain_name> is the server group name. Add the _server postfix to your server name.
   - **Host**: master
   - **Auto Start**: On
   - **Group**: <domain_name>
   - **Socket Binding Port Offset**: 0
5. On the **Runtime** tab, select **Topology** and click **Refresh**.
   Start the created server by clicking its name.

Set up Java Options for WildFly or JBoss EAP (standalone mode only) on AIX

Skip this section if you do not use AIX platform or configure the WildFly or JBoss EAP application servers in domain mode.

For Windows:

1. Open the `%JBOSS_HOME%\bin\standalone.conf.bat` file for editing.
2. Go to end file and add string `set "JAVA_OPTS=%JAVA_OPTS% -XX:+PositiveIdentityHash -XX:-IgnoreUnrecognizedVMOptions -XX:+UnlockExperimentalVMOptions"` before `:JAVA_OPTS_SET` instruction.
3. Save the file.

For Linux:

1. Open the `$JBOSS_HOME/bin/standalone.conf` file for editing.

2. Go to end file and add string `JAVA_OPTS="$JAVA_OPTS -XX:+PositiveIdentityHash -XX:-IgnoreUnrecognizedVMOptions -XX:+UnlockExperimentalVMOptions"`.
3. Save the file.

Set up Java Options for WildFly or JBoss EAP (domain mode only) on AIX

Skip this section if you do not use AIX platform or configure the WildFly or JBoss EAP application servers in standalone mode.

1. Log in to the WildFly or JBoss EAP Administration Console.
2. On the **Runtime** tab, select **Server Groups**.
3. On the **Server Group** menu, select **Server Group Name**.
4. In the **Server Group Name** box, click the **View** button.
5. On the left pane, select JVMs and add a new JVM configuration.
6. Click **Edit** and set the following memory properties for your application server. Suggested values for **JVM Options** are:

   `-XX:+PositiveIdentityHash`

   `-XX:-IgnoreUnrecognizedVMOptions`

   `-XX:+UnlockExperimentalVMOptions`

Add SSL certificate to the application server truststore (for SSL only)

Skip this section if you are not using SSL to provide secure web communications for the application server.

Skip this section if you plan to use the MarkView installer to install and configure WildFly.

To add the certificate to the application server Java truststore, run the following command:

```
keytool -import -alias <alias> -keystore
      <application_server_java_home>/jre/lib/security/cacerts -file
      <certificate>
```

Where:

- `<alias>` is a keystore entry unique name
- `<certificate>` is a file that contains the self-signed certificate or any other certificate received from the certificate authority

  If you have a certificate received from the certificate authority, verify that root and intermediate certificates from the certification chain are in the application server Java truststore and run the indicated command to add the missing certificates.

The default Java certificate authority keystore is `cacerts`. The default password for `cacerts` is `<changeit>`.

Add truststore to the `jboss-cli` configuration file (for SSL only)

Skip this section if you are not using SSL to provide secure web communications for the application server.

In `JBOSS_HOME/bin`, open the `jboss-cli.xml` file for editing. Right after the `<color-output>..</color-output>` tag, add the following strings:

```
<ssl>
  <alias>"<alias>"</alias>
  <trust-store>"<truststore>"</trust-store>
  <trust-store-password>"<truststorepassword>"</trust-store-password>
    </ssl>
```

Where:

- `<alias>` is a truststore entry unique name.
- `<truststore>` is a repository that contains a trusted self-signed certificate or certificates.
- `<truststorepassword>` is a password of the truststore.

What to do next

- To use Silent Installation mode, go to Silent verification and installation on page 40.
- To use Interactive mode, go to Verify your environment on page 54.

Chapter 4

Silent verification and installation

In silent mode, you set installation properties in a script that is used by the installer. The installer does not display windows or prompt for input during the installation process. Because you can reuse the install_silent script, you can automate identical installations on multiple systems.

You can use silent-mode installation on Windows or UNIX systems and can also use it to install Oracle Objects.

This chapter assumes that you:

- Completed the tasks described in Plan your MarkView installation.
- Completed the *Kofax MarkView Installation Worksheet* and have the worksheet available for reference.
- Logged in as the owner of the application server.

Using silent-mode installation requires you to complete the following procedures, which this chapter describes:

1. Edit the interview files in the MarkView installation directory. See Silent-mode setup.
2. If you choose to run the verify_silent script, copy the interview files to the **verify** directory and run verify. See Run the verify_silent script on page 47.
3. Run the install_silent script. See Run the install_silent script on page 48.

When you finish the silent installation:

- For Accounts Payable post-installation steps, see Configure MarkView for Accounts Payable on page 116.
- For Oracle Objects post-installation steps, see Configure Oracle Forms on page 77.

Silent-mode setup

Edit the preliminary_interview.properties file

1. Navigate to `<distribution_directory>/installer/conf` where `<distribution_directory>` is the location where you downloaded and decompressed the installation files.
2. Back up the preliminary_interview.properties file.
3. Open the preliminary_interview.properties file and enter the following information.

For installations running on Windows, when modifying manually populated fields, use a double backslash (\\) or a forward slash (/) as a path delimiter.

Field	Allowed Values
AppServerType.app_server_type	• WebLogic • JBoss (use for WildFly and JBoss EAP)
InstallDirectory.install_directory	Installation directory. This is user defined and must exist prior to installation. This cannot be the same as the temporary distribution directory. See the *MarkView Installation Worksheet.*
InstallerAction.installer_action	install
InstallationType.installation_type	• Standard Full Install • Partial Install (Any value other than Standard Full Install performs a partial install)
SelectedProducts.selected_products	These must exactly match what appears in the install_script.xml file. To verify product names, open install_script.xml and search for display = <product name>. For example: • MarkView for AP 10.5.0 with Transformation • MarkView for Expense Management 10.5.0 • MarkView Document Library 10.5.0 • MarkView Self Service Invoice 10.5.0 To list multiple products, separate product names with commas.
ERPType.erp_type	(Optional) Oracle, or blank
MarkView DBConn.password	Password for MarkView schema user

Run the generateInterviewTemplate file

The generateInterviewTemplate script uses the information in the preliminary_interview.properties file to generate the installer_interview.properties file.

1. Navigate to `<distribution_directory>\installer\bin`, where `<distribution_directory>` is the location where you downloaded and decompressed the installation files.
2. Run either:
   - UNIX: generateInterviewTemplate.sh
   - Windows: generateInterviewTemplate.bat

Edit the installer_interview.properties file

1. Navigate to `<distribution_directory>\installer\conf` where `<distribution_directory>` is the location where you downloaded and decompressed the installation files.
2. Back up the installer_interview.properties file.
3. Open the installer_interview.properties file.

4. Enter information for the fields identified with **bold** type in the following table. These fields appear in the same alphabetical order in the installer_interview.properties file. Use this list as a reference for all possible fields in the installer_interview.properties file. Your file may not contain all of the listed fields. Field names and values cannot contain spaces.

   Modifying automatically populated fields may cause unexpected results during the installation.

   For installations running on Windows, when modifying manually populated fields, use a double backslash (\\) or a forward slash (/) as a path delimiter.

Field	Values	Source	Product
AppServer Type. app _server_type	• WebLogic • JBoss (use for WildFly and JBoss EAP)	Automatically populated. Do not change this value.	All
AppServerType. type	SimpleQuestion	Automatically populated. Do not change this value.	All
Folder Location. location	Directory for the Document Server. Must exist prior to installation.	Enter the data from your Installation Worksheet.	AP
FolderLocation. type	FolderLocation	Automatically populated. Do not change this value.	AP
InstallDirectory. install _directory	From the preliminary _interview. properties file	Automatically populated. Do not change this value.	All
InstallDirectory. type	SimpleQuestion	Automatically populated. Do not change this value.	All
InstallationType. installation _type	From the preliminary _interview. properties file	Automatically populated. Do not change this value.	All
InstallationType. type	SimpleQuestion	Automatically populated. Do not change this value.	All
JBossAppServer. adminUserName	JBoss administrator name	Enter the data from your Installation Worksheet.	All

Field	Values	Source	Product
JBossAppServer. adminPassword	JBoss application server administrator password	Enter the data from your Installation Worksheet.	All
JBossAppServer. adminPort	The admin HTTP port (for example, 9090)	To change the default value, enter the data from your Installation Worksheet.	All
JBossAppServer.asSSL	For SSL with WildFly or JBoss EAP: true Valid values: true, false	Enter the data from your Installation Worksheet.	All

JBossAppServer.domain	For domain mode, enter your domain name as follows:
	`JBossAppServer.domain=<domainName>`
	For standalone mode, leave the field value blank:
	`JBossAppServer.domain=`
		For domain mode, enter the data from your Installation Worksheet.	All

JBossAppServer. host	Fully qualified hostname of this machine	Enter the data from your Installation Worksheet.	All
JBossAppServer. port	The HTTP port where MarkView applications listen (for example, 26000)	To change the default value, enter the data from your Installation Worksheet.	All
JBossAppServer. type	JBossAppServer	Automatically populated. Do not change this value.	All
JBossAppServer. jbossLocation	Defaults to `<distribution_directory>/../wildfly`, where `<distribution_directory>` is the location where you downloaded and extracted the MarkView installation files. If `<distribution_directory>/../wildfly` does not exist prior to installation, the installer creates the directory.	To change the default value, enter the data from your Installation Worksheet.	All

Field	Values	Source	Product
JBossAppServer. oracleDriver	Defaults to `<distribution_directory>/distr/ojdbc6-11.2.0.3.jar`, where `<distribution_directory>` is the location where you downloaded and extracted the MarkView installation files.	To change the default value, enter the data from your Installation Worksheet	All
JBossAppServer. needsDeploy	Defaults to <empty> Valid values: no, yes	To change the default value, enter the data from your Installation Worksheet.	All
MarkView DBConn. dbType	oracle	Automatically populated. Do not change this value.	All
MarkView DBConn. host	Fully qualified hostname where MarkView resides	Enter the data from your Installation Worksheet.	All
MarkView DBConn. indexspace	Tablespace for MarkView indexes	Enter the data from your Installation Worksheet.	All
MarkView DBConn. loggingDirectory	Oracle logging directory for MarkView processes	Enter the data from your Installation Worksheet.	All
MarkView DBConn. password	Password for MarkView schema user	Enter the data from your Installation Worksheet.	All
MarkView DBConn. port	Port for MarkView schema	Enter the data from your Installation Worksheet.	All
MarkView DBConn. sid	SID for MarkView schema	Enter the data from your Installation Worksheet.	All
MarkView DBConn. tablespace	Tablespace for MarkView data	Enter the data from your Installation Worksheet.	All
MarkView DBConn. type	OracleDatabase Connection	Enter the data from your Installation Worksheet.	All

Field	Values	Source	Product
MarkView DBConn. user	User name for the MarkView schema user	Enter the data from your Installation Worksheet.	All
OracleEBS. password	Oracle APPS user password	Enter the data from your Installation Worksheet.	All except Doc Lib
OracleEBS.type	OracleEBSInstance	Automatically populated. Do not change this value.	All except Doc Lib
OracleEBS. user	Oracle APPS user name	Enter the data from your Installation Worksheet.	All except Doc Lib
OracleEBSCodes. holdCode	170_SYSTEMS _HOLD	Automatically populated. Do not change this value.	All except Doc Lib
OracleEBSCodes. releaseCode	170_SYSTEMS _RELEASE	Automatically populated. Do not change this value.	All except Doc Lib
OracleEBSCodes. type	OracleEBS Codes	Automatically populated. Do not change this value.	All except Doc Lib
OracleText. password	Oracle Text user password	Enter the data from your Installation Worksheet.	Doc Lib
OracleText.type	OracleText	Automatically populated. Do not change this value.	Doc Lib
OracleText.user	CTXSYS	Enter the data from your Installation Worksheet.	Doc Lib
SelectedProducts. selected_ products	Products selected in the preliminary _interview. properties file	Automatically populated. Do not change this value.	All

Field	Values	Source	Product
Selected Products. type	MultipleAnswer Question	Automatically populated. Do not change this value.	All
SMTPInfo. password	SMTP password, if necessary	Enter the data from your Installation Worksheet.	All
SMTPInfo. serverName	Fully qualified SMTP server address	Enter the data from your Installation Worksheet.	All
SMTPInfo. type	Custom Resource	Automatically populated. Do not change this value.	All
SMTPInfo. username	SMTP user name if necessary	Enter the data from your Installation Worksheet.	All
WebLogic AppServer. adminPassword	WebLogic application server password	Enter the data from your Installation Worksheet.	All
WebLogic AppServer. adminPort	The admin HTTP port (default 7001)	Enter the data from your Installation Worksheet.	All
WebLogic AppServer. adminUserName	WebLogic administrator name	Enter the data from your Installation Worksheet.	All
WebLogicAppServer. asSSL	For SSL with WebLogic: true Valid values: true, false	Enter the data from your Installation Worksheet.	All
WebLogic AppServer. domainLocation	Defaults to `${WL_HOME}/../markview)`	To change the default value, enter the data from your Installation Worksheet.	All
WebLogic AppServer. domainName	Defaults to MarkView	To change the default value, enter the data from your Installation Worksheet.	All

Field	Values	Source	Product
WebLogic AppServer. host	Fully qualified hostname of this machine	Enter the data from your Installation Worksheet.	All
WebLogic AppServer. jarLocation	Defaults to `${WL_HOME}/server/lib/weblogic.jar`	To change the default value, enter the data from your Installation Worksheet.	All
WebLogic AppServer. javaHomeDir	Defaults to `%WL_HOME/../jrockit_*`	To change the default value, enter the data from your Installation Worksheet.	All
WebLogic AppServer. nodeManagerPort	Defaults to 5556	To change the default value, enter the data from your Installation Worksheet.	All
WebLogic AppServer.port	The HTTP port where MarkView applications listen (default 8001)	To change the default value, enter the data from your Installation Worksheet.	All
WebLogic AppServer.type	WebLogicAppServer	Automatically populated. Do not change this value.	All

Run the verify_silent script

To ensure that your environment is configured properly for successful installation, run the verify script, which is a smaller version of the installation script.

1. Copy the installer_interview.properties file that you generated in Run the generateInterviewTemplate file and edited in Edit the installer_interview.properties file from `<distribution_directory>/installer/conf` to `<distribution_directory>/verify/conf`, (where `<distribution_directory>` is the location where you downloaded and decompressed the installation files).
2. Ensure that all the paths entered in the install_interview.properties file exist.
3. Skip this step if you do not use SSL for the application server. If you plan to use SSL, navigate to `<distribution_directory>/verify/bin`, (where `<distribution_directory>` is the

location where you downloaded and decompressed the installation files), open for editing verify_silent.sh or verify_silent.bat and change the following string:

- For UNIX:

```
java -Xmx1024m -cp ${CLASSPATH}
      -Doracle_home=${ORACLE_HOME} com.markview.installer.Installer "$@"
```

to:

```
java -Xmx1024m -cp ${CLASSPATH}
      -Doracle_home=${ORACLE_HOME} -Dmarkview.ssl.alias=<alias>
      -Djavax.net.ssl.keyStore=<keystore>
      -Djavax.net.ssl.keyStorePassword=<keystorepassword>
      -Djavax.net.ssl.trustStore=<truststore>
      -Djavax.net.ssl.trustStorePassword=<truststorepassword>
      com.markview.installer.Installer "$@"
```

- For Windows:

```
java -Xmx1024m -cp "%CLASSPATH%"
      -Doracle_home=%ORACLE_HOME% com.markview.installer.Installer %*
```

to:

```
java -Xmx1024m -cp "%CLASSPATH%"
      -Doracle_home=%ORACLE_HOME% -Dmarkview.ssl.alias=<alias>
      -Djavax.net.ssl.keyStore=<keystore>
      -Djavax.net.ssl.keyStorePassword=<keystorepassword>
      -Djavax.net.ssl.trustStore=<truststore>
      -Djavax.net.ssl.trustStorePassword=<truststorepassword>
      com.markview.installer.Installer %*
```

4. In `<distribution_directory>/verify/bin`, run either:
   - UNIX: verify_silent.sh
   - Windows: verify_silent.bat

   If no errors occur, verify_silent returns to a command prompt with no further messages.

If Verify encounters an error

1. Review the verify logs located in the distribution directory in the reports folder.
2. Resolve the issue.
3. Rerun the verify script.
   If no errors occur, the script returns to a command prompt with no further messages.

Run the install_silent script

1. Skip this step if you do not use SSL for the application server. If you plan to use SSL, navigate to `<distribution_directory>/installer/bin`, (where `<distribution_directory>` is the location where you downloaded and decompressed the installation files), open for editing install_silent.sh or install_silent.bat and change the following string:
   - For UNIX:

```
java -Xmx1024m -cp ${CLASSPATH}
      -Doracle_home=${ORACLE_HOME} com.markview.installer.Installer "$@"
```

to:

```
java -Xmx1024m -cp ${CLASSPATH}
```

```
      -Doracle_home=${ORACLE_HOME} -Dmarkview.ssl.alias=<alias>
      -Djavax.net.ssl.keyStore=<keystore>
      -Djavax.net.ssl.keyStorePassword=<keystorepassword>
      -Djavax.net.ssl.trustStore=<truststore>
      -Djavax.net.ssl.trustStorePassword=<truststorepassword>
      com.markview.installer.Installer "$@"
```

- For Windows:

```
java -Xmx1024m -cp "%CLASSPATH%"
      -Doracle_home=%ORACLE_HOME% com.markview.installer.Installer %*
```

to:

```
java -Xmx1024m -cp "%CLASSPATH%"
      -Doracle_home=%ORACLE_HOME% -Dmarkview.ssl.alias=<alias>
      -Djavax.net.ssl.keyStore=<keystore>
      -Djavax.net.ssl.keyStorePassword=<keystorepassword>
      -Djavax.net.ssl.trustStore=<truststore>
      -Djavax.net.ssl.trustStorePassword=<truststorepassword>
      com.markview.installer.Installer %*
```

2. In `<distribution_directory>\installer\bin`, run either:
   - UNIX: install_silent.sh
   - Windows: install_silent.bat

   If the installer encounters an error, the installation stops. Review the log files located in the log folder in the MarkView installation directory. Resolve the issue, then rerun the install_silent script.

   Upon successful completion, the install_silent script returns to the command prompt with no further messages.

Install Oracle Objects

Make sure that your environment is configured correctly for installing Oracle Objects. See Set up your environment and install MarkView Oracle Objects on page 70. Copy the target_registry_service.properties file from the MarkView installation directory to the Oracle Objects installation directory.

Silent-mode setup for Oracle Objects

Edit the preliminary_interview.properties file for Oracle Objects

1. Log in to the Oracle EBS server as the EBS user.
2. Navigate to `<distribution_directory>/installer/conf` (where `<distribution_directory>` is the location where you downloaded and decompressed the installation files).
3. Back up the preliminary_interview.properties file.

4. Open the preliminary_interview.properties file and enter the following information.

Field	Allowed Values
AppServerType.app_server_type	• WebLogic • JBoss (use for WildFly and JBoss EAP)
InstallDirectory.install_directory	Installation directory. This is user defined and must exist prior to installation. See the *Kofax MarkView Installation Worksheet.*
InstallerAction.installer_action	install
InstallationType.installation_type	Standard Full Install Partial Install (Any value other than Standard Full Install will perform a partial install)
SelectedProducts.selected_products	Must be an exact match to contents of the install_script.xml file. To verify product names, open install_script.xml and search for display = <product name>. To list multiple products, separate product names with commas.
ERPType.erp_type	Oracle or blank - optional field

Run the generateInterviewTemplate file for Oracle Objects

1. Log in to the Oracle EBS server as the EBS user.
2. Navigate to `<distribution_directory>\installer\bin` where `<distribution_directory>` is the location where you downloaded and decompressed the installation files.
3. Run either:
   - UNIX: generateInterviewTemplate.sh
   - Windows: generateInterviewTemplate.bat

Edit the Oracle Objects installer_interview.properties file

1. Log in to the Oracle EBS server as the EBS user.
2. Navigate to the conf folder in the MarkView installation directory.
3. Back up the installer_interview.properties file.
4. Open the Oracle Objects installer_interview.properties file.
5. Enter information for the fields marked with **bold** type. There are no spaces in field names.

Modifying fields populated by the preliminary_interview.properties file may cause unexpected results during installation.

Field	Values	Source	Product
InstallDirectory. install_directory	MarkView installation directory from the preliminary_ interview. properties file	preliminary_ interview. properties	All

Field	Values	Source	Product
InstallDirectory. type	Simple Question	preliminary_ interview. properties	All
InstallationType. installation_type	Install type seeded from preliminary_ interview . properties	preliminary_ interview. properties	All
InstallationType . type	SimpleQuestion	preliminary_ interview. properties	All
MarkView DBConn. dbType	Enter **oracle**.	preliminary_ interview. properties	All
MarkView DBConn. host	Fully qualified hostname where MarkView resides	Installation Worksheet	All
MarkView DBConn. indexspace	Tablespace where MarkView indexes will reside	Installation Worksheet	All
MarkView DBConn. logging Directory	Oracle logging directory for MarkView processes	Installation Worksheet	All
MarkView DBConn. password	Password for MarkView schema user	Installation Worksheet	All
MarkView DBConn. port	Port for MarkView schema	Installation Worksheet	All
MarkView DBConn. sid	SID for MarkView schema	Installation Worksheet	All
MarkView DBConn. tablespace	Tablespace where MarkView data will reside	Installation Worksheet	All
MarkView DBConn. type	Oracle Database Connection	Installation Worksheet	All
MarkView DBConn. user	User name for MarkView schema user	Installation Worksheet	All
OAForms EnvInfo. appl_top		install_silent.sh	Forms
OAForms EnvInfo. au_top		install_silent.sh	Forms
OAForms EnvInfo. c_markview_ top		install_silent.sh	Forms
OAForms EnvInfo. fnd_top		install_silent.sh	Forms
OAForms EnvInfo. type		install_silent.sh	Forms
OAFrameworks EnvInfo. appl_top		install_silent.sh	OA Frameworks, OA Expense
OAFrameworks EnvInfo. common_top		install_silent.sh	OA Frameworks, OA Expense

Field	Values	Source	Product
OAFrameworks EnvInfo. java_top		install_silent.sh	OA Frameworks, OA Expense
OAFrameworks EnvInfo. type	OAFramework EnvInfo Resource	install_silent.sh	OA Frameworks, OA Expense
OracleEBS password	Oracle APPS user password	Installation Worksheet	All except Doc Lib
OracleEBS .type	Oracle EBSInstance	preliminary_ interview. properties	All except Doc Lib
OracleEBS. user	Oracle APPS user name	Installation Worksheet	All except Doc Lib
Selected Products. selected_products	Products selected from preliminary_ interview. properties	preliminary_ interview. properties	All
Selected Products. type	Multiple Answer Question	preliminary_ interview. properties	All

Run the verify_silent script for Oracle Objects

1. Log in to the Oracle EBS server as the EBS user.
2. Copy the installer_interview.properties file from `<distribution_directory>/installer/conf` to `<distribution_directory>/verify/conf` (where `<distribution_directory>` is the location where you downloaded and decompressed the installation files).
3. Ensure that all the paths entered in the install_interview.properties file exist.
4. In `<distribution_directory>/verify/bin`, run either:
   - UNIX: verify_silent_oracle_objects.sh
   - Windows: verify_silent_oracle_objects.bat

   If no errors exist, verify_silent_oracle_objects returns to a command prompt with no further messages.

If Verify Oracle Objects encounters an error

1. Review the verify logs located in the reports folder in the distribution directory.
2. Resolve the issue.
3. Rerun the verify script.
   If no errors exist, the script returns to a command prompt with no further messages.

Run the install_silent script for Oracle Objects

1. Log in to the Oracle EBS server as the EBS user.
2. If the Target Registry Service is already deployed, copy the existing target_registry_service.properties file to the MarkView installation directory for Oracle Objects.
3. In `<distribution_directory>/installer/bin`, (where `<distribution_directory>` is the location where you downloaded and decompressed the installation files), run either:
   - UNIX: install_silent.sh
   - Windows: install_silent.bat

If the installer encounters an error, the installation stops automatically. Review the log files located in the log folder in the target installation directory. Resolve the issue, then rerun the install_silent script.

4. Continue at Post-installation steps.

If no errors exist, the install_silent file returns to the command prompt with no further messages.

Chapter 5

Verify your environment

The Verify tool is a smaller version of the installation application. Verify checks many of the system configuration settings and generates log files to help you identify and correct any issues before you install MarkView.

Before running Verify:

- Ensure that your system is in compliance with the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site.
- Complete the *Kofax MarkView Installation Worksheet*.
- Complete the tasks described in Plan your MarkView installation.

Run Verify

The MarkView verification process requires information about your environment. Complete the sections of the installation worksheet that apply to your environment before you begin to verify MarkView.

Run verify on all systems where MarkView products are installed or being upgraded:

- Application server hosts
- Oracle E-Business Suite hosts

Verify hosts

Verify checks the following:

- Version information for
  - Operating System
  - Database
  - Database Server
  - Application Server
  - Forms Server
- MarkView Oracle RDBMS user privileges
- Oracle XML DB
- Oracle Text DB library (for the Document Library installation only)
- Oracle Advanced Queuing
- MarkView schema user setup

Verify generates logs that contain information about issues that can cause the MarkView installation to fail. The values that you enter when you run Verify pre-populate fields in the installer prompts.

Run Verify on the MarkView application server host

Use the information that you entered on the *Kofax MarkView Installation Worksheet* to respond to the Verify prompts. Run Verify before installing MarkView.

1. Log in to the application server host operating system as the application server owner.
2. Ensure that the MarkView application server is running.
3. Ensure that the environment variables are correct.

   For more information, see:
   - Set locale-sensitive environment variables
   - Configure environment variables for WebLogic or Configure environment variables
4. Skip this step if you do not use SSL for the application server. If you plan to use SSL, navigate to `<distribution_directory>/verify/bin`, (where `<distribution_directory>` is the location where you downloaded and decompressed the installation files), open for editing verify.sh or verify.bat and change the following string:
   - For UNIX:

     ```
     java -Xmx1024m -cp ${CLASSPATH}
           -Doracle_home=${ORACLE_HOME} com.markview.installer.InstallerVerify "$@"
     ```

     to:

     ```
     java -Xmx1024m -cp ${CLASSPATH}
           -Doracle_home=${ORACLE_HOME} -Dmarkview.ssl.alias=<alias>
           -Djavax.net.ssl.keyStore=<keystore>
           -Djavax.net.ssl.keyStorePassword=<keystorepassword>
           -Djavax.net.ssl.trustStore=<truststore>
           -Djavax.net.ssl.trustStorePassword=<truststorepassword>
           com.markview.installer.InstallerVerify "$@"
     ```
   - For Windows:

     ```
     java -Xmx1024m -cp "%CLASSPATH%"
           -Doracle_home=%ORACLE_HOME% com.markview.installer.InstallerVerify %*
     ```

     to:

     ```
     java -Xmx1024m -cp "%CLASSPATH%"
           -Doracle_home=%ORACLE_HOME% -Dmarkview.ssl.alias=<alias>
           -Djavax.net.ssl.keyStore=<keystore>
           -Djavax.net.ssl.keyStorePassword=<keystorepassword>
           -Djavax.net.ssl.trustStore=<truststore>
           -Djavax.net.ssl.trustStorePassword=<truststorepassword>
           com.markview.installer.InstallerVerify %*
     ```
5. Navigate to `<distribution_directory>/verify/bin`, (where `<distribution_directory>` is the location where you downloaded and decompressed the installation files), and run the command for your operating system:
   - UNIX: verify.sh
   - Windows: verify.bat
6. On the **Which products do you want to verify for this environment?** page, select *only* the products that you plan to install.
7. Follow the on-screen prompts and click **Verify**.

On the **Installation Progress** window, click **Show Details** to display the progress.

8. Review the generated reports located in the MarkView installation directory you selected during the verification. Save these logs in another directory to avoid overwriting them.
   The log file `reports/EnvironmentReport.txt` describes issues with your environment that will prevent successful installation.
9. Make changes as indicated in the failure reports. You are now ready to install.

To run Verify for the Oracle Objects installer on the Oracle EBS host before running the application server and database components installer, copy the target_registry.properties file from the MarkView installation directory on the application server host to the installation directory on the OEBS host. See Download the Oracle Objects installer and Verify files on page 73.

Chapter 6

Install MarkView

Follow the steps in this chapter to run the MarkView installer. If you used the silent-mode installation, skip this section.

Before you run the installer:

- Complete the installation worksheet.
- Complete the tasks described in Plan your MarkView installation on page 14.
- Run Verify. See Verify your environment on page 54.

Add SSL certificate to the MarkView installer Java truststore (for SSL only)

Skip this section if you are not using SSL to provide secure web communications for the application server.

To add the certificate to the MarkView installer Java truststore, run the following command:

```
keytool -import -alias <alias> -keystore
     <installer_java_home>/jre/lib/security/cacerts -file
     <certificate>
```

Where:

- `<alias>` is a keystore entry unique name.
- `<certificate>` is a file that contains the self-signed certificate or any other certificate received from the certificate authority.

  If you have a certificate received from the certificate authority, verify that root and intermediate certificates from the certification chain are in the MarkView installer Java truststore and run the indicated command to add the missing certificates.

The default Java certificate authority keystore is `cacerts`. The default password for `cacerts` is `<changeit>`.

Modify installation scripts (for SSL only)

Skip this section if you are not using SSL to provide secure web communications for the application server.

1. Navigate to `<distribution_directory>/installer/bin` where `<distribution_directory>` is the location where you downloaded and extracted the installation files, and open for editing:
   - UNIX: install.sh
   - Windows: install.bat
2. Locate and change the string as follows:
   - For UNIX:

     ```
     java -Xmx1024m -cp ${CLASSPATH}
           -Doracle_home=${ORACLE_HOME} com.markview.installer.Installer "$@"
     ```

     to:

     ```
     java -Xmx1024m -cp ${CLASSPATH}
           -Doracle_home=${ORACLE_HOME} -Dmarkview.ssl.alias=<alias>
           -Djavax.net.ssl.keyStore=<keystore>
           -Djavax.net.ssl.keyStorePassword=<keystorepassword>
           -Djavax.net.ssl.trustStore=<truststore>
           -Djavax.net.ssl.trustStorePassword=<truststorepassword>
           com.markview.installer.Installer "$@"
     ```

   - For Windows:

     ```
     java -Xmx1024m -cp "%CLASSPATH%"
           -Doracle_home=%ORACLE_HOME% com.markview.installer.Installer %*
     ```

     to:

     ```
     java -Xmx1024m -cp "%CLASSPATH%"
           -Doracle_home=%ORACLE_HOME% -Dmarkview.ssl.alias=<alias>
           -Djavax.net.ssl.keyStore=<keystore>
           -Djavax.net.ssl.keyStorePassword=<keystorepassword>
           -Djavax.net.ssl.trustStore=<truststore>
           -Djavax.net.ssl.trustStorePassword=<truststorepassword>
           com.markview.installer.Installer %*
     ```

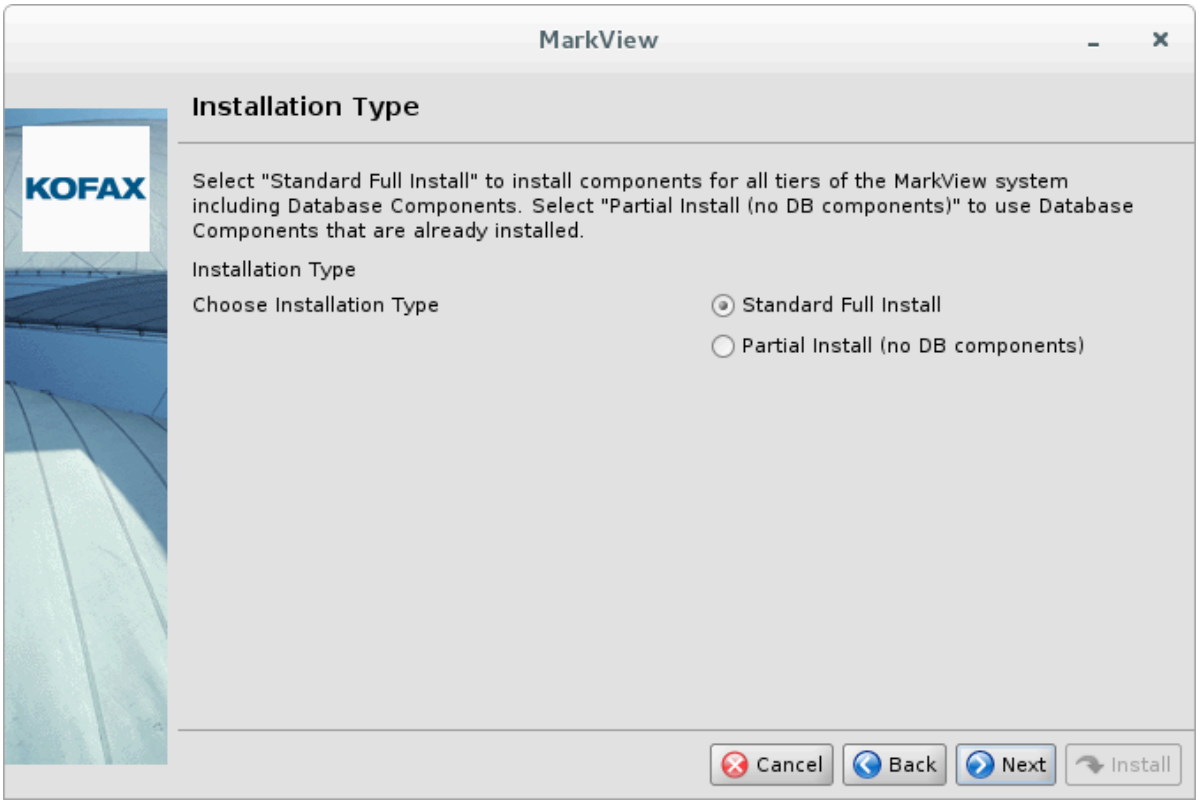
   Where:
   - `<alias>` is a keystore attribute that defines the string alias used to store and retrieve the server private key.
   - `<keystore>` is a repository that contains private keys and the certificates with the corresponding public keys.
   - `<keystorepassword>` is a password of `<keystore>`.
   - `<truststore>` is a repository that contains trusted certificates from other parties that it expects to communicate with, or from Certificate Authorities that it trusts to identify other parties.
   - `<truststorepassword>` is a password of `<truststore>`.

Run the MarkView installer

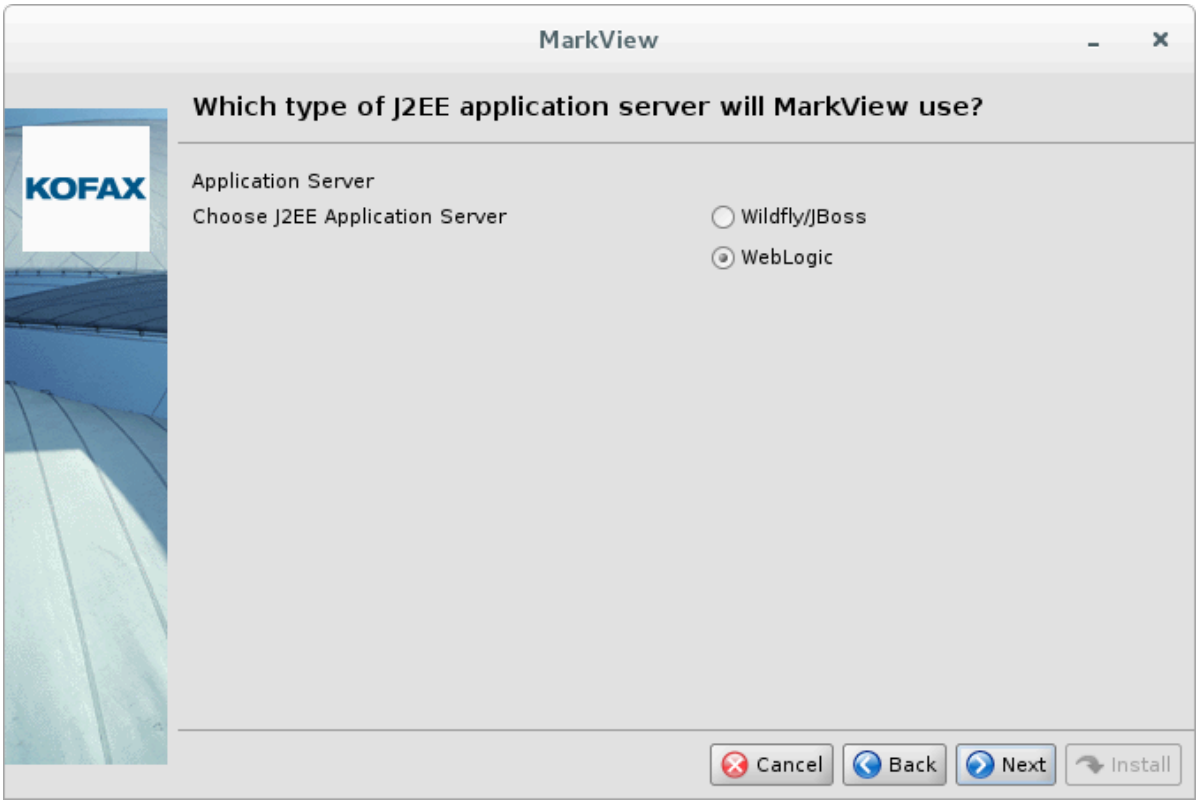
WebLogic

Have your completed installation worksheet available when you start the installer.

1. Log in to the application server host operating system as the application server owner.
2. Verify that the application server is running.
3. Ensure that the environment variables are correct.
   For more information, see:
   - Set locale-sensitive environment variables
   - Configure environment variables for WebLogic
4. Navigate to `<distribution_directory>\installer\bin` where `<distribution_directory>` is the location where you downloaded and extracted the installation files, and run the command for your operating system:
   - UNIX: install.sh.
   - Windows: install.bat.
5. On the **Which products do you want to install?** window, select the products to install.
6. Click **Next**.
7. Select **Standard Full Install** and click **Next**.



8. Select **WebLogic** and click **Next**.



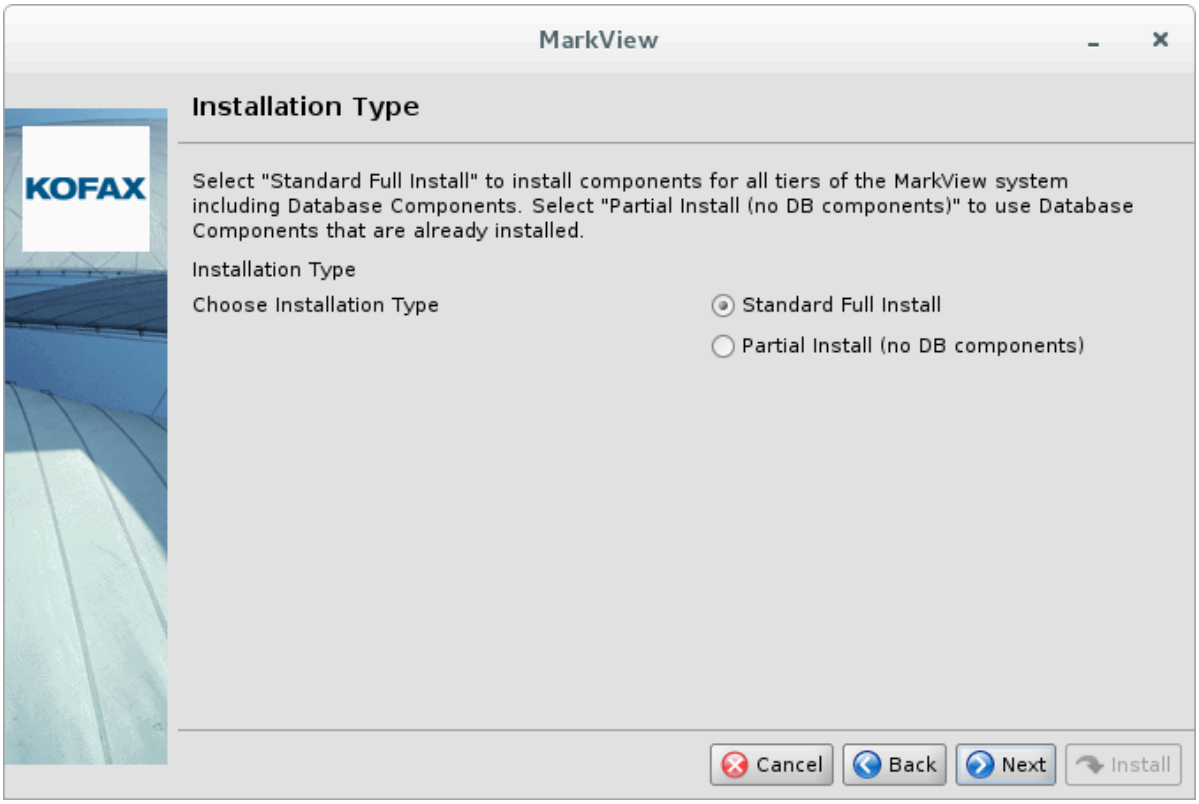
9. Use the installation worksheet to complete the windows as prompted by the installer.
   The windows and prompts that appear vary based on your selections.
10. When prompted, click **Install**.
    The process can take half an hour or more for a new installation. To track the progress, click **Show Details**.
11. Click **Exit** to complete the installation.
    The installer finishes with a message indicating whether the installation is successful.
12. The installer creates a log file in the MarkView installation directory. Save the installation log files in a safe place in case you need this information for Technical Support.

WildFly or JBoss EAP

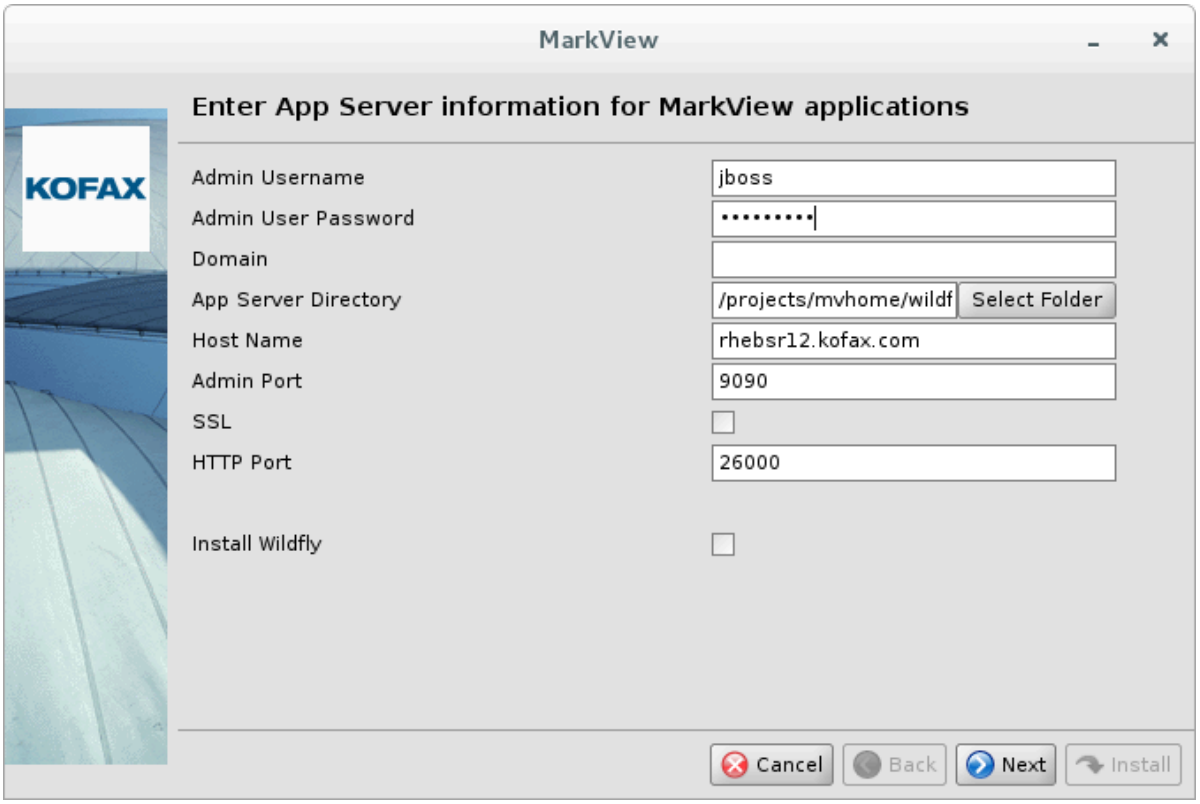
Have your completed installation worksheet available when you start the installer.

1. Log in to the application server host operating system as the application server owner.
2. If you use manually installed WildFly or JBoss EAP, verify that the application server is running.
3. If you use manually installed WildFly or JBoss EAP, ensure that the environment variables are correct.
   For more information, see:
   - Set locale-sensitive environment variables
   - Configure environment variables

4. Navigate to `<distribution_directory>\installer\bin` where `<distribution_directory>` is the location where you downloaded and extracted the installation files, and run the command for your operating system:
   - UNIX: install.sh.
   - Windows: install.bat.
5. On the **Which products do you want to install?** window, select the products to install.
6. Click **Next**.
7. Select **Standard Full Install** and click **Next**.



8. On the **Which type of J2EE application server will MarkView use?** window, select **WildFly/JBoss** and click **Next**.
9. Use the installation worksheet to complete the windows as prompted by the installer.
   The windows and prompts that appear vary based on your selections.



- **Admin Username**
- **Admin User Password**
- **Domain**

  For the domain mode, enter your domain name in the **Domain** field.

  For the standalone mode, leave the **Domain** field blank.
- **App Server Directory**

  For manually configured WildFly or JBoss EAP, specify `<JBOSS_HOME>`.

  If you are using the MarkView installer to install and configure WildFly, specify the location to store your WildFly installation files.
- **Host Name**

  Specify your application server host name.
- **Admin Port**

  The admin ports for manually configured WildFly and JBoss EAP may differ. See Configure ports and hosts.
- **SSL**

  Select the check box if you are installing MarkView on SSL.
- **HTTP Port**

  See Configure ports and hosts.
- **Install WildFly**

Select **Install WildFly**, to use the MarkView installer to install and configure the WildFly application server.

Clear **Install WildFly**, to use the manually installed WildFly.

10. On the installer screen, check the summary of your selections.

    In the **Application server** field, the value **JBoss** is set.

11. When prompted, click **Install**.

    The process can take half an hour or more for a new installation. To track the progress, click **Show Details**.

    In **Show Details** > **Output**, **Installing or verifying JBoss server...** line indicates the WildFly installation and verification process.

12. Click **Exit** to complete the installation.

    The installer finishes with a message indicating whether the installation is successful.

13. The installer creates a log file in the MarkView installation directory. Save the installation log files in a safe location in case you need them later for Technical Support.

Chapter 7

Post-installation steps

Add SSL certificate for WildFly (for SSL only)

Only follow the instructions in this section if you used the MarkView installer to install and configure WildFly and if you use SSL to provide secure web communications for the WildFly application server.

To add the certificate to the application server Java truststore, run the following command:

```
keytool -import -alias <alias> -keystore
      <application_server_java_home>/jre/lib/security/cacerts -file
      <certificate>
```

Where:

- `<alias>` is a keystore entry unique name.
- `<certificate>` is a file that contains the self-signed certificate or any other certificate received from the certificate authority.

The default Java certificate authority keystore is `cacerts`. The default password for `cacerts` is `<changeit>`

Set up memory properties (for WebLogic only)

1. Log in to the WebLogic Server Administration Console.
2. Go to **Environment** > **Servers**.
3. On the list of servers, click **markview_server** and go to **Configuration** > **Server Start** tab.
4. In the **Arguments** field, remove the following arguments, if any:

   ```
   -Xms1024m -Xmx1400m -XX:CompileThreshold=8000 -XX:MetaspaceSize=128m -
   XX:MaxMetaspaceSize=256m
   ```

   The values for your environment may differ.

   Do not remove other arguments in order for MarkView to function correctly.

Set up the log files location

To set up the log files location, configure the markview.home variable.

WebLogic

1. Log in to the WebLogic Server Administration Console.
2. Go to **Environment** > **Servers**.
3. On the list of servers, click **markview_server** and go to **Configuration** > **Server Start** tab.
4. In the **Arguments** field, add the following to the end of the line:
   `-Dmarkview.home=<path>`
   Where `<path>` is the location where you installed MarkView.
   The WebLogic log files will be located in the `<path>/log` directory.
5. Click **Save**.

WildFly or JBoss EAP

1. Open one of the following configuration files depending on the mode you use to run the application server:
   a. For Unix: `JBOSS_HOME/bin/standalone.conf` or `JBOSS_HOME/bin/domain.conf`
   b. For Windows: `JBOSS_HOME/bin/standalone.conf.bat` or `JBOSS_HOME/bin/domain.conf.bat`
2. Locate the JAVA_OPTS value and add the markview.home parameter to the end of the string as follows:
   `JAVA_OPTS="... -Dmarkview.home=<path>"`
   Where `<path>` is the location where you installed MarkView.
   The WildFly or JBoss EAP log files will be located in the `<path>/log` directory.

Configure the print function (for WebLogic 12.1.3 only)

To set up the print function for MarkView Viewer on WebLogic 12.1.3 application server, perform the following steps.

1. Log in to the WebLogic Server Administration Console.
2. Go to **Environment** > **Servers**.
3. On the list of servers, click **markview_server** and go to **Configuration** > **Server Start** tab.
4. In the **Arguments** field, add the following to the end of the line:
   `-DUseSunHttpHandler=true`
5. Click **Save**.

Standard/Basic WebLogic license

In case you have a Standard/Basic license for WebLogic, you need to make the following changes to the **frameworks** deployment after the installation:

1. Log in to the WebLogic Server Administration Console.

2. Shut down **markview_server**.
3. Delete **frameworks** deployment.
   a. Go to **Deployments**.
   b. Select the **frameworks** deployment and click **Delete**.
4. Install and rename the application. Do not rename the ear file, only the application.
   a. On the **Deployments** tab, click **Install**.
   b. Update the path to point at
   `<installation_directory>/applications/frameworks.ear`
   Where `<installation_directory>` is the MarkView installation directory.
   c. Select the **frameworks.ear** and click **Next**.
   d. Select **Install this deployment as application** and click **Next**.
   e. Select **markview_server** and click **Next**.
   f. Change the name of the application from **frameworks** to **aframeworks** and click **Finish**.

Repeat the renaming step (4.f) after major updates or when you apply fix packs.

Restart the application server

WebLogic

1. Log in to the WebLogic Server Administration Console.
2. Go to **Environment** > **Servers** > **Control** tab.
3. Select the check box next to **markview_server**.
4. Click **Shutdown** and select **Force shutdown now**.
5. Select the check box next to **markview_server** and click **Start**.

When you restart markview_server the first time after installing or upgrading applications, not all applications transition to the Active state. At this point, not all applications need to be active.

WildFly or JBoss EAP

If you used the MarkView installer to install and configure WildFly, before starting the application server, configure the memory properties. See Set up memory properties (standalone mode only) on page 30 or Set up memory properties (domain mode only) on page 30 for more information.

1. Set the JBOSS_HOME environmental variable, such as:
   `JBOSS_HOME=<drive&path>/wildfly`
   For specific details related to UNIX or Windows, see the installation guide on the JBoss website.
2. Start the WildFly or JBoss EAP application server in standalone or domain modes. See the JBoss website for more information about the operating modes.

Check for invalid packages

1. Log in as the MarkView database user.
2. Enter the following SQL statement:

```
SELECT OBJECT_NAME, OBJECT_TYPE FROM USER_OBJECTS WHERE STATUS
      = 'INVALID';
```

3. If invalid database objects exist, save the output from the SQL statement and run @gencomp.sql in `<distribution_directory>\installer\scripts`, where `<distribution_directory>` is the location where you downloaded and decompressed the installation files.

   A message similar to the following appears:

```
Recursively compiling 2 object(s).
Please wait...
All objects compiled successfully.
```

4. Review the information in the COMPILE.LOG. If the message says that it is recursively compiling more than 0 objects, rerun @gencomp.sql. Dependencies between objects can require more than one execution to complete compilations successfully before the other completes compilations.
5. If any objects still fail to compile, run SQL*Plus SHOW ERRORS to view the error messages. Use the following format for this command:

```
SHOW ERRORS { FUNCTION | PROCEDURE | PACKAGE | PACKAGE BODY | TRIGGER | VIEW }
 name
```

   For example, to view the PL/SQL errors for the package body MVERP_DFM_DESCR_FLEX_CUSTOM, enter:

```
SQL> SHOW ERRORS PACKAGE BODY MVERP_DFM_DESCR_FLEX_CUSTOM
```

   The errors that occurred during compilation of the object are displayed.

Start MarkView Home

MarkView Home is a dynamically generated web page from which tools and utilities draw data from database queries. Starting MarkView Home verifies that the installation succeeded.

1. Open a Web browser and navigate to the MarkView Home URL.

   MarkView Home is installed in the following default location:

   http://host.domain.extension:port/markview/MVT_MV_Home.Home

   For example, the URL might look like this:

   http://my_host.company.com:7777/markview/MVT_MV_home.home
2. Enter the following MarkView credentials:
   - **User Name**: **admin**
   - **Password: change_on_install**
3. If the MarkView interface is not displayed properly, log in to the application server Administration console; navigate to **Deployments**, and verify the status of your MarkView applications.

Access the MarkView help

To launch the online help for the installed version of the product, click the Help icon within the application.

To access the MarkView help in offline mode, perform the following procedure.

1. After you obtained KofaxMarkViewDocumentation_10.5.0_EN.zip from the product package, create a directory for the MarkView help, such as:
   `<MarkView_installation_directory>/applications/OLH/`
2. Create subfolders for each language, such as en_US for English or de_DE for German, and extract all help files to folders with the corresponding language codes.
3. Deploy the help to the application server.
4. In MarkView Admin, change the default value for the HELP_BASE_URL preference from:
   `https://docshield.kofax.com/MarkView/[lang]/10.5.0-yw2qf8m7r6/`
   To:
   `http(s)://host:port/<deployment_path>/[lang]/`
   Set the application server host and port as applicable to the location where you deployed the help in the previous step. Do not change the [lang] value. The language code is substituted automatically.

Configure MarkView to use the Oracle Wallet (for SSL only)

Skip this section if you do not use SSL to provide secure web communications for the application server.

1. Log in to MarkView and navigate to **Administration** > **MarkView Admin**.
2. Select the **Preferences** tab.
3. Locate and change the settings for the following preferences:
   a. Set SECURITY_SSL_WALLET_LOCATION to <WalletFolder>.
   b. Set SECURITY_SSL_WALLET_PASSWORD to <WalletPasswd>.

   For information about the values, see Add SSL certificate to Oracle Wallet (for SSL only).

Verify the system setup

1. Log in to MarkView and navigate to **Administration** > **Verify MarkView**.
2. In the Test Folder that opens, click the **document icon** next to the About MarkView document. MarkView Viewer displays the document, which validates that the viewer operates correctly.

   The first time that you try to view a document after installation, you may get a null pointer exception. If this happens, restart the application server and retry this step.

3. Navigate to **Utilities** > **Bar Code Generation** and generate a bar code for **Supplier Document**.

Verify that database jobs are running

1. Log in to MarkView and navigate to **Utilities** > **System Status**.
2. Locate **DBMS User Jobs Broken**.

Status	Current Value	Limit	Over Limit	Description
DBMS User Jobs Broken	2	0	Y	The number of current MarkView database user jobs and scheduler jobs that are in error.
Disconnected Bar Code Server	1	0	Y	Checks v$session to see if the Bar Code server has a connection to the database.

3. Contact Kofax Technical Support if the current value for **DBMS User Jobs Broken** is greater than 0.

Chapter 8

Set up your environment and install MarkView Oracle Objects

Follow these steps if you installed MarkView manually. If you installed MarkView Oracle Objects in silent mode, continue at After you run the installer.

Install MarkView Oracle Objects

Complete the following procedures:

- Create the $c_MARKVIEW_TOP environment variable
- Download the Oracle Objects installer and Verify files
- Run Verify on the Oracle E-Business Suite host
- Run the MarkView Oracle Objects installer

Create the $c_MARKVIEW_TOP environment variable

Before you install MarkView Oracle Objects, create the environment variable that Oracle E-Business Suite uses to locate the MarkView Forms.

Determine the forms mode

In the following table, locate the version and mode that you are running to determine the correct procedure for adding the $c_MARKVIEW_TOP environment variable to your system. Complete the appropriate procedure.

Oracle EBS version	Forms Mode	Procedure
12.x (except 12.2)	Servlet or Socket	Add c_MARKVIEW_TOP to your environment for Oracle EBS 12.x (except Oracle EBS 12.2): Socket and servlet modes on page 71.
12.2	Servlet or Socket	Add c_MARKVIEW_TOP to your environment for Oracle EBS 12.2: Socket and servlet modes on page 72

For information about how to check if the forms server is configured in servlet or socket mode, see Oracle MetaLink Note 417216.1.

Add c_MARKVIEW_TOP to your environment

Perform the correct procedure for your environment.

Add c_MARKVIEW_TOP to your environment for Oracle EBS 12.x (except Oracle EBS 12.2): Socket and servlet modes

1. Log in to Oracle E-Business Suite as System Administrator.
2. Navigate to **System Administrator** > **Oracle Application Manager** > **OAM Setup** > **Site Map** > **AutoConfig**.
3. The Applications Dashboard opens the **Context Files** window. Find the Related Links section at the bottom, and click **Manage Custom Parameters**.
4. On the next page (Customized Parameters), click **Add**.

   If you see the error message: "Customization is not allowed on different versions of configuration files.", see Oracle MetaLink 762590.1: Create a Custom Parameter Fails With - Customization Is Not Allowed On Different Versions of Configuration Files.

5. Select **Applications Tier** and click **Next**.
6. Set up the next page as follows:

Field	Description and Setting
OA_VAR	The name of the environment variable. Select c_MARKVIEW_TOP.
Default Value	The c_MARKVIEW_TOP directory. For installation set to: %s_at%/markview/12.0.0 (%s_at% is APPL_TOP). For upgrade set to %s_at%/<your TOP name>/12.0.0 (Use 12.0.0 for R12.1)
Title	MarkView Top
Description	MarkView for Oracle Forms Top
OA Type	PROD_TOP

7. On the Step 2 page, click **Next**.
8. On the confirmation page verify your values and click **Next**.
   Step 4 summarizes the files that change when you change the TOP variable. You can read the XML file listed here in your shell by viewing $CONTEXT_FILE.
9. Click **Finish**.
10. Go to Set up c_MARKVIEW_TOP in Oracle E-Business Suite on page 72.
    AutoConfig loads the contents of $CONTEXT_FILE into your shell and the Oracle Forms environment via `$ORACLE_CONFIG_HOME/forms/server/default.env`.

Add c_MARKVIEW_TOP to your environment for Oracle EBS 12.2: Socket and servlet modes

1. On the Oracle E-Business Suite server, open a command shell and log in as the Oracle E-Business Suite owner. The default account for this user is applmgr.
2. To set the environment variables, source the run file system environment file.

   For example, from a UNIX shell, run the following command:

   ```
   $ source $APPL_TOP/../../../EBSapps.env run
   ```
3. Create the $customfile custom environment file (if it does not already exist).
4. Add the following lines to the end of the $customfile custom environment file:

   ```
      export c_MARKVIEW_TOP=`dirname ${BASH_SOURCE[1]}`/markview/12.0.0
     export C_MARKVIEW_TOP=$c_MARKVIEW_TOP
   ```
5. To set the environment variables, source the patch file system environment file.

   For example, from a UNIX shell, run the following command:

   ```
   $ source $APPL_TOP/../../../EBSapps.env patch
   ```
6. Create the $customfile custom environment file (if it does not already exist).
7. Add the following lines to the end of the $customfile custom environment file:

   ```
   export c_MARKVIEW_TOP=`dirname ${BASH_SOURCE[1]}`/markview/12.0.0
     export C_MARKVIEW_TOP=$c_MARKVIEW_TOP
   ```
8. To set the environment variables, source the run file system environment file.

   For example, from a UNIX shell, run the following command:

   ```
   $ source $APPL_TOP/../../../EBSapps.env run
   ```
9. Go to Set up c_MARKVIEW_TOP in Oracle E-Business Suite on page 72.

Set up c_MARKVIEW_TOP in Oracle E-Business Suite

1. Run AutoConfig to load c_MARKVIEW_TOP into your environment and ensure that future runs of AutoConfig will not unset c_MARKVIEW_TOP. See Oracle documentation for more detailed information on AutoConfig.

   On the Oracle E-Business Suite server, open a command shell and log in as the Oracle E-Business suite owner. The default account for this user is applmgr. Run the AutoConfig script:

   ```
   $INST_TOP/admin/scripts/adautocfg.sh
   ```
2. After AutoConfig finishes running, restart Oracle EBS Applications.
3. Confirm that the variable is set:
   a. Log out of your shell and close your remote connection.
   b. Log in to the shell and run `echo $c_MARKVIEW_TOP` to display the variable.

If after running AutoConfig and logging into your shell, the variable is not available, see MetaLink Note: 461326.1 for a bug that may apply to your system.

Download the Oracle Objects installer and Verify files

1. On the Oracle E-Business Suite server, open a command shell and log in as the Oracle E-Business suite owner. The default account for this user is applmgr.
2. Create a temporary distribution directory for the compressed MarkView installer and verification files. For example, `<home_directory>/mvforms_dist` where <home_directory> is the user home directory.
3. In the distribution directory, create these subdirectories:
   - `<distribution_directory>/verify`
   - `<distribution_directory>/installer`

   Where <distribution_directory> is the temporary distribution directory you just created.
4. Download the following file into the verify directory (where <version_number> is the MarkView version number):

   KofaxMarkView-<version_number>_Oracle_Verify.zip (for all hosts)
5. Download the following file into the installer directory (where <version_number> is the MarkView version number):

   KofaxMarkView-<version_number>_Oracle_Objects.zip
6. Decompress the files.
7. Create the MarkView installation directory for Oracle Objects modules. This is typically the same as the MarkView installation directory.

   The directory name must not contain any XML special characters, such as an ampersand (&) and it cannot be a subdirectory of the temporary installer directory.

Add SSL certificate to the MarkView Oracle Objects installer Java truststore (for SSL only)

Skip this section if you do not use SSL to provide secure web communications for the application server.

Add the certificate to the MarkView installer Java truststore on the system where you plan to run the Oracle Objects installer:

```
keytool -import -alias <alias> -keystore "<installer_java_home>\jre\lib\security
\cacerts" –file <certificate>
```

Where:

- `<alias>` is a keystore entry unique name.
- `<certificate>` is a file that contains the self-signed certificate or any other certificate received from the certificate authority.

  If you have a certificate received from the certificate authority, verify that root and intermediate certificates from the certification chain are in MarkView installer Java truststore and run the indicated command to add the missing certificates.

The default Java certificate authority keystore is `cacerts`. The default password for `cacerts` is `<changeit>`.

Run Verify on the Oracle E-Business Suite host

Use the information that you entered on the MarkView Installation Worksheet to respond to the Verify prompts. Run Verify before installing MarkView.

1. On the Oracle E-Business Suite server, open a command shell and log in as the Oracle E-Business suite owner. The default account for this user is APPLMGR.
2. Ensure that the environment variables are correctly set up:
   - $PATH: Confirm the appropriate Java version comes first (or run `java –version`). For the Java version, see the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site.
   - $APPL_TOP: Confirm this is the correct instance of Oracle E-Business Suite
   - $FORMS_PATH: Confirm that it includes $AU_TOP/resource and $AU_TOP/forms/US.

   Also, for more information, see:
   - Set locale-sensitive environment variables
   - Configure environment variables for WebLogic or Configure environment variables.
3. Ensure that the MarkView application server is running.
4. Navigate to `<distribution_directory>/verify/bin`, where <distribution_directory> is the location where you downloaded and decompressed the installation files.
5. Run **Verify**:
   - On Unix, enter ./verify_oracle_objects.sh.
   - On Windows, enter verify_oracle_objects.bat.
6. Select the products you are planning to install with the Oracle Objects installer.
   - Oracle Forms Integration
   - OA Framework Integration for AP
   - OA Framework Integration for Expense (only if you are running MarkView for Expense Management)

   Consider these points when you select products:
   - Only systems running Oracle EBS 12.x that also include MarkView for Account Payables can select OA Framework Integration for AP.
   - Only systems running MarkView for Expense Management can select OA Framework Integration for Expense.
7. Follow the prompts.
8. Review the generated reports. The reports are located in the MarkView installation directory you selected during the verification. Save these logs in another directory to prevent overwriting them.

   The file `reports/EnvironmentReport.txt` describes issues with your environment that will prevent successful installation.
9. Make changes as indicated in the failure reports. You are now ready to install.

Run the MarkView Oracle Objects installer

To run the installer:

1. On the Oracle E-Business Suite server, open a command shell and log in as the Oracle E-Business suite owner. The default account for this user is applmgr.
2. Make sure that all environment variables are correctly set up for this account, check:
   - $PATH: Confirm the appropriate Java version comes first (or run `java –version`). For the Java version, see the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site.
   - $APPL_TOP: Confirm this is the correct instance of Oracle E-Business Suite
   - $FORMS_PATH: Confirm that it includes $AU_TOP/resource and $AU_TOP/forms/US.
3. Ensure that the application server is running.
4. Navigate to `<distribution_directory>/installer/bin`, where <distribution_directory> is the temporary distribution directory.
5. Start the installer by running either:
   - For Unix: ./install.sh
   - For Windows: install.bat
6. Select the applications to install. Available choices are:
   - Oracle Forms Integration
   - OA Framework Integration for AP
   - OA Framework Integration for Expense

   Consider the following when selecting products:
   - Only systems running Oracle Release 12 that also include MarkView for Account Payables can select OA Framework Integration for AP.
   - Only systems running MarkView for Expense Management can select OA Framework Integration for Expense.
7. Click **Next**.
8. Select **Standard Full Install** and click **Next**.
9. Click **Select Folder** to navigate to the MarkView installation directory and click **Next**.
10. Enter your MarkView schema password and click **Next**.
11. Enter your Oracle Applications schema password and click **Next**.
    The order and appearance of the next few steps vary depending on the installation options.
12. Review the values displayed and click **Next**:
    - **Location of APPL_TOP** value: Confirm this is the instance of Oracle E-Business Suite where you want to install Forms.
    - **Location of AU_TOP and FND_TOP** values: Confirm this is the instance of Oracle E-Business Suite where you want to install Forms (both directories should be under $APPL_TOP).
    - **Location of $c_MARKVIEW_TOP** value: It should be the value you set up in the Pre-Install steps.
13. Verify the Oracle Framework Environment Variable values APPL_TOP, COMMON_TOP, and JAVA_TOP and click **Next**.

14. Review the Summary and click **Next**.
15. Click **Install**.
    The process can take several minutes. To track the progress, click **Show Details**.
    The installation finishes with a message indicating whether the installation is successful.
    The installation script creates log files in the MarkView installation directory.
16. Click **Exit.**

After you run the installer

If you are installing on Oracle EBS 12.2, follow the steps in Add MarkView classes to the EBS class path (Oracle EBS 12.2 only) to add the MarkView classes to the $JAVA_TOP/customall.jar file that is on the EBS class path.

Otherwise, continue at Disable Inline Attachments in Oracle E-Business Suite to configure the MarkView Oracle Forms Server for use with MarkView products.

Add MarkView classes to the EBS class path (Oracle EBS 12.2 only)

After running the Oracle Objects installer on Oracle EBS 12.2, you must add the MarkView classes to the $JAVA_TOP/customall.jar file that is on the EBS class path by following the steps in this section. If you do not add the MarkView classes, you may encounter errors while working with Oracle Forms, for example an unexpected error may occur in the iExpenses module.

1. Run the Oracle Adadmin utility to generate the new jar files.
    a. In the Oracle Adadmin utility, select option **1: Generate Applications Files menu**.
    b. Select option **4: Generate product JAR files**.
    c. If you wish to force regeneration of all jar files, when prompted, enter **Y**.
2. Restart Oracle EBS Applications.

Disable Inline Attachments in Oracle E-Business Suite

We recommend that you disable the following option for appropriate interaction with attachments.

1. Log in to Oracle E-Business Suite as System Administrator.
2. Navigate to **System Administrator** > **Profile** > **System**.
3. In the **Find System Profile Values** window, select **Site**.
4. In the **Profile** field, to locate the Disable Inline Attachments option, enter FND%Inline% and click **Find**.
5. In the **Site** field, set the value to True and save changes.

Chapter 9

Configure Oracle Forms

The Forms configuration process includes required and optional steps:

1. Verify the environment (Oracle EBS 12.2 only)
2. Test the $c_MARKVIEW_TOP environment variable
3. Set up the Oracle Forms environment variables
4. Update the Oracle Attachments form (FNDATTCH.fmb)
5. Configure Oracle Forms for multi-language support (optional) If your system uses a language other than US English, configure Oracle Forms for multi-language support.
6. Update the custom library (CUSTOM.pll)
7. Enable Invoice Workbench (optional)
8. Enable MarkView Quick Invoices (optional)
9. Synchronize the run and patch file systems (Oracle EBS 12.2 only)

Verify the environment (Oracle EBS 12.2 only)

Follow these steps if you are integrating MarkView with Oracle E-Business Suite 12.2 or higher

When configuring Oracle Forms, run any shell commands on the run file system.

1. On the Oracle E-Business Suite server, open a command shell and log in as the Oracle E-Business Suite owner.

   The default account for this user is applmgr.
2. Source the run file system environment file.

   For example, from a UNIX shell, run the following command:

   ```
   $ source $APPL_TOP/../../../EBSapps.env run
   ```
3. Verify that the environment is properly set by examining the relevant environment variable.

   For example, from a UNIX shell, run the following command:

   ```
   $ echo $FILE_EDITION
       run
   ```

Test the $c_MARKVIEW_TOP environment variable

1. Log in to Oracle Applications and open any form (except Invoice Workbench).

2. Select **Help** > **Diagnostics** > **Examine**.
3. When prompted, enter the <password>.
4. Navigate to **Block** and press **CTRL-L**.
5. Select **$ENVIRONMENT$**.
6. In **Field**, enter one of the following commands and click **Tab**:
   - For servlet mode, enter: **C_MARKVIEW_TOP**
   - For socket mode, enter: **c_MARKVIEW_TOP**

   The command is case-specific.

   Do not press CTRL-L to display the list of values.

7. Verify the **Value** setting.
   - If the pathname for either the c_MARKVIEW_TOP variable or the C_MARKVIEW_TOP variable appears in the field, the variable is configured correctly.
   - If the pathname does not appear for either c_MARKVIEW_TOP or C_MARKVIEW_TOP, try steps 1-6 again, but use the alternative case. For example, if you initially used c_MARKVIEW_TOP, try C_MARKVIEW_TOP.
   - If the pathname does not appear for either c_MARKVIEW_TOP or C_MARKVIEW_TOP after using the alternative case, there is a configuration error. Check if the variable was configured correctly.
8. Verify the value in the database:
   a. Log in to the database as the APPS user.
   b. Run the following SQL command:

      ```
      select basepath from fnd_application where
            basepath like '%MARKVIEW_TOP%';
      ```

   c. If the return value corresponds to the variable that you verified in step 7, continue at Set up the Oracle Forms environment variables.
   d. If the return value does not correspond to the variable that you verified in step 7, there may be an error when opening a MarkView form such as Invoice Workbench (SFXINWKB).
   e. From the SQL prompt, update the base path to correspond to the environment. Enter the correct code for the value that you verified in step 7:
      - For c_MARKVIEW_TOP, enter:

        ```
        update fnd_application set basepath= 'c_MARKVIEW_TOP' where
              basepath like '%MARKVIEW_TOP%'; commit;
        ```

      - For C_MARKVIEW_TOP, enter:

        ```
        update fnd_application set basepath= 'C_MARKVIEW_TOP' where
              basepath like '%MARKVIEW_TOP%'; commit;
        ```

Set up the Oracle Forms environment variables

Before launching Oracle Forms Builder, set environment variables. Log in to the Forms host as a user with write privileges in the $APPL_TOP directory (for example, applmgr).

Oracle Forms Builder must run through a windowing system. Initiate this session on a desktop environment or from an X Windows client.

For X Windows clients, set the DISPLAY environment variable to the IP address of your local machine. For example:

```
export DISPLAY=xxx.xxx.xxx.xxx:0
```

The $APPL_TOP directory contains configuration files which have the suffix .env and set environment variables. These environment variables must be set properly so you can compile forms and libraries.

Before invoking Oracle Forms Builder, nvoke the appropriate configuration file to establish the proper working environment. Use the shell command that runs scripts or batch files in your current environment:

- C shell: `source APPS<sid>_<hostname>.env`
- KornShell: `APPS<sid>_<hostname>.env`

where <sid> is the database SID and <hostname> is the server name.

The configuration file establishes several environment variables, including the following:

Variable	What it Holds
APPL_TOP	The name of the directory where the configuration files reside.
FORMS_PATH in R12.x	One or more directories required to compile forms and libraries.
AU_TOP	The source code for all forms.

To verify FORMS_PATH:

1. Check FORMS_PATH to make sure that it includes `$AU_TOP/resource`.
2. Oracle Forms Builder must have `$AU_TOP/forms/US` in its path. Either:
   - Launch Oracle Forms Builder from the directory `$AU_TOP/forms/US`.
   - Set the variable FORMS_PATH to include `$AU_TOP/forms/US`.

Start Oracle Forms Builder

Before running the Oracle Forms Builder installer, verify that the Java version on the system matches the Oracle EBS Java (32-bit or 64-bit versions).

To start Oracle Forms Builder for Oracle Release 12, enter the following command in a shell:

```
frmbld
```

Update the Oracle Attachments form (FNDATTCH.fmb)

By default, Oracle Applications support attachments on most standard Oracle Applications forms. A user clicks the Attachments (paper clip) button on the Oracle Applications toolbar, which starts the FNDATTCH form. The FNDATTCH form searches for and returns any attachments to the current Oracle Applications record. Modify the FNDATTCH form so that it shows attachments with MarkView categories.

Many of the changes to the FNDATTCH form are encapsulated in a source form named 170ATTCH that is installed by the MarkView installer. As you update the FNDATTCH form, cut and paste some of the MarkView modifications from 170ATTCH to FNDATTCH.

Step 1: Open the FNDATTCH and 170ATTCH forms

1. Copy:

   `$AU_TOP/forms/US/FNDATTCH.fmb`

   to:

   `$c_MARKVIEW_TOP/forms/US`
2. Start Oracle Forms Builder as described in Start Oracle Forms Builder on page 79.
3. Connect to the Oracle APPS database schema.
   a. Select **File** > **Connect**.
   b. Enter the Oracle APPS database user, password, and connect string (the same credentials specified during MarkView for Oracle Applications installation).
4. Select **File** > **Open** and open `$c_MARKVIEW_TOP/MVOA/<version_number>/forms/170ATTCH.fmb` (where <version_number> is the Oracle version number).
   The name of the form, ATTCH170, appears at the top of the navigation tree.
5. Select **File** > **Open** and open `$c_MARKVIEW_TOP/forms/US/FNDATTCH.fmb`.
   The name of the form, FNDATTCH, appears at the top of the navigation tree.

Step 2: Paste the GET_MV_DOCUMENT_ID item into the FNDATTCH form

1. In the **Object Navigator**, expand **ATTCH170** > **Data Blocks** > **DOCUMENT_CONTROL** > **Items** and select **GET_MV_DOCUMENT_ID**.
2. Right-click and select **Copy**.
3. In the **Object Navigator**, expand **FNDATTCH** > **Data Blocks** > **DOCUMENT_CONTROL** and select **Items**.
4. Right-click and select **Paste**.

Step 3: Paste the MarkView package into the FNDATTCH form

1. In the **Object Navigator**, expand **ATTCH170** > **Program Units** and highlight these packages:
   - **MARKVIEW* (Package Spec)**
   - **MARKVIEW* (Package Body**)
2. Right-click and select **Copy**.

3. In the **Object Navigator**, expand **FNDATTCH** and select **Program Units**.
4. Right-click and select **Paste**.

Step 4: Edit the PRE-FORM trigger

1. In the **Object Navigator**, expand **FNDATTCH** > **Triggers** and select **PRE-FORM**.
2. Right-click and select **PL/SQL Editor**.
3. Make the following changes to the PRE-FORM trigger:
   a. Append **.170** to the revision number to indicate that the form is edited for MarkView integration.
      For example, change:
      FND_STANDARD.FORM_INFO('$Revision: 115.155.11591.2')
      to:
      FND_STANDARD.FORM_INFO('$Revision: 115.155.11591.2**.170**')
   b. Add the following code to the end of the trigger as a separate line:

```
MarkView.Event('PRE-FORM');
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 5: Edit the PRE-QUERY trigger

1. In the **Object Navigator**, expand **FNDATTCH** > **Data Blocks** > **DOCUMENT_HEADER** > **Triggers** and select **PRE-QUERY**.
2. Right-click and select **PL/SQL Editor**.
3. In the PL/SQL Editor, add the following line of code to the end of the trigger:

```
MarkView.Initialize;
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 6: Edit the POST-QUERY trigger

1. In the **Object Navigator**, expand **FNDATTCH** > **Data Blocks** > **DOCUMENT_HEADER** > **Triggers** and select **POST-QUERY**.
2. Right-click and select **PL/SQL Editor**.
3. Add the following line of code to the end of the trigger:

```
MarkView.Event('POST-QUERY');
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 7: Edit the PRE-INSERT trigger

1. In the **Object Navigator**, expand **FNDATTCH** > **Data Blocks** > **DOCUMENT_HEADER** > **Triggers** and select **PRE-INSERT**.
2. Right-click and select **PL/SQL Editor**.
3. Add the following code to the beginning of the trigger:

```
If MarkView.IsMarkView then
MarkView.Event('PRE-INSERT');
End if;
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 8: Edit the WHEN-NEW-RECORD-INSTANCE trigger

1. In the **Object Navigator**, expand **FNDATTCH** > **Data Blocks** > **DOCUMENT_HEADER** > **Triggers** and select **WHEN-NEW-RECORD-INSTANCE**.
2. Right-click and select **PL/SQL Editor**.
3. In the **PL/SQL Editor**, add the following code to the end of the trigger:

```
MarkView.Default_Show_Document;
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 9: Create the KEY-NEXT-ITEM trigger

1. In the **Object Navigator**, expand **FNDATTCH** > **Data Blocks** > **DOCUMENT_HEADER** > **Items** > **DATATYPE_NAME** and select **Triggers**.
2. Click the plus sign **+** button in the toolbar to create a new trigger.
   A list of trigger names appears.
3. In the list, select **KEY-NEXT-ITEM** and click **OK**.
   The PL/SQL Editor opens.
4. Add the following code to the new KEY-NEXT-ITEM trigger:

```
MarkView.Event('KEY-NEXT-ITEM');
```

5. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 10: Edit the WHEN-VALIDATE-ITEM trigger for the DATATYPE_NAME item

1. In the **Object Navigator**, expand **FNDATTCH** > **Data Blocks** > **DOCUMENT_HEADER** > **Items** > **DATATYPE_NAME** > **Triggers** and select **WHEN-VALIDATE-ITEM**.
2. Right-click and select **PL/SQL Editor**.
3. Append the following code to the end of the trigger:

```
MarkView.Event('WHEN-VALIDATE-ITEM');
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 11: Edit the WHEN-VALIDATE-ITEM trigger for the CATEGORY_DESCRIPTION item

1. In the **Object Navigator**, expand **FNDATTCH** > **Data Blocks** > **DOCUMENT_HEADER** > **Items** > **CATEGORY_DESCRIPTION** > **Triggers** and select **WHEN-VALIDATE-ITEM**.
2. Right-click and select **PL/SQL Editor**.
3. Append the following code to the end of the trigger:

```
MarkView.Event('WHEN-VALIDATE-ITEM');
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 12: Add an alert to the FNDATTCH form

1. In the **Object Navigator**, expand **ATTCH170** > **Alerts** and select **MVOA_MESSAGE**.

2. Right-click and select **Copy**.
3. Expand **FNDATTCH** and select **Alerts**.
4. Right-click and select **Paste**.

Step 13: Edit the WHEN-BUTTON-PRESSED trigger

1. In the **Object Navigator**, expand **FNDATTCH** > **Data Blocks** > **DOCUMENT_CONTROL** > **Items** > **OPEN_OTHER_DOCUMENT** > **Triggers** and select **WHEN-BUTTON-PRESSED**.
2. Right-click and select **PL/SQL Editor**.
3. Replace any existing code with the following code:

```
if MarkView.IsMarkView then
copy(:document_header.file_name, 'GLOBAL.ATCHMT_FILE_NAME');
APPCORE_CUSTOM.EVENT('OPEN-DOCUMENT');
else
ATCHMT_OPEN_OTHER_DOCUMENT.open_document('document_header');
end if;
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 14: Save your changes

1. In the **Object Navigator**, select **File** > **Save** to save FNDATTCH.
2. Close Oracle Forms Builder.
3. Navigate to `$c_MARKVIEW_TOP/forms/US`.
4. Using Oracle Forms generator, issue the following command to compile the form into an .fmx file, substituting the appropriate userid information.

   These commands must be run on a single line. If you cut and paste from this guide, remove any line breaks.

   For Oracle R12:

```
frmcmp userid=apps/apps-pw@connectstring module=$c_MARKVIEW_TOP/forms/US/
FNDATTCH.fmb module_type=FORM compile_all=YES
```

   The compiled form is now in the US forms directory at FNDATTCH.fmx.

   MarkView has encountered problems when compiling forms in some versions of **Forms Builder**. Compile from the command line to safeguard against these problems.

5. In the host operating system, copy FNDATTCH.fmx to `$FND_TOP/forms/US`.
   For example, from a UNIX shell using socket mode, run the following command:

```
$ cp $c_MARKVIEW_TOP/forms/US/FNDATTCH.fmx $FND_TOP/forms/US
```

   You do not need to copy FNDATTCH.fmb to `$FND_TOP/forms/US`. At runtime, the system uses the .fmx file, not the .fmb file.

Update the custom library (CUSTOM.pll)

The custom library (CUSTOM.pll) is an Oracle Forms library shipped with Oracle Applications. The custom library is attached to all forms in the E-Business Suite. As shipped by Oracle, this library performs no functions, but provides callouts for custom logic.

The MarkView installer overwrites CUSTOM.pll to integrate it with MarkView. Therefore, if you added your own customizations to CUSTOM.pll, restore the version of CUSTOM.pll that contains your modifications and manually add the MarkView integration code.

Step 1: Back up the active CUSTOM.pll and CUSTOM.plx files

Back up the active versions of the CUSTOM.pll and CUSTOM.plx files before you restore the modified CUSTOM.pll file.

1. Create the following directory (if it does not already exist):
   `$c_MARKVIEW_TOP/MVOA/<version_number>/restore`
   where <version_number> is the Oracle version number.
2. Copy:
   `$AU_TOP/resource/CUSTOM.plx`
   to:
   `$c_MARKVIEW_TOP/MVOA/<version_number>/restore`
3. Copy:
   `$AU_TOP/resource/CUSTOM.pll`
   to:
   `$c_MARKVIEW_TOP/MVOA/<version_number>/restore`

Step 2: Restore the modified CUSTOM.pll file

If you did not modify the CUSTOM.pll file, skip this step and proceed to Step 3: Open CUSTOM.pll for editing on page 85.

If you added your own customizations to CUSTOM.pll, restore the version of the file that contains your changes. The MarkView installer creates restore directories with both CUSTOM.pll and CUSTOM.plx files in

`$c_MARKVIEW_TOP/MVOA/<version_number>/Restore_<timestamp>`

where <version_number> is the Oracle version number, and <timestamp> is the date and time when the MarkView installer ran.

1. Locate the original CUSTOM.pll file in `$c_MARKVIEW_TOP/MVOA/<version_number>/Restore_<timestamp>`.
   If multiple restore directories exist, use the directory which contains the most recent version of your modified files.
2. Copy:
   `$c_MARKVIEW_TOP/MVOA/<version_number>/Restore_<timestamp>/CUSTOM.pll`

to:

`$c_MARKVIEW_TOP/MVOA/<version_number>/libraries/`

Step 3: Open CUSTOM.pll for editing

1. Start Oracle Forms Builder as described in Start Oracle Forms Builder on page 79.
2. Connect to the Oracle APPS database schema.
   a. Select **File** > **Connect**.
   b. Enter the Oracle APPS database user, password, and connect string (the same credentials specified during MarkView for Oracle Applications installation).
3. Select **File** > **Open** and open:

   `$c_MARKVIEW_TOP/MVOA/<version_number>/libraries/CUSTOM.pll`

   where <version_number> is the Oracle version number.

   The name of the library, CUSTOM, appears under PL/SQL Libraries in the navigation tree.

Step 4: Attach libraries (customized versions of CUSTOM.pll only)

If you did not customize CUSTOM.pll, skip this step and proceed to Step 5: Edit the zoom_available and style functions and the event procedure on page 86. If you customized CUSTOM.pll, manually attach the following MarkView libraries to CUSTOM.pll:

- MVOAUTIL.pll
- MVVIEWER.pll
- MVFOLDER.pll
- SFAPI.pll

1. In the **Object Navigator**, expand **PL/SQL Libraries** > **CUSTOM** and select **Attached Libraries**.
2. Click the plus sign **+** button in the toolbar to create a new attached library.
   The Attach Library window opens.
3. Click **Browse**.
   The **PL/SQL Library File** window opens.
4. Navigate to `$AU_TOP/resource` and select **MVOAUTIL.pll**.
5. Click **OK**.
   The **PL/SQL Library File** window closes.
6. Click **Attach**.
7. Repeat these steps for MVVIEWER.pll, MVFOLDER.pll, and SFAPI.pll.

All four attached libraries are visible under Attached Libraries in the tree.

Step 5: Edit the zoom_available and style functions and the event procedure

The following changes modify zoom_available, style, and event so that they call the MVOAUTIL library. Since these modifications require some additional analysis, contact Kofax Technical Support before you make these changes to CUSTOM.pll.

1. In the **Object Navigator**, expand **PL/SQL Libraries** > **CUSTOM** > **Program Units** and select **CUSTOM* (Package Body)@**.
2. Right-click and select **PL/SQL Editor**.
3. In the **function zoom_available** section, comment out any existing return lines, such as:

   ```
   # return(FALSE);
   ```
4. Add the following code to the **function zoom_available** section immediately before the end line:

   ```
   return(MVOA_Util.Zoom_Available);
   ```
5. In the **function style** section, comment out any existing return lines, such as:

   ```
   # return(FALSE);
   ```
6. Add the following code to the end of the **function style** section immediately before the end line:

   ```
   return(MVOA_Util.Zoom_Style);
   ```
7. In the **procedure event** section, comment out any existing return lines, for example:

   ```
   # return(FALSE);
   ```
8. Add the following code to the end of the **procedure event** section immediately before the end line:

   ```
   MVOA_Util.Event(event_name);
   if ( (GET_APPLICATION_PROPERTY(Current_Form_Name) ='APXXXEER'
   or GET_APPLICATION_PROPERTY(Current_Form_Name) = 'SFXIISIM'
   or GET_APPLICATION_PROPERTY(Current_Form_Name) ='APXINWKB')
   and event_name = 'ZOOM') then
   execute_trigger('WHEN-WINDOW-ACTIVATED');
   end if;
   ```
9. Select **File** > **Save** and close the PL/SQL Editor.

Step 6: Compile and copy CUSTOM.pll

1. Using **Oracle Forms generator**, issue the following command to compile CUSTOM.pll into CUSTOM.plx. In this command, <version_number> is the Oracle version number:

   These commands must be run on a single line. If you cut and paste from this guide, remove any line breaks and update the version number.

   Oracle R12

   ```
   frmcmp userid=apps/apps-pw@connectstring module=$c_MARKVIEW_TOP/MVOA/
   <version_number>/libraries/CUSTOM.pll module_type=LIBRARY compile_all=YES
   ```
2. Copy:

   `$c_MARKVIEW_TOP/MVOA/<version_number>/libraries/CUSTOM.pll`

to:

`$AU_TOP/resource`

where <version_number> is the Oracle version number.

3. Copy:

   `$c_MARKVIEW_TOP/MVOA/<version_number>/libraries/CUSTOM.plx`

   to:

   `$AU_TOP/resource`

   where <version_number> is the Oracle version number.

Enable Invoice Workbench (optional)

If you plan to use Oracle Forms with the MarkView Process GetNext or Open Work Item operations, modify the copies of the original Oracle Forms. This section describes how to enable Invoice Workbench functionality for MarkView Process workflow processing, by creating a modified version of the Invoice Workbench form (APXINWKB). This modified form (SFXINWKB) will be enabled for both GetNext and Open Work Item.

The following instructions assume that the MarkView base path is the default, $c_MARKVIEW_TOP.

Step 1: Image-enable the default Invoice Workbench form (optional)

There are two versions of the Invoice Workbench form:

- The integrated version (SFXINWKB.fmb). Use this version when you require GetNext and Open Work Item workflow processing from the Invoice Workbench.
- The unintegrated version (APXINWKB.fmb). Use this version when you do not require GetNext or Open Work Item workflow processing from the Invoice Workbench.

If you use the integrated version, skip this step and go to Step 2: Copy the Invoice Workbench form on page 87.

If you use the unintegrated version, image-enable the default invoice workbench form.

1. On the Oracle E-Business Suite server, open a command shell and log in as the Oracle E-Business suite owner. The default account for this user is applmgr.
2. Navigate to:

   `<distribution directory>\modules\erp-integration-oracle-dist-x.x.x\erp-integration-oracle-db\schema\seed_data\oracle_forms`

   where x.x.x is the MarkView version number.
3. Run APXINWKB.sql.
4. Continue at Configure Oracle Forms for multi-language support (optional) on page 90.

Step 2: Copy the Invoice Workbench form

1. Copy:

   `$AU_TOP/forms/US/APXINWKB.fmb`

   to:

`$c_MARKVIEW_TOP/forms/US`

2. Rename:

   `$c_MARKVIEW_TOP/forms/US/APXINWKB.fmb`

   to:

   `$c_MARKVIEW_TOP/forms/US/SFXINWKB.fmb`

Step 3: Open the SFXINWKB form

1. Start Oracle Forms Builder as described in Start Oracle Forms Builder.
2. Connect to the Oracle APPS database schema.
   a. Select **File** > **Connect**.
   b. Enter the Oracle APPS database user, password, and connect string (the same credentials specified during MarkView for Oracle Applications installation).
3. Select **File** > **Open** and open `$c_MARKVIEW_TOP/forms/US/SFXINWKB.fmb`.

   The name of the form, APXINWKB, appears at the top of the navigation tree. Do not change this name to SFXINWKB. Only the .fmb and .fmx file names change.

Step 4: Edit the IMG_IMAGE_ID item

1. In the **Object Navigator**, expand **APXINWKB** > **Data Blocks** > **INV_SUM_FOLDER** > **Items**.
2. Click the plus sign **+** button in the toolbar to create a new item.
   The new item appears at the top of the tree.
3. Right-click the item and select **Property Palette**.
4. In the Property Palette **General** section **Name** field, enter **IMG_IMAGE_ID**.
5. In the **Item Type** field, select **Text Item**.
6. In **Subclass Information**, click the button to the right of the blank field.
   The Subclass Information window opens.
7. Select **Property Class** and click **OK**.
8. In the Property Palette **Data** section **Maximum Length** field, enter **240**.
9. In the Property Palette **Database** section **Database Item** field, select **No**.
10. Close the Property Palette.

Step 5: Edit the Invoice Folder

1. Expand **APXINWKB** > **Program Units** and select **INV_SUM_FOLDER_BLOCK_INSERT1* (Package Body)**.
2. Right-click and select **PL/SQL Editor**.
3. Add the following code immediately before the END Insert_Row line:

```
IF :INV_SUM_FOLDER.IMG_IMAGE_ID IS NOT NULL THEN
APPCORE_CUSTOM.EVENT('INVOICE-IMAGE-ASSOCIATED');
END IF;
```

4. For Oracle R12: Click**Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 6: Edit the KEY-DUPREC trigger

1. In the **Object Navigator**, expand **APXINWKB** > **Data Blocks** > **INV_SUM_FOLDER** > **Triggers** and select **KEY-DUPREC**.
2. Right-click and select **PL/SQL Editor**.
3. Replace the existing text with the following:

```
-- inv_sum_folder.event('KEY-DUPREC');
Declare
      cur_image_id Varchar2(240);
Begin
      cur_image_id := :inv_sum_folder.img_image_id;
      inv_sum_folder.event('KEY-DUPREC');
      :inv_sum_folder.img_image_id := cur_image_id;
End;
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 7: Create the WHEN-WINDOW-ACTIVATED trigger

1. In the **Object Navigator**, expand **APXINWKB** and select **Triggers**.
2. Click the plus sign **+** button in the toolbar to create a new trigger.
   A list of trigger names appears.
3. In the list, select **WHEN-WINDOW-ACTIVATED** and click **OK**.
   The PL/SQL Editor opens.
4. Add the following code to the new WHEN-WINDOW-ACTIVATED trigger:

```
APPCORE_CUSTOM.EVENT('MVOA-WHEN-WINDOW-ACTIVATED');
```

5. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 8: Edit the SFXINWKB form revision number

1. In the **Object Navigator**, expand **APXINWKB** > **Program Units** and select **APXINWKB (Package_Body)**.
2. Right-click and select **PL/SQL Editor**.
3. Append **.170** to the revision number to indicate that the form is edited for MarkView integration.

   For example, change:

   FND_STANDARD.FORM_INFO('$Revision: 115.155.11591.2')

   to:

   FND_STANDARD.FORM_INFO('$Revision: 115.155.11591.2**.170**')
4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 9: Compile the Invoice Workbench form

1. In the **Object Navigator**, select **File** > **Save** to save SFXINWKB.
2. Close Oracle Forms Builder.
3. Navigate to `$c_MARKVIEW_TOP/forms/US`.

4. Using Oracle Forms generator, issue the correct command to compile the form into an .fmx file, substituting the appropriate userid information.

   These commands must be run on a single line. If you cut and paste from this guide, remove any line breaks.

   For Oracle R12:

   ```
   frmcmp userid=apps/apps-pw@connectstring module=$c_MARKVIEW_TOP/forms/US/
   SFXINWKB.fmb module_type=FORM compile_all=YES
   ```

   The compiled form is now at `$c_MARKVIEW_TOP/forms/US/SFXINWKB.fmx`.

   MarkView has encountered problems when compiling forms in some versions of **Forms Builder**. Compile from the command line to safeguard against these problems.

Configure Oracle Forms for multi-language support (optional)

To configure Oracle Forms to support languages in addition to the default, US English, edit language-specific versions of the forms to include the MarkView integration code.

1. Locate the FNDATTCH.fmb file for the target language. For example, the US English version of this file is located at:

   `$AU_TOP/forms/US/FNDATTCH.fmb`

   and the French version of the file is located at:

   `$AU_TOP/forms/F/FNDATTCH.fmb`
2. Create a new language-specific subdirectory under `$c_MARKVIEW_TOP/forms`. For example, if you are adding support for French, create:

   `$c_MARKVIEW_TOP/forms/F`
3. Modify the FNDATTCH.fmb file for the target language to include the MarkView integration code, as described in Update the Oracle Attachments form (FNDATTCH.fmb) on page 80.
4. Copy the APXINWKB.fmb file from the language-specific subdirectory in `$AU_TOP/forms` to the new language-specific subdirectory under `$c_MARKVIEW_TOP/forms` that you created in step 2.
5. Rename the APXINWKB.fmb file to SFXINWKB.fmb.
6. Modify the SFXINWKB.fmb file for the target language to include the MarkView integration changes, as described in Enable Invoice Workbench (optional) on page 87 .
7. Use the Oracle Forms Generator to compile SFXINWKB.fmb into SFXINWKB.fmx.

   Make sure the .fmx file is in the correct language-specific subdirectory.
8. Repeat these steps for each language that you want to support.

Enable MarkView Quick Invoices (optional)

If Kofax Transformation Modules for MarkView is a part of your solution, enable MarkView Quick Invoices.

Step 1: Copy the Quick Invoices form

1. Copy:
   `$AU_TOP/forms/US/APXIISIM.fmb`
   to:
   `$c_MARKVIEW_TOP/forms/US`
2. Rename:
   `$c_MARKVIEW_TOP/forms/US/APXIISIM.fmb`
   to:
   `$c_MARKVIEW_TOP/forms/US/SFXIISIM.fmb`

Step 2: Open the SFXIISIM form

1. Start Oracle Forms Builder as described in Start Oracle Forms Builder.
2. Connect to the Oracle APPS database schema.
   a. Select **File** > **Connect**.
   b. Enter the Oracle APPS database user, password, and connect string (the same credentials specified during MarkView for Oracle Applications installation).
3. Select **File** > **Open** and open `$c_MARKVIEW_TOP/forms/US/SFXIISIM.fmb`.
4. In the **Property Palette**, update the form name from APXIISIM to SFXIISIM at the top of the tree.

Step 3: Edit the IMG_IMAGE_ID item

1. In the **Object Navigator**, expand **SFXIISIM** > **Data Blocks** > **INVOICES_FOLDER** > **Items**.
2. Click the plus sign **+** button in the toolbar to create a new item.
   The new item appears at the top of the tree.
3. Right-click the item and select **Property Palette**.
4. In the Property Palette **General** section **Name** field, enter **IMG_IMAGE_ID**.
5. In the **Item Type** field, select **Text Item**.
6. In **Subclass Information**, click the button to the right of the blank field.
   The Subclass Information window opens.
7. Select **Property Class** and click **OK**.
   The Subclass Information window closes.
8. In the Property Palette **Data** section **Maximum Length** field, enter **240**.
9. In the Property Palette **Database** section **Database Item** field, select **No**.
10. Close the Property Palette.

Step 4: Edit the ON-INSERT trigger

1. In the **Object Navigator**, expand **SFXIISIM** > **Data Blocks** > **INVOICES_FOLDER** > **Triggers** and select **ON-INSERT**.
2. Right-click and select **PL/SQL Editor**.

3. Add the following code after the call to INVOICES_FOLDER.INSERT_ROW:

```
IF :INVOICES_FOLDER.IMG_IMAGE_ID IS NOT NULL THEN
 APPCORE_CUSTOM.EVENT('INTERFACE-INVOICE-IMAGE-ASSOCIATED');
END IF;
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 5: Edit the KEY-DUPREC trigger

1. In the **Object Navigator**, expand **SFXIISIM** > **Data Blocks** > **INVOICES_FOLDER** > **Triggers** and select **KEY-DUPREC**.
2. Right-click and select **PL/SQL Editor**.
3. Replace the existing text with the following:

```
--invoices_folder.key_duprec;
Declare
 cur_image_id Varchar2(240);
Begin
 cur_image_id:=:invoices_folder.img_image_id;
 invoices_folder.key_duprec;
 :invoices_folder.img_image_id:=cur_image_id;
End;
```

4. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 6: Create the WHEN-WINDOW-ACTIVATED trigger

1. In the **Object Navigator**, expand **SFXIISIM** and select **Triggers**.
2. Click the plus sign **+** button in the toolbar to create a new trigger.
   A list of trigger names appears.
3. In the list, select **WHEN-WINDOW-ACTIVATED** and click **OK**.
   The PL/SQL Editor opens.
4. Replace the existing code with:

```
default_value(null, 'global.mvoa_open_opening_work_item');
if :GLOBAL.MVOA_OPEN_OPENING_WORK_ITEM = 'Y' then
 clear_block(no_validate);
end if;
APPCORE_CUSTOM.EVENT('MVOA-WHEN-WINDOW-ACTIVATED');
```

5. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 7: Edit the WHEN-NEW-FORM-INSTANCE trigger

1. In the **Object Navigator**, expand **SFXIISIM** > **Triggers** and select **WHEN-NEW-FORM-INSTANCE**.
2. Right-click and select **PL/SQL Editor**.
3. Comment out the following line:

```
--EXECUTE_TRIGGER('QUERY_FIND');
```

4. Add the following line:

```
set_window_property('INVOICES_FOLDER_WINDOW', title, 'MarkView Quick Invoices');
```

5. For Oracle R12: Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 8: Edit the SOURCE_DSP item

1. In the **Object Navigator**, expand **SFXIISIM** > **Data Blocks** > **QF_ INVOICES** > **Items** and select **SOURCE_DSP**.
2. Right-click the item and select **Property Palette**.
3. In the **Data** section, set **Required** to **No**.
4. Close the Property Palette.

Step 9: Edit the GROUP_ID item

1. In the **Object Navigator**, expand **SFXIISIM** > **Data Blocks** > **QF_ INVOICES** > **Items** and select **GROUP_ID**.
2. Right-click the item and select **Property Palette**.
3. In the **Data** section, set **Required** to **No**.
4. Close the Property Palette.

Step 10: Edit the Query Data Source Name

1. In the **Object Navigator**, expand **SFXIISIM** > **Data Blocks** and select **INVOICES_FOLDER**.
2. Right-click and select **Property Palette**.
3. In the **Database** section, set **Query Data Source Name** to **MVCN_AP_INVOICES_INTERFACE_V**.
4. Close the Property Palette.

Step 11: Edit PRE_UPDATE, LOCK_ROW, and UPDATE_ROW procedures for Oracle EBS 12.x

Oracle enhancements to APXIISIM and party_site_id in now enable you to create two invoices with the same invoice number, vendor, and vendor_site_id.

If you applied the Oracle patches, edit the PRE_UPDATE, LOCK_ROW, and UPDATE_ROW procedures to configure MarkView to support the enhancements. If you are not sure whether or not you applied the patches, follow these instructions; if the text of your PRE_UPDATE, LOCK_ROW, and UPDATE_ROW procedures do not match those in a particular step, skip that step.

1. In the **Object Navigator**, expand **SFXIISIM** > **Program Units**.
2. Right-click **INVOICES_FOLDER_EVENT (Package Body)** and select **PL/SQL Editor**.
3. Edit the PRE_UPDATE procedure:
   a. In the PRE_UPDATE procedure, locate the ap_invoices_interface section:

```
  select count(1)
  into   x_cnt_inv_int
  from   ap_invoices_interface
  where  invoice_num = :invoices_folder.invoice_num
  and    vendor_id = :invoices_folder.vendor_id
and (party_site_id = :invoices_folder.party_site_id
/*Bug9105666*/
OR (party_site_id is null and :invoices_folder.party_site_id is
null)) /*Bug9105666*/
```

If the PRE_UPDATE procedure does not include these lines, continue at step 4.

b. Edit these lines:

```
and (party_site_id = :invoices_folder.party_site_id
/*Bug9105666*/
OR (party_site_id is null and :invoices_folder.party_site_id is
null)) /*Bug9105666*/
```

- To allow the same invoice number for another vendor_site_id, replace those lines with:

```
and  (vendor_site_id = :invoices_folder.vendor_site_id /*Bug9105666*/
        OR (vendor_site_id is null and :invoices_folder.vendor_site_id is
 null)) /*Bug9105666*/
```

- To prevent the same invoice number from being used twice for the same vendor, comment out the lines.

4. Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.
5. Right-click **INVOICES_FOLDER_EVENT_LOCK (Package Body)** and select **PL/SQL Editor**.
6. Edit the **INVOICES_FOLDER_EVENT_LOCK.**LOCK_ROW procedure:
   a. Locate the LOCK_ROW procedure.
   b. If the following line appears in the LOCK_ROW procedure, comment out the line:

```
x_party_site_id => :invoices_folder.party_site_id
      /*Bug 16361548*/
```

7. Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.
8. Right-click **INVOICES_FOLDER_EVENT_UPDATE (Package Body)** and select **PL/SQL Editor**.
9. Edit the **INVOICES_FOLDER_EVENT_UPDATE.**UPDATE_ROW procedure:
   a. Locate the UPDATE_ROW procedure.
   b. If the following line appears in the UPDATE_ROW procedure, comment out the line:

```
x_party_site_id => :invoices_folder.party_site_id
      /*Bug 16361548*/
```

10. Click **Program** > **Compile PL/SQL** > **Incremental** and close the window.

Step 12: Edit INVOICES_CONTENT

1. In the **Object Navigator**, expand **SFXIISIM** > **Canvases** and select **INVOICES_CONTENT**.
2. Right-click and select **Layout Editor**.
3. Right-click **Save and Next** in the lower right corner of the form to open the **Property Palette**.
4. In the **Functional** section, set **Enabled** to **No**.
5. In the **Physical** section, set **Visible** to **No**.
6. Close the **Property Palette**.
7. Close **INVOICES_CONTENT**.

Step 13: Save your changes

1. In the **Object Navigator**, select **File** > **Save** to save SFXIISIM.
2. Close Oracle Forms Builder.
3. Navigate to `$c_MARKVIEW_TOP/forms/US`.
4. Using Oracle Forms generator, issue the following command to compile the form into an .fmx file, substituting the appropriate userid information.

   These commands must be run on a single line. If you cut and paste from this guide, remove any line breaks.

   For Oracle R12:

   ```
   frmcmp userid=apps/apps-pw@connectstring module=$c_MARKVIEW_TOP/forms/US/
   SFXIISIM.fmb module_type=FORM compile_all=YES
   ```

   The compiled form is now at `$c_MARKVIEW_TOP/forms/US/SFXIISIM.fmx`.

   MarkView has encountered problems when compiling forms in some versions of **Forms Builder**. Compile from the command line to safeguard against these problems.

Synchronize the run and patch file systems (Oracle EBS 12.2 only)

Follow these steps if you are integrating MarkView with Oracle E-Business Suite 12.2 or higher.

Proceed to one of the following procedures to synchronize the MarkView files between the run and patch file systems:

- Synchronize the MarkView files using adop phase=fs_clone command

  The file systems synchronization with `adop phase=fs_clone` command requires a large amount of free disk space to be available for adop operations. The synchronization procedure is time-consuming. For more information about space requirements, refer to the Oracle documentation.
- Synchronize the MarkView files using custom synchronization driver (for UNIX only)

  This procedure requires less time and disk space compared to the synchronization using `adop phase=fs_clone`.

Synchronize the MarkView files using adop phase=fs_clone command

If you configured Oracle Forms or applied any changes to the Oracle Forms, do the following:

1. Before synchronizing the run and patch file systems, verify that no patching cycle is currently active.

   For example, from a UNIX shell, run the following command:

   ```
   $ adop -status
   ```

2. To propagate the changes to the secondary file system, run the following command:

   ```
    $ adop phase=fs_clone
   ```

`adop phase=fs_clone` command recreates the patch edition file system as an exact copy of the run edition file system.

3. For more information about using the Oracle adop (the AD Online Patching) utility, refer to the Oracle adop utility documentation.

Synchronize the MarkView files using custom synchronization driver (for UNIX only)

If you configured Oracle Forms or applied any changes to the Oracle Forms, do the following:

1. Before synchronizing the run and patch file systems, verify that no patching cycle is currently active.

   For example, from a UNIX shell, run the following command:

   ```
   $ adop -status
   ```

2. In `<distribution_directory>\installer\tools`, locate the copy_mv_objects.sh shell script,

   where <distribution_directory> is the location where you downloaded and decompressed the installation files.

3. Copy copy_mv_objects.sh to: `$APPL_TOP_NE/ad/custom/`

   Verify that the copied script has the **Execute** permissions.

4. In `$APPL_TOP_NE/ad/custom/adop_sync.drv`, add the following line between `#Begin Customization` and `#End Customization`:

   ```
   sh %s_ne_base%/EBSapps/appl/ad/custom/copy_mv_objects.sh
         %s_current_base% %s_other_base%
   ```

   Next time you start a new patching cycle with the `adop phase=prepare` command, the MarkView files will be synchronized between the file systems.

The files will be automatically synchronized between the file systems each time you start a new patching cycle with the `adop phase=prepare` command.

If you do not want to propagate any subsequent changes in the MarkView files (for example, temporary changes in the customized Oracle Forms) from the run file system to the patch file system, comment out the added line in `$APPL_TOP_NE/ad/custom/adop_sync.drv` to stop synchronization.

Chapter 10

Capture and Output modules

MarkView Capture and Output modules control how documents enter into and are output from the MarkView system. MarkView requires at least one Capture and Output module. You can install Capture and Output components at the same time or separately.

For more information about the MarkView Capture and Output modules, see the following documents on the Kofax MarkView Product Documentation site:

- *Kofax MarkView Planning Guide*
- *Kofax MarkView Technical Specifications*.

Each Capture and Output component has its own installer. You can choose modules to install and run their installers:

- MVBarcodeServer.Installer forMarkView Bar Code Server
- sfMailService.Installer for MarkView Mail Gateway
- MVImport.Installer forMarkView Import Server
- MVDataExport.Installer for MarkView Data Export Server.

About installing Data Export Server for Kofax Transformation Modules

The Data Export Server provides data from Oracle and MarkView to Kofax Transformation Modules for validation and is required for MarkView AP.

Install the Data Export Server on all machines running Kofax Transformation Modules.

Before you start

Install MarkView Application Server and Database components before you install any Capture and Output module. For more information, see Run the MarkView installer on page 59.

Download and extract the installer and Verify files

Download the compressed MarkView System setup files from the Kofax Fulfillment Site.

To access the files:

1. Log in as the local administrator for the operating system for the Windows Capture and Output server.
2. Create a temporary distribution directory for the compressed MarkView installer file, for example, `C:\mvcodist`.
3. Download the following file into the distribution directory:
   KofaxMarkView-<version_number>_Capture_Output.zip
4. Extract the file.

   The built-in ZIP utilities in certain versions of Windows have issues with lengthy directory paths. Use a third-party extraction utility if your directory paths are more than 200 characters long.

Install Oracle Database 19c Client (19.3) for Microsoft Windows

For the Oracle Data Access Components supported, see "Required Third-Party Technologies" in the *Kofax MarkView Technical Specifications* document. Look at the table and select between the 32-bit or 64-bit version.

If you plan to integrate with Kofax Capture and Kofax Transformation Modules on Windows Server 2019, complete the following procedure.

1. Install Oracle Database 19c Client (19.x) (ODAC).
   a. Run the installer.
   b. Select the **Custom** installation type.
   c. On the **Available Product Components** page, select the following components.
      - Oracle ODBC Driver.
      - Oracle Provider for OLE DB.
      - Oracle Data Provider for .NET.
   d. Install the product.
2. If you installed ODAC Xcopy version, register Oracle.DataAccess.dll in the GAC by running the following commands:

```
OraProvCfg.exe /action:gac /providerpath:<oracle_client>\odp.net\bin
\4\Oracle.DataAccess.dll
OraProvCfg.exe /action:config /force /product:odp /frameworkversion:v4.0.30319
/providerpath:<oracle_client>\odp.net\bin\4\Oracle.DataAccess.dll
```

3. If you installed ODAC Xcopy version and you encounter problems with database connectivity, run the following commands to register Oracle products in the GAC manually.

```
cd <oracle_client>\odp.net\bin\4
```

```
OraProvCfg.exe /action:ungac /providerpath:<oracle_client>\odp.net\bin
\4\Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy
\4\Policy.4.112.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
```

```
/providerpath:<oracle_client>\odp.net\PublisherPolicy
\4\Policy.4.121.Oracle.DataAccess.dll
```

```
cd <oracle_client>\odp.net\bin\4
```

```
OraProvCfg.exe /action:gac /providerpath:<oracle_client>odp.net\bin
\4\Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy
\4\Policy.4.112.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy
\4\Policy.4.121.Oracle.DataAccess.dll
```

```
cd <oracle_client>\odp.net\bin\2.x
```

```
OraProvCfg.exe /action:ungac /providerpath:<oracle_client>\odp.net\bin\2.x
\Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.102.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.111.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.112.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.121.Oracle.DataAccess.dll
```

```
cd <oracle_client>\odp.net\bin\2.x
```

```
OraProvCfg.exe /action:gac /providerpath:<oracle_client>\odp.net\bin\2.x
\Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.102.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.111.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.112.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.121.Oracle.DataAccess.dll
```

Where `<oracle_client>` is the Oracle Database 19c Client installation folder.

Some Windows folders (such as `C:\Users\<USER NAME>`) may be protected and have permission restrictions.
Folder location values that contain spaces must be enclosed in double quotation marks. Example: `"C:\oracle client\network\admin"`.

Customize the tnsnames.ora file

Your tnsnames.ora file is an Oracle DBMS file that specifies the names and locations of your databases. MarkView uses the information to communicate with the database. A template tnsnames.ora file is installed with the Oracle components.

Edit the template tnsnames.ora file to:

- Refer to the correct databases
- Contain the name and location of your Oracle DBMS

Edit tnsnames.ora for each instance of ODAC installed on your system.

Bar Code and Mail Gateway prerequisites

Kofax VirtualReScan (VRS) includes a bar code reader. Determine whether you need to install VRS separately:

- If you are installing Bar Code Server on a system with Kofax Capture, you do not need to install VRS separately. VRS is installed silently as part of all Kofax Capture installations.
- If you are installing Bar Code Server on a system without Kofax Capture, install VRS. See the *Kofax VirtualReScan (VRS) Installation Guide* for information about installing VRS. For a list of supported versions, see the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site.

Install Capture and Output modules

Install each Capture and Output module separately.

1. Log in as the local administrator for the operating system for the Windows Capture and Output server.
2. Navigate to `<distribution_directory>` and run one of the available installers: MVBarcodeServer.Installer.msi, MVDataExport.Installer.msi, MVImport.Installer.msi, or sfMailService.Installer.msi.
3. Follow the prompts to install the components you selected.
4. Run another component installer that you need.

Configure Capture and Output modules

Installing any of the Capture and Output modules creates a default unconfigured service named DB1. It also places configuration shortcuts on the desktop. Complete the steps in the following sections to configure Capture and Output modules.

Configure Data Export Server

Follow these steps to configure newly installed instances of Data Export Server. Upgrades to existing instances of Data Export Server do not require reconfiguring.

1. Double-click the **MV Data Export Server - Configuration** shortcut on your desktop.
2. Enter an instance **Name** that identifies the function that the instance will perform, such as Contacts, and click **OK**.
3. Select the instance and click **Preferences**.
4. In the MarkView Data Export Server Preferences window, provide the following:
   - **Database user**: The MarkView schema user
   - **Database password**: The password for the MarkView schema user
   - **Database host**: The TNS alias name that was configured in the TNS names file (such as tnsnames.ora) for the database instance of the MarkView schema
5. In the **Data Function** list, select the data function for the instance.

Data Function	Description
Get Vendor	Provides vendor information to Kofax Transformation Modules Validation for selecting valid vendors/vendor sites to associate with invoices. Each record in this data feed is a Supplier Site, so you might have multiple records for Suppliers with multiple Sites. Provides the following values for each vendor/vendor site: Company Active/Inactive Enabled/Disabled Organization Name/Org Short Name Supplier Site Code Street Name Street 2 Street 3 City Name State Zip Phone Fax Supplier ID Supplier Site ID Org ID Tax ID 1 (VAT Registration Number) Tax ID2 Bank Code Bank Account IBAN
Get Contacts	Provides contact information to Kofax Transformation Modules Validation for associating contacts with invoices. Provides the following values for each invoice approver. • Last Name • First Name • User ID Each invoice approver must have an email address configured for use with MarkView.
Get Organizations	Provides organization information to Kofax Transformation Modules Validation for associating valid organizations with invoices. This data is derived from Organizations configured in MarkView; it is not the full list of Organizations defined in Oracle Applications. Provides the following values for each organization:

Data Function	Description
	ORGID ORGNAME ADDRESSLINE1 ADDRESSLINE2 CITY REGION POSTALCODE COUNTRY BASECURRENCY
Get Purchase Order Numbers	Provides purchase order information to Kofax Transformation Modules Validation UI for associating valid purchase orders with invoices. Provides the following values for each purchase order: • Purchase Order # • PO Type (Blanket or Standard) • Release Number (for Blanket POs only)
Generate Tax Regime Feed	Provides tax Regime information for Oracle EBS 12.x (data available is specific to the Org of the invoice)
Generate Tax Feed	Provides tax code information for Oracle EBS 12.x (data available is specific to the Org and Tax Regime of the invoice)
Generate Tax Jurisdiction Feed	Provides the Tax Jurisdiction information for Oracle EBS 12.x (data available is specific to the Org, Tax Regime, and Tax of the invoice)
Generate Tax Status Feed	Provides the Tax Status information for Oracle EBS 12.x (data available is specific to the Org, Tax Regime, and Tax of the invoice)
Other	Provides custom information for use in the Validation UI.

When you select a data function, MarkView populates the following fields:

- **Output folder**
- **Output file**
- **XSL Transform**

6. Ensure that the **Output** folder points to the location of the Kofax Transformation Modules project file. The default is `C:\KTM\MarkView\KTM Source Files\Databases`.
7. Set the database polling interval and the connection retry interval, then click **OK**.
8. Repeat these steps for the remaining functions: Contacts, Vendors, Purchase Orders, and Organizations.
9. Open the **Windows Service Manager**.
10. Specify the startup type (automatic or manual) as follows:
    a. Right-click the MarkView service name.
    b. Select **Properties**.
    c. In the **Startup Type** list, select **Automatic** or **Manual**.
11. If your configuration requires access to network resources requiring authentication:
    a. Right-click the MarkView service name.
    b. Select **Properties**.
    c. Select the **Log On** tab.
    d. Log in as a user with access to the network resources.

Configure Bar Code Server and Mail Gateway

Configure Bar Code Server

Follow the steps in this section to configure the Bar Code Server source and Bar Code Server Instances.

Configure the Bar Code Server source

Configure a Kofax VirtualReScan (VRS) file import scan source and set that source as the default. The process to use depends on your VRS version. Use the following procedure as a guideline. See the *Kofax VirtualReScan (VRS) User Guide* for information.

1. Open the VRS configuration tool, the Scanner Configurator.
2. If a **Kofax Software Import Source (no image processing)** appears in the list of configured sources, remove it.
3. Configure a file import scan source.
4. Set the source you create as the default.

Configure the Bar Code Server instances

To create a new instance or modify DB1:

1. Double-click the **MarkView Bar Code Server Configuration** shortcut on the desktop.
2. In the **Bar Code Server** window, either:
   - Click **New** to create a new instance.
   - Click **Preferences** to edit DB1.

   The **Bar Code** window opens.
3. Enter the name (either a new instance name or DB1), and click **OK**.
   The Preferences window opens.
4. Enter the following information to complete the window fields:

Control	Description
Server Name	The name of the bar code server as defined in MarkView Administration. Default: DEFAULT_BARCODE_SERVER
DbAccount	The name associated with the MarkView schema user.
DbPassword	The password associated with the MarkView schema user.
DbHost	The name of the Oracle host database defined in the Oracle TNS file.
MVAccount	The MarkView User ID of a user defined in MarkView Administration with privileges to download files from the Document Server, such as ADMIN.
MVPassword	The password associated with the MVAccount.
WorkStation	The workstation serial number that, in conjunction with database preferences, selects the protocol used to save and retrieve documents. Default: WEB_CLIENT

Control	Description
Polling Period	The number of seconds that the server instance waits when checking for new bar code requests. The server processes bar code requests found in the queue until none are left. It then waits the duration of the polling period before checking again. Default: 10
Reconnect after error	The number of minutes that the server instance waits before retrying a failed bar code request.
Include in event log	Event log option to record errors only, or to record errors and information messages.

5. Click **Save**.
   The default service DB1 is set up with a startup type of Manual. To take advantage of Windows services features, set the startup type of the new instance to **Automatic**.
6. Click **Test** to validate the server name, workstation name, and database connectivity.
7. Click **OK** to clear the success window. If the **MarkView Bar Code Properties** window does not open automatically:
   a. Click **Bar Code Settings**.
   b. Click **OK** to close the **MarkView Bar Code Properties** window without making any changes.

   Do not alter the settings in the **MarkView Bar Code Properties** window unless instructed to do so by Kofax Technical Support.

Configure Mail Gateway

To open the Mail Gateway window and configure server instances, double-click the **MarkView Process Mail Gateway Configuration** shortcut on your desktop.

Configure the instance

1. Open MarkView Mail Gateway and click either
   - **New**
     OR:
   - **Preferences**.
2. Enter a new instance name and click **OK**.
   The **Preferences** window, which includes five tabs, opens.
3. Complete the fields on each tab as described in the sections that follow.
   Configuration settings take effect the next time you start the service.

Configure monitoring options

The Monitoring tab settings specify which accounts to monitor and how often.

1. Set the following information to complete the tab.

Field Name	Description
Process Outbound Messages	Select this option to monitor and process outbound mail messages.
Process Inbound Messages	Select this option to monitor and process inbound mail messages.
Polling Period (seconds)	Set this value to the number of seconds to wait before checking for new messages. Mail Gateway processes any messages it finds until none remain to process. The gateway waits the duration of the polling period before checking again. Default: 60

2. To continue, do one of the following:
   - Select another tab.
   - Click **OK** to confirm your selections and close the window.

   Configuration settings take affect the next time you start the service.

Configure error options

The Error tab settings specify the actions that Mail Gateway takes in response to errors.

1. Set the following information to complete the tab.

Field Name	Description
Reconnect on Errors	Select this option to have Mail Gateway periodically attempt to reconnect at the retry interval specified. Otherwise, Mail Gateway remains disconnected on errors and stops the service. Mail Gateway automatically disconnects from the database and the mail system when a database or a mail error occurs.
Error Retry Period (minutes)	The number of minutes to wait between retry attempts when reconnecting. Default: 1

2. To continue, do one of the following:
   - Select another tab.
   - Click **OK** to confirm your selections and close the window.

   Configuration settings take affect the next time you start the service.

Configure MarkView process options

The MarkView tab specifies which settings to use to connect to the database and the database objects to use to process outbound message.

1. Enter the following information to complete the tab.

Field Name	Description
Username	The name of the database account.
Password	The password associated with the database account.
Host	The name of the host database as defined in the TNS file.

Field Name	Description
User ID	**SQLFLOW_MAIL** This is the user account created to connect to the system for processing inbound and outbound messages.
Application Function	**SQL*Flow Mail Gateway** This is the application function created to retrieve work items for processing outbound messages.
Completed Action	**Sent Outbound Email** This is the action created to retrieve work items for processing outbound messages.
Work Item Class	**Outbound Email Message** This is the work item class created for outbound messages.

2. Click **Test** to validate database connectivity.
3. To continue, do one of the following:
   - Select another tab.
   - Click **OK** to confirm your selections and close the window.

   Configuration settings take effect the next time you start the service.

Configure mail options

Mail tab settings specify which options the gateway uses to send and receive email.

1. Select a protocol which determines the available options.
2. Complete the tabs for your outbound protocol.

SMTP Outbound Protocol Options

Field or checkbox	Value
Protocol	SMTP
SSL	Enable to use SSL on authentication.
Server	Enter the host name or IP address of the SMTP server or servers to use, such as SMTP.KOFAX.COM. To allow Mail Gateway to try multiple mail servers in case of failures, use a semicolon to delimit a list of servers.
Port	Enter the TCP/IP port on which to communicate with the SMTP server. Default: 25
Enable authentication	Select if your SMTP server requires authentication.
Enable OAuth	Select to use OAuth credentials to authenticate without password. To configure OAuth credentials, click **OAuth Credentials**. The credentials set saved as default is automatically applied for any protocol with OAuth authentication enabled. Register Mail Gateway on your OAuth provider site. When you enable OAuth, the password is no longer used to access the mailbox, although it remains unchanged.

Field or checkbox	Value
Timeout	Specify how many seconds Mail Gateway waits for a response from the server before returning an error. Default: 30
Username	If you selected a type of authentication, enter the name of the account to use to access the SMTP server.
Password	If you selected a type of authentication, enter the password for the Username account that accesses the SMTP server.

MAPI Outbound Protocol Options

Field or checkbox	Value
Server	The host name or IP address of the MAPI server or servers to use. To allow Mail Gateway to try multiple mail servers in case of failures, use semicolons to delimit a list of servers.
Username	If the MAPI client requires a user name, enter a user name. The Microsoft Exchange Inbox client does not require a user name.
Password	If the MAPI client requires a password, enter a password. The Microsoft Exchange Inbox client does not require a password.

3. Click **Test Connection** to verify your settings.
4. Complete the tabs for your inbound protocol.

POP Inbound Protocol Options

Field or checkbox	Value
Protocol	POP
SSL	Enable to use SSL on authentication.
Server	Enter the host name or IP address of the POP3 server to use.
Port	Enter the TCP/IP port on which to communicate with the POP3 server. Default: 110
Timeout	Specify how many seconds Mail Gateway waits for a response from the server before returning an error. Default: 30
Preferred Format	Select the message format to use. Some inbound mail messages may contain the same message in both text and HTML formats.
Enable OAuth	Select to use OAuth to authenticate without password. To configure OAuth credentials, click **OAuth Credentials**. The credentials set saved as default is automatically applied for any protocol with OAuth authentication enabled. Register Mail Gateway on your OAuth provider site. When you enable OAuth, the password is no longer used to access the mailbox, although it remains unchanged.

Field or checkbox	Value
Username	Enter the name of the account to use to access the POP3 server.
Password	Enter the password for the user name account that accesses the POP3 server.
Mailbox	Select the folder. The field is disabled for the POP3 server. Default: Inbox

MAPI Inbound Protocol Options

Field	Value
Server	If you use the Microsoft Exchange Inbox client, enter the name of the Profile you created when you configured the Microsoft Exchange Inbox client For other MAPI clients, see the client documentation.
Username	If the MAPI client requires a user name, enter a user name. The Microsoft Exchange Inbox client does not require a user name.
Password	If the MAPI client requires a password, enter a password. The Microsoft Exchange Inbox client does not require a password.

IMAP Inbound Protocol Options

Field or checkbox	Value
Protocol	IMAP
SSL	Enable to use SSL on authentication.
Server	Enter the host name or IP address of the IMAP server to use.
Port	Enter the TCP/IP port on which to communicate with the IMAP server. Default: 143
Enable OAuth	Select to use OAuth to authenticate without password. To configure OAuth credentials, click **OAuth Credentials**. The credentials set saved as default is automatically applied for any protocol with OAuth authentication enabled. Register Mail Gateway on your OAuth provider site. When you enable OAuth, the password is no longer used to access the mailbox, although it remains unchanged.
Timeout	Specify how many seconds Mail Gateway waits for a response from the server before returning an error. Default: 30
Preferred Format	Select the message format to use. Some inbound mail messages may contain the same message in both text and HTML formats.
Username	Enter the name of the account to use to access the IMAP server.
Password	Enter the password for the user name account that accesses the IMAP server.

Field or checkbox	Value
Mailbox	Select the folder. Default: Inbox

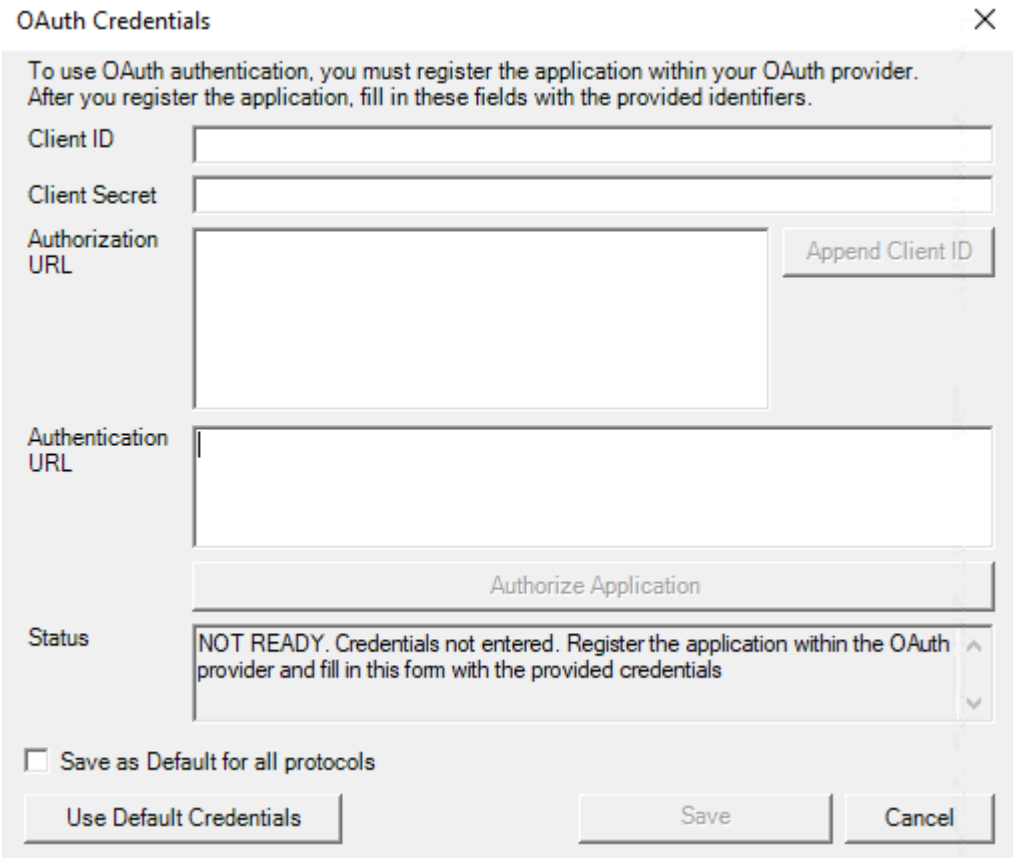
5. Click **Test Connection** to perform connection with the current settings.
6. Click **OK** to confirm your selections and close the window.

For the configuration settings to take affect, restart the service.

Configure OAuth credentials

To use OAuth credentials, you must register Mail Gateway on your OAuth provider site, such as Google Developer Console. This is required to enable the application to access your email account without the password. If you experience troubles with registering the application on the OAuth provider site, contact the OAuth provider customer service.

We recommend that you create all instances of Mail Gateway before saving OAuth credentials.



OAuth Credentials UI elements

UI element	Value
Client ID	The identifier provided to an application during the registration on the OAuth provider site. **Example:** Google Client ID: `1072099888437-8q5k7u2ibf1m7r3m3v9lg6j2qgb6h6oj.apps.googleusercontent.com` Microsoft Client ID: `ba98929d-45ec-4cbd-91af-0ad6f4416fb9`
Client Secret	The secret code received from the OAuth provider. This code is specific for an application. Some providers do not use a client secret, so the field may be left empty in such a case.
Authorization URL	The URL of the page that a user enters manually to grant access rights to the registered application. This URL should contain the Client ID parameter to enable the "Authorize application" button. **Example:** Google Authorization URL: `https://accounts.google.com/o/oauth2/auth?scope=https%3A%2F%2Fmail.google.com&redirect_uri=urn:ietf:wg:oauth:2.0:oob&response_type=code` Microsoft Authorization URL: `https://login.microsoftonline.com/6f8c8d80-c6d3-4b33-b30a-f45fda35bca5/oauth2/v2.0/authorize?response_type=code&redirect_uri=https%3A%2F%2Flogin.microsoftonline.com%2Fcommon%2Foauth2%2Fnativeclient&response_mode=query&scope=offline_access%20https%3A%2F%2Foutlook.office.com%2FIMAP.AccessAsUser.All&state=12345&client_id=aef27fc4-7763-465e-8152-cfd3b6fb604b`
Append Client ID	Click to add your Client ID to the Authorization URL.
Authentication URL	The URL that the application uses to perform authentication for operations in the service mode. In the Authentication URL, the values for parameters "scope" and "redirect_uri" should correspond to the values in the Authorization URL. **Example:** Google Authentication URL: `https://accounts.google.com/o/oauth2/token?scope=https%3A%2F%2Fmail.google.com&redirect_uri=urn:ietf:wg:oauth:2.0:oob` Microsoft Authentication URL: `https://login.microsoftonline.com/6f8c8d80-c6d3-4b33-b30a-f45fda35bca5/oauth2/v2.0/token?scope=offline_access%20https%3A%2F%2Foutlook.office.com%2FSMTP.Send%20User.Read&redirect_uri=https%3A%2F%2Flogin.microsoftonline.com%2Fcommon%2Foauth2%2Fnativeclient`

UI element	Value
Authorize Application	Click to perform the provider authorization and get the access tokens. The access tokens represent the authorization of an application to access specific parts of a user's data. After you click the button, the Authorize Application window appears. Then, the system default browser window appears prompting to authorize the application and providing the authorization code. The code is shown on the interactive page or is given as a value of the URL parameter after the OAuth provider redirects you to the new page. Copy the code without parameters (if any) and paste it in the **Authorize Application** window. Then click **Submit** to pass the code to Mail Gateway. **Example:** In this example, the code is in bold. `login.microsoftonline.com/common/oauth2/nativeclient?code=`**`0.AX0AgI2Mb9PGM0uzCvRf2jW8pZ2SmLrsRb1Mka8K1vRBb7mcAAAAgABAAIAAAAmoFfGtYxvRrNriQdPKIZ`**`&state=12345&session_state=286eff1d-cf79-4172-8a74-2ba4e3e2ab79`
Status	The text in the Status field is self-adjusting depending on the values in other fields. For example, once the authorization code is submitted, the Status field text is changed. • READY: The access tokens are received successfully. The OAuth credentials can be used to connect to the mail service. • NOT READY: Read the proceeding message to troubleshoot the issue. The OAuth credentials set cannot be saved.
Save as Default for all protocols	Select to share the same tokens among several Mail Gateway instances. When selected, the current tokens are accessible for every Mail Gateway instance. If you select "Save as Default for all protocols," you rewrite the default credentials for all protocols. All previously configured protocols remain unchanged, but their OAuth settings are no longer default.
Use Default Credentials	Click to insert the default settings into the OAuth Credentials window fields.
Save	Click to store the access tokens.
Cancel	Click to discard changes.

Once you save the OAuth credentials, the window is closed and the connection starts using the access tokens. To verify the configuration, click **Test Connection** on the mail configuration tab.

Configure logging options

The Log tab settings specify the types of messages that appear in the Event Log:

- Errors
- Errors and Warnings (Default)
- Errors, Warnings, and Normal Messages

To continue, do one of the following:

- Select another tab.
- Click **OK** to confirm your selections and close the window.

Configuration settings take affect the next time you start the service.

Configure Microsoft Outlook with MAPI protocol for Mail Gateway

If you use the MAPI protocol and use Microsoft Outlook as your MAPI client for Mail Gateway, disable the Outlook Email Security Update option in Microsoft Outlook. The security update prevents Microsoft Outlook from operating as a MAPI client through a Windows NT Service. The Outlook Email Security Update is built into Outlook 2002 and higher and is an optional update to older versions of Outlook.

Configure Mail Gateway to support invoice approval and rejection by email

Configuration settings take affect the next time you start the service.

Set up the Outbound instance

1. Double-click the **MarkView Process Mail Gateway Configuration** shortcut on your desktop.
2. In the **MV Mail Gateway** window, create a new **OUTBOUND** instance and click **Preferences**.
3. Click the **Monitoring** tab and do the following:
   a. Enable **Process Outbound Messages**.
   b. Clear **Process Inbound Message**.
   c. Set the Polling Period (seconds) to **30**.
4. Click the **MarkView** tab and complete the Database fields, for example:
   - Username: markview
   - Password: markview
   - Host: r4ebsr12.vis01

   Where r4ebsr12.vis01 is a TNS name in the TNSNAMES.ORA file for the database connection.
5. Click **Test** to verify your connection.
6. On the MarkView tab, complete the MarkView Process fields, for example:
   - User ID: SQLFLOW_MAIL
   - Application Function: SQL*Flow Mail Gateway
   - Completed Action: Sent Outbound Email
   - Work Item Class: Outbound Email Message
7. Click the **Mail** tab and complete the Outbound section, for example:
   - Protocol: SMTP
   - SSL: (if needed)
   - Server: smtp.kofax.com
   - Port: 25
   - Enable authentication: (if needed)
   - Timeout: (if needed)

- Username: (if needed for authentication)
- Password: (if needed for authentication)

8. Click **Test Connection** to verify your settings.
9. Click **OK**.

Set up the Inbound instance

1. Double-click the **MarkView Process Mail Gateway Configuration** shortcut on your desktop.
2. In the **MV Mail Gateway** window, create an **INBOUND** instance and click **Preferences**.
3. Click the **Monitoring** tab and do the following:
   a. Clear **Process Outbound Messages**.
   b. Enable **Process Inbound Message**.
   c. Set the Polling Period (seconds) to **30**.
   d. Click **Test** to verify your connection to the host server.
4. Click the **MarkView** tab and complete the Database fields as follows:
   - Username: markview
   - Password: markview
   - Host: r4ebsr12.vis01
5. Click **Test** to verify your connection.
6. On the **MarkView** tab, complete the MarkView Process fields, for example:
   - User ID: SQLFLOW_MAIL
   - Application Function: SQL*Flow Mail Gateway
   - Completed Action: Sent Inbound Email
   - Work Item Class: Inbound Email Message
7. Click the **Mail** tab and complete the Inbound section, for example:
   - Protocol: IMAP
   - SSL: (if needed)
   - Server: imap.gmail.com
   - Port: 25
   - Enable authentication: (if needed)
   - Preferred format: Text
   - Username: chorton@gmail.com
   - Password: ********
   - Mailbox: Inbox
8. Click **Test Connection** to verify your settings.
9. Click **OK**.

Enable the feature in MarkView

Once you set up Mail Gateway to support invoice approval and rejection by email, complete the following task in MarkView Administration.

1. Log in to MarkView and navigate to **Administration** > **MarkView Admin**.

2. Select the **Preferences** tab.
3. Locate and change the settings for the following preferences:
   - MVAP_CONTROL_EMAIL_ADDRESS: Enter an SMTP email address. This is the email address from which Mail Gateway sends approval and rejection emails.
   - MVAP_ENABLE_APPROVAL_REJECTION_EMAIL: Set to **TRUE**.
   - MVAP_ENABLE_SUCCESS_MESSAGE: Set to **TRUE**.

Configure Capture and Output services

1. After installation, open the **Windows Service Manager**.
2. Specify the startup type (automatic or manual) as follows:
   a. Right-click the MarkView service name.
   b. Select **Properties**.
   c. In the **Startup Type** list, select **Automatic** or **Manual**.
3. If your Capture and Output configuration requires access to network resources requiring authentication:
   a. Right-click the MarkView service name.
   b. Select **Properties**.
   c. Select the **Log On** tab.
   d. Log in as a user with access to the network resources.

Add SSL certificate to Windows (for SSL only)

Skip this section if you do not use SSL to provide secure web communications for the application server.

If you have a self-signed certificate for the application server, add the certificate to **Trusted Root Certification Authorities** of the Windows Computer account or user account.

If you have any other certificate received from the certificate authority, add all root and intermediate certificates from the certification chain to **Trusted Root Certification Authorities** of the Windows Computer account or user account.

1. Start the **mmc** console.
2. On the **File** menu, click **Add/Remove Snap-in**.
3. In the **Available snap-ins** list, select **Certificates** and click **Add**.
4. Select the account and expand **Certificates**.
5. Expand **Trusted Root Certification Authorities** and click **Certificates**.
6. Right-click the list on the right and, on the context menu, select **All Tasks**.
7. Click **Import** to import the certificates and follow the steps in the Certificate Import Wizard.

Troubleshoot Capture and Output configuration utilities

Windows Security settings may cause issues when running the Capture and Output configuration utilities. If you see errors when you run a configuration utility, right-click the desktop shortcut for the utility, select the **Compatibility** tab, and select **Run as Administrator** to set the access-level permanently.

Chapter 11

Configure MarkView for Accounts Payable

To configure MarkView for Accounts Payable:

- Configure the Oracle Payables Open Interface import job to move data from the AP Invoice Interface tables to the AP Invoice tables. See Configure the Oracle Payables Open Interface Import job.
- Add organizations to MarkView. See Add organizations to MarkView.
- Add users to user groups associated with organizations. Either configure AUSS to assign MarkView users to user groups associated with organizations (see Set up MarkView users with AUSS on page 119) or add the users manually (see the *Kofax MarkView Administrator's Guide, Volume 1*.) Ensure that every MarkView user has a corresponding Oracle HR record with a valid email address. Users without email addresses cannot participate in MarkView workflows.
- Configure an optional default GL account to create dummy lines on a Non-PO Invoice. See Configure default GL accounts for organizations.
- Set system preferences for email senders. See Set email addresses for system alerts on page 136.
- Complete additional setup for Oracle systems. See Perform additional setup in Oracle on page 139.

Configure the Oracle Payables Open Interface Import job

Configure the Oracle Payables Open Interface Import job to move data from the AP Invoice Interface tables to the AP Invoice tables.

The Payables Open Interface Import job creates the invoices in the Oracle AP Invoice tables after Kofax MarkView Export Connector has prepared the invoice and image data. This concurrent request can be submitted as a single or recurring request. For MarkView, the key parameters for this Payables Open Interface Import concurrent request are:

- Source: MarkView Connector
- Hold Name: 170_SYSTEMS_HOLD
- Hold Reason: 170_SYSTEMS_HOLD

The Hold Name was configured during the installation of MarkView. The default is 170_SYSTEMS_HOLD. Your hold name may be different. It is also stored as the value of the MarkView preference MVAP_170_MARKVIEW_HOLD.

When configuring and scheduling the Payables Open Interface Import, configure the import to apply the 170_SYSTEMS_HOLD during the process. Doing so guarantees that MarkView immediately applies the hold to each imported invoice. The hold remains in place until all workflow actions are completed and the invoice is ready for payment. Applying the hold prevents an imported invoice from circumventing the workflow if a system component malfunctions.

For information about configuring Oracle Payables Open Interface Import jobs, see the Oracle documentation.

Add organizations to MarkView

When you add organizations to MarkView, the records populate the Oracle Org ID list from which you select approval organizations when setting up approval hierarchies. For more information about approval hierarchy administration, see the *Kofax MarkView Administrator's Guide, Volume 1*.

Required configuration tasks

To add organizations to MarkView:

1. Add organizations defined in Oracle to MarkView. Optionally, you can change from the default configuration values.

   (Optional) Although not required to set up organizations in MarkView, adding Sub Types (if you use them) when you add organizations simplifies the required task of assigning MarkView users (see the *MarkView Administrator's Guide*).
2. Assign MarkView users to the user group associated with an organization. By convention, the name is “MVERP - Org”, where Org is the unique organization Short Name. For example, for an organization named VISOP, the user group name is MVERP - VISOP.

   Although you can manually assign MarkView users, running AUSS may overwrite the manual assignments. For more information, see Set up MarkView users with AUSS.

Prerequisites

Before adding organizations to MarkView, verify the following:

- MarkView for Accounts Payable is installed.
- If using Expense Management, MarkView for Expense Management is installed.
- Organizations exist in Oracle for the organizations being set up in MarkView.
- In Oracle:
  - Responsibilities are set up and configured to access organizations.
  - Users are assigned to these responsibilities.
- Oracle Forms are set up (part of MarkView post-installation).

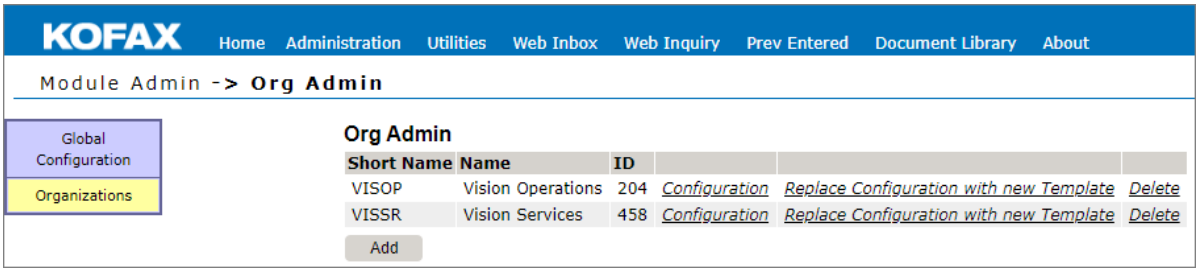
Before adding and configuring organizations in MarkView, set up default GL accounts in Oracle. Configure a default GL account for an organization, which is used to create dummy lines on a Non-

PO Invoice when it is created in Oracle. For more information, see the Kofax MarkView Installation or Upgrade Guides.

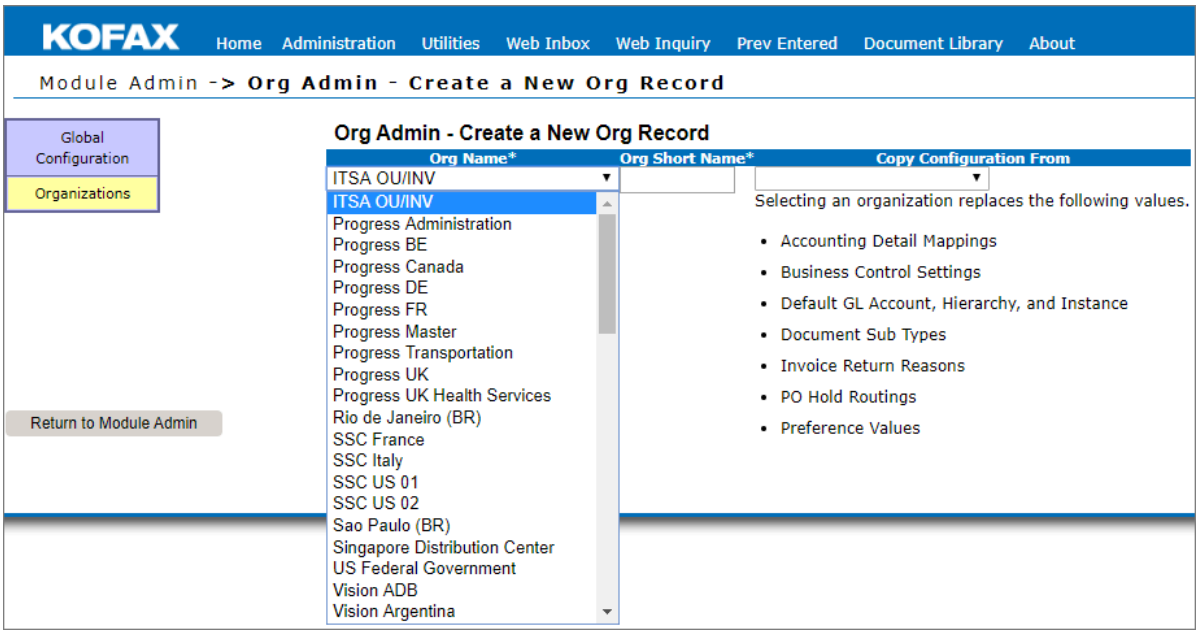
Add an organization to MarkView

When you add an organization to MarkView, MarkView creates a new MarkView User Group that includes authorization to the new organization.

1. Log in to MarkView and navigate to **Administration** > **Module Admin**.
2. Select the **Organizations** tab.
   The Org Admin window opens.



3. Click **Add.**
   The **Org Admin - Create a New Org Record** form appears.



4. In the **Org Name** list, select the organization to add.

> You cannot add an organization that is not defined in Oracle.

5. Enter a new **Org Short Name** or accept the default **Org Short Name**, which MarkView populates with the name specified in Oracle. (If you use lowercase letters, MarkView converts them to uppercase.)
   MarkView uses the Org Short Name to more efficiently retrieve information. An **Organization Name** can have up to 260 characters with spaces and special characters, whereas the **Org Short Name** is limited to 8 alphanumeric characters with no spaces.
6. (Optional) To use the configuration of an existing organization as the configuration for the new organization, select an organization under **Copy Configuration From**.
   For example, if your shared service center has 15 organizations that will follow the same workflow processes and have the same Sub Types, you can fully define and configure one organization and copy that configuration to the other 14 when you add them to MarkView.
7. Click **Insert**.

After you add an organization, MarkView creates a MarkView User Group and associates the group with the organization. MarkView adds the organization to the Org ID list from which you select approval organizations when setting up approval hierarchies. For more information about organizations, see the Setting Up Organizations section of the *Kofax MarkView Administrator's Guide, Volume 1*.

Add users to user groups associated with organizations

After adding an organization to MarkView, add users to user groups associated with organizations. Either configure AUSS to assign MarkView users to user groups associated with organizations (see Set up MarkView users with AUSS on page 119) or add the users manually (see the *Kofax MarkView Administrator's Guide*.)

Configure default GL accounts for organizations

If you did not use an existing organization as a template, enter a valid default GL account number:

1. Log in to MarkView and navigate to **Administration** > **Module Admin**.
2. Select the **Organizations** tab.
3. Click **Configuration** on the new organization line.
   The **Preferences** window for the organization opens.
4. On the menu on the left, click **GL Account, Hierarchy, and Instance**.
5. Click **Update**.
   The **Update GL Account, Hierarchy, and Instance** window for the organization opens.
6. Enter the **Default GL Account**.
7. Click **Update**.

Set up MarkView users with AUSS

Automated User Setup and Synchronization (AUSS) maps user Source System Groups to corresponding MarkView Groups and Roles through MarkView Profiles. This mapping provides MarkView users with privileges required for the tasks they perform in MarkView. Thus, AUSS leverages user information from Oracle E-Business Suite or Microsoft Active Directory Service without requiring an administrator to manually recreate it in MarkView per each Source System

user. You can also use MarkView Profiles to add users to default user groups associated with organizations.

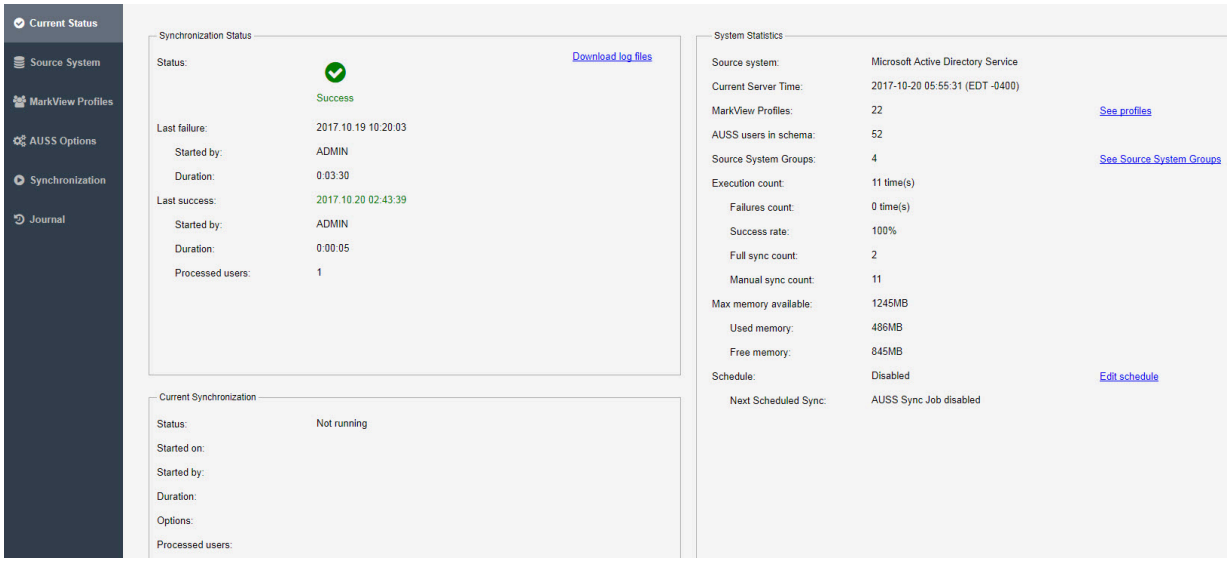
When integrated with Oracle Source System, ensure that the users to be synchronized have a valid email address in their Oracle HR record. Oracle users without email addresses cannot participate in MarkView workflows. The user must have an entry in the FND_USER and PER_ALL_PEOPLE_F tables in the Oracle APPS database schema. The FND_USER and PER_ALL_PEOPLE_F tables are joined by the EMPLOYEE_ID and PERSON_ID fields.

The following table contains terms and definitions used in AUSS.

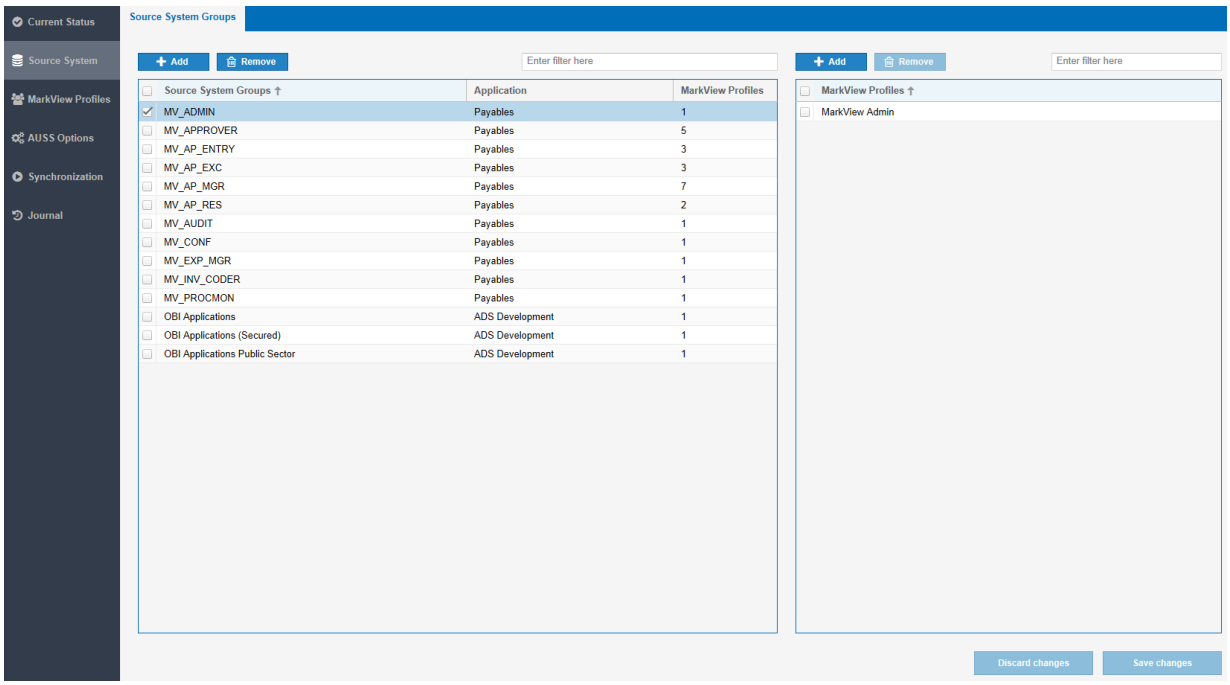
Term	Description
Source System	The system from which AUSS loads user information into MarkView. Your options are Oracle E-Business Suite (Oracle) and Microsoft Active Directory Service (Active Directory).
Source System Group	The AUSS term for Oracle Application Responsibilities and Active Directory Groups.
MarkView Profile	The profile that maps the Source System Groups to MarkView Groups and MarkView Roles.
MarkView Group	The group that determines user access to MarkView documents and related privileges in MarkView.
MarkView Role	Workflow functions the user can access.
Oracle Application Responsibility	The Oracle Source System Group to which an AUSS administrator maps MarkView Profiles.
Active Directory Group	The group in the Active Directory server to which an AUSS administrator maps. The users in Active Directory are members of security groups.
LDAP Search Filters	Search filters that select the entries on the LDAP server to be returned for a search operation.
LDAP Attributes Mapping	Mapping of LDAP user attributes to MarkView user attributes. Set Active Directory Attributes to manage Active Directory filter results.
Manually created MarkView user	A user created in MarkView by a MarkView administrator.
Source System user	A user in the Source System. If the user is synchronized, an account of the same user name is created/updated in MarkView.
AUSS managed user	Such MarkView user that is subject to synchronization: has or had at least one assignment to the Source System Groups added in AUSS setup.
Full synchronization	AUSS conducts a complete comparison of user accounts in the Source System and MarkView.
Initial synchronization	AUSS conducts a first-time full synchronization during which user information is transferred from the Source System to MarkView.
Incremental synchronization	AUSS looks for changes only since the previous synchronization.

AUSS interface

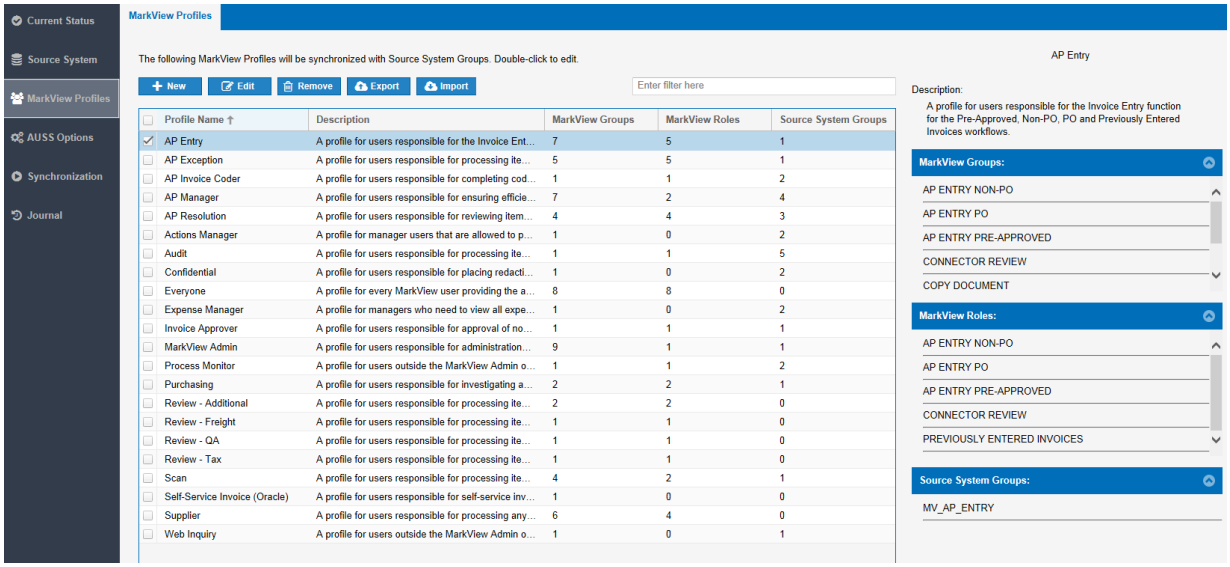
- **Current Status**: Displays the current AUSS status on near real-time basis. The visual refresh occurs every 10 seconds. See Current Status.



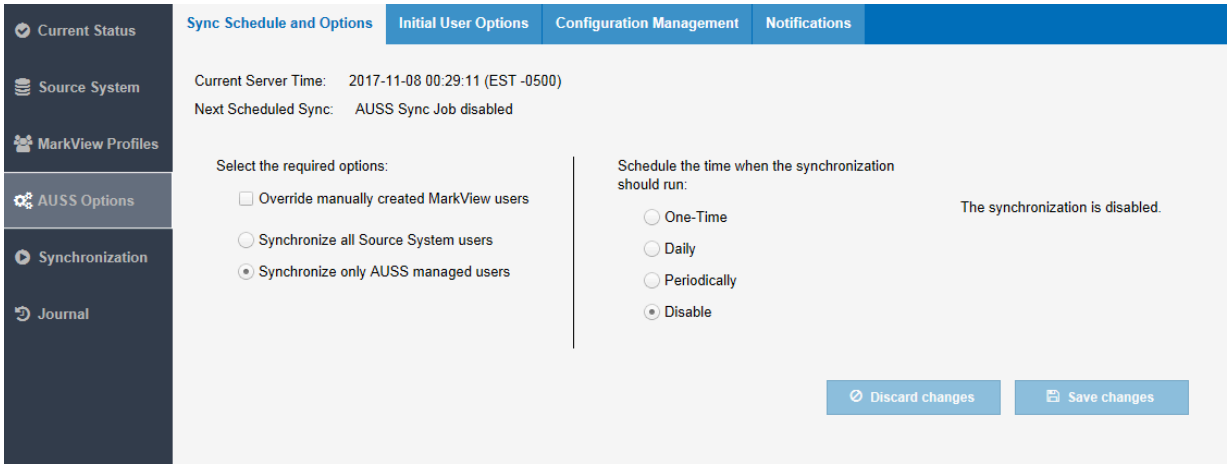
- **Source System**: Accesses Source System Groups information for both Active Directory and Oracle. If you use Active Directory as a source system, Source System also displays the Active Directory Connection tab, LDAP Search Filters, and LDAP Attributes Mapping. See Source System.



- **MarkView Profiles**: Lists available MarkView Profiles. See for a list of the default profiles. See MarkView Profiles for information about adding, editing, importing and exporting profiles.

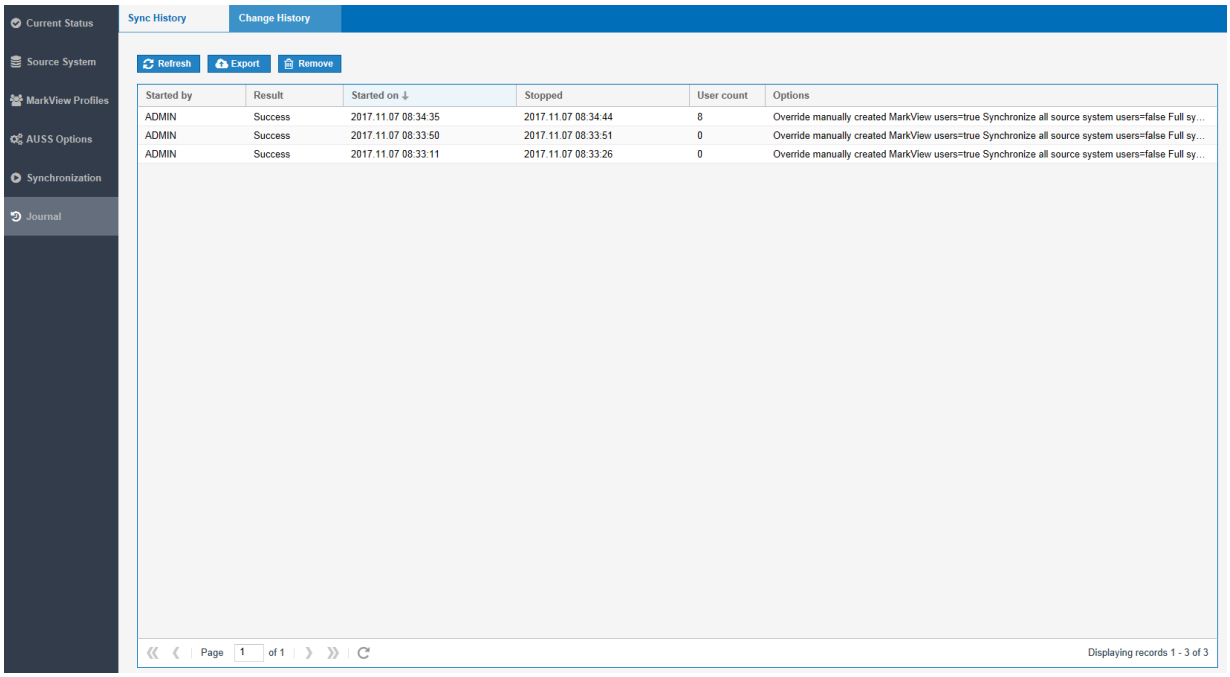


- **AUSS Options**: Opens the window in which you can set up synchronization schedules, set passwords, create backup files, configure notifications, and set up queues. See AUSS Options.



- **Synchronization**: Enables manual synchronization of user information between AUSS and the Source System. See Synchronization.

- **Journal**: Displays the synchronization process history and changes. See Journal for information about the Journal tab.



Active Directory source system connection information

If you select Active Directory as a source system, you will need to specify the LDAP data.

Use this list as a reference for all fill-in fields in the **Source System** tab for Active Directory.

Field	Description
Active Directory Connection	

Field	Description
LDAP connection URL	`<protocol>://<host>:<port>/<root>` Where: <protocol> is the LDAP protocol, such as ldap or ldaps <host> is the LDAP server name or IP address <port> is the LDAP server port to which AUSS connects. Default: 389 <root> is the root entry of the LDAP server you are connecting to, such as dc=AUSS,dc=local
User name	LDAP admin user DN (Distinguished Name), such as CN=Administrator, DC=local
Password	LDAP admin user password
LDAP Search Filters	
User base DN(s)	The base Distinguished Name (DN) subtree that is used when searching for user entries on the LDAP server.
User search filter	Filter string for objectclasses required by AUSS: (objectClass=person)
Group base DN(s)	The base Distinguished Name (DN) subtree that is used when searching for group entries on the LDAP server.
Group search filter	Filter string for objectclasses required by AUSS: (objectClass=group)
LDAP Attributes Mapping (Objects such as Last Name are described by LDAP attributes. MarkView uses Attributes to filter Active Directory users for AUSS.)	
User name	LDAP user attribute for Common Name (CN) or logon account name (sAMAccountName)
First name	LDAP user attribute for first name (givenName)
Last name	LDAP user attribute for last name (SN)
Email	LDAP user attribute for email address (mail)
Source group	LDAP user attribute for user group (memberOf)

Run the MarkView AUSS Setup Wizard

1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration**.
   The **MarkView AUSS Setup Wizard** opens.
2. Follow the prompts of the **MarkView AUSS Setup Wizard**.
3. If you have the AUSS configuration backup file, click the corresponding link to upload it.
   With this file, you upload the information about your source system settings, initial user options, MarkView profiles, synchronization schedule, and notifications. When prompted to select the source system, continue with the previously used source system.
   For Active Directory Source System, the backup file fills in the source system connection information fields automatically.
4. For Active Directory Source System only: After you fill in the source system connection information fields (see Active Directory source system connection information), click **Test connection**.
   - If you see an error message, verify if the field settings are correct.

- If the test is successful, click **Next** and then apply changes.

5. Review the steps to complete the configuration and click **Go to AUSS Home**.

Configure AUSS

Run the MarkView AUSS Setup Wizard and perform the following tasks to configure AUSS:

1. Configure the source system as described in Source System.
2. Set up the user options. Navigate to **AUSS Options** > **Initial User Options** and follow the instructions in Initial User Options.
3. Configure MarkView Profiles as described in MarkView Profiles.
4. Set up the synchronization schedule. Navigate to **AUSS Options** > **Sync Schedule and Options** and follow the instructions in Synchronization schedule and options.
5. If you want to run the first synchronization manually, see Synchronize for the first time.

Source System

Select the source system that you use to supply user data and follow the required configuration procedure:

- Microsoft Active Directory Service source system
- Oracle E-Business Suite source system

Microsoft Active Directory Service source system

If you use the Active Directory source system, see Active Directory source system connection information for the source system connection details.

1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration**.
2. On the **Source System** tab, open **Active Directory Connection**, enter or verify the LDAP connection information, and click **Test connection**.
   - If you see an error message, confirm the field settings.
   - If the test is successful, click **Save changes**.
3. Open **LDAP Search Filters**, configure the LDAP search filters using the context sensitive help, and click **Check filter**.
   - If you see an error message, confirm the field settings.
   - If the test is successful, the search results are displayed.
   - Click **Save changes**.
4. Open **LDAP Attribute Mapping**, type a user personal information and a source group, and click **Check mapping**.
   - If you see an error message, confirm the field settings.
   - If the test is successful, click **Save changes**.
5. Use **Source System Groups** to limit the scope of AUSS users by selecting specific groups from the user's Source Systems.
   AUSS allows mapping of the selected groups in Source System with MarkView Profile.

Oracle E-Business Suite source system

If you use the Oracle E-Business Suite source system, add Source System Groups.

1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration**.
2. On the **Source System Groups** tab, click **Add** Source Groups.
3. In the **Application** drop-down list, select an application. Available Source Groups are listed.
4. To find a specific source group on the list, in the **Filter** field, start typing the name.
5. Select Source System Groups that contain MarkView users and click **Add selected**.
6. Optionally you can remove a previously added Source System Group. In the list, select the Source System Group and click **Remove**.
7. To apply the changes, click **Save changes**.

Initial User Options

Use the **Initial User Options** tab to configure the default setup for all synchronized users.

1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration**.
2. On the **AUSS Options** tab, click **Initial User Options**.
3. Change the default **Initial user password**, if required.
4. Select **Print queue** and **Export queue** assigned for work item processing.
5. Click **Save changes**.

MarkView Profiles

The MarkView Profiles screen displays MarkView profiles with configured MarkView Groups and Roles.

Use the MarkView Profiles tab to review a brief description of the selected MarkView Profile with the list and the count of associated MarkView Groups, MarkView Roles, and Source System Groups.

You can add, delete, or edit profiles. Select a profile to add Source System Groups, MarkView Groups, and MarkView Roles and to map multiple groups from User Source Systems to MarkView Groups and MarkView Roles.

Create or edit a profile

Edit the existing profiles or create new profiles and map MarkView Groups, Roles, and Source Groups before you import users.

1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration**.
2. On the **MarkView Profiles** tab:
   - To add a profile, click **New**.
   - To edit a profile, select the profile and click **Edit** or double-click the profile.
3. To create a new profile, enter the **Profile Name** and **Profile Description** and add at least one MarkView group or role.
4. Select MarkView Groups:
   a. On the **MarkView Groups** tab, click **Add**.

The Select MarkView Groups window opens.

b. To find a specific group on the list, in the **Filter** field, start typing the name.

c. Click **Add selected**.

5. (Optional) Select **Auto-populate** MarkView Roles based on MarkView Groups.

   When you select **Auto-populate**, MarkView Roles with the same names as the MarkView User Groups are automatically made part of this profile. However, each role name must be unique within MarkView.

6. If you did not select **Auto-populate**, select MarkView Roles now:

   a. On the **MarkView Roles** tab, click **Add**.
   The Select MarkView Roles window opens.

   b. To find a specific role on the list, in the **Filter** field, start typing the name.

   c. Click **Add selected**.

7. Click **Save changes** to save the new profile.

8. Select Source Groups:

   a. On the **Source System Groups** tab, click **Add**.
   The Select Source Groups window opens.

   b. To find a specific source group on the list, in the **Filter** field, start typing the name.

   c. Click **Add selected**.

   d. Click **Save changes** to edit the profile.

   e. To verify that the source system group is mapped to the profile, navigate to **Source System** > **Source System Groups**.

MarkView profile export and import

The AUSS Import/Export feature enables bulk updates to profile mappings. An Administrator can:

- Export selected profiles to a comma separated value file (CSV)
- Edit the CSV file.
- Import the updated CSV file into AUSS.

AUSS then processes the imported CSV file and updates the profiles.

CSV file format

The CSV file format is identical for both export and import purposes. The first line of the CSV file must be the field names in the order specified later. All fields in the CSV file are required for both importing and exporting. All field names and values, except for MarkView Group names, are case insensitive.

The following table lists the CSV file fields and their content.

Order	.csv Field Name	Field Content
1	AUSS Profile	Profile name (1–100 single-byte characters)
2	Description	Profile description (0–1000 single-byte characters)

Order	.csv Field Name	Field Content
3	Source Group	Source group name (1–100 single-byte characters)
4	Source Application	Source application name
5	Source System	Source system type (Oracle or Active Directory)
6	MarkView Group	A MarkView group name (1–200 single-byte characters)
7	MarkView Role	A MarkView role name (1–200 single-byte characters)
8	User Controllable	User controllable flag for MarkView Role (Y or N)

If a profile has multiple associated source groups or MarkView groups and roles, you can add additional rows in the CSV file to represent the one-to-many relationship of the MarkView profile to its source groups or MarkView groups and roles.

Tips for CSV files:

- Before you import or export, check your file path to ensure that you have read/write/modify access.
- Imported profiles are identified by the name.
  - If the profile name does not exist, AUSS adds the new profile name.
  - If the profile name exists, AUSS overwrites the profile information with the imported values from the CSV file including the mapping for that profile. The values in the CSV file replace the values for that profile in the database.
  - If a profile name is not in the imported CSV file, AUSS does not make any changes to that profile. Importing a CSV file does not delete any profiles.

Export profile CSV files from AUSS

You should be a user in the AUSS Mapping Administrator user group to perform this task.

1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration**.
2. On the **MarkView Profiles** tab, select the MarkView Profiles to export and click **Export**.

   If you do not select specific profiles, AUSS exports all profile data.

3. Follow the prompts to download the CSV file. Validate the path and file name to ensure that you have access to the exported file.

Edit a CSV file

1. Make a backup copy of the exported CSV file. If editing errors exist, you can reimport this backup file to revert to the pre-edited profile settings.
2. Open the exported CSV file in Microsoft Excel or a text editor.
3. Edit the profile lines.
4. Save the file as a CSV file. If you save the file in another format, you cannot import the data back into AUSS.

Import profile CSV files to AUSS

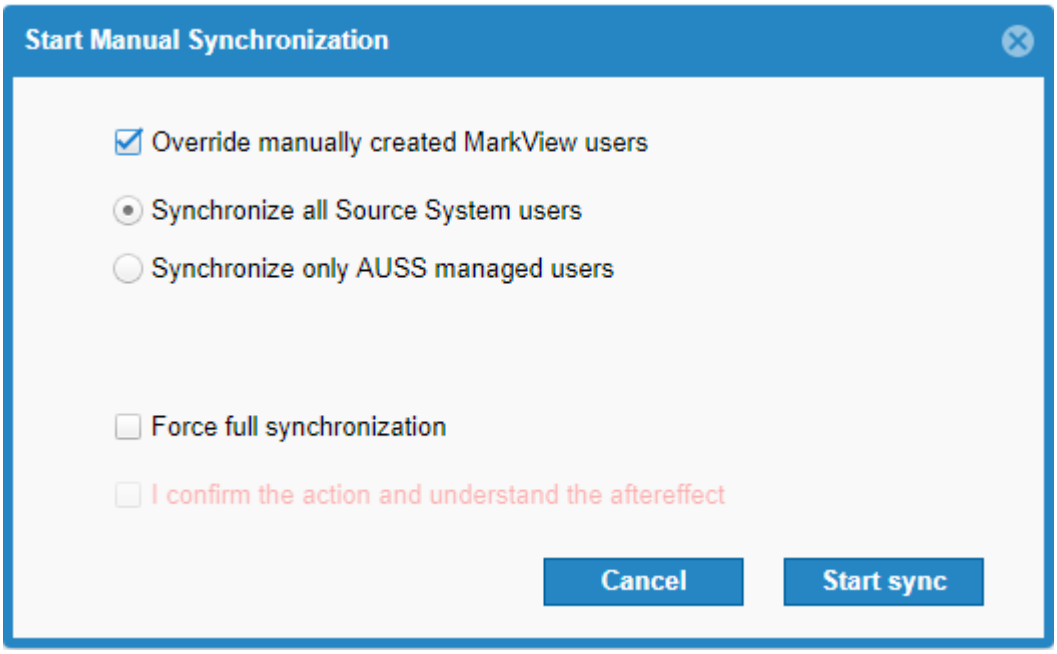
1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration** > **MarkView Profiles**.

2. Export your profile data to a backup CSV file. See #unique_252. Validate the path and file name to ensure that you can recover your backup data.
3. Click **Import** and select the CSV file to import.
4. Correct any errors reported. See Troubleshoot AUSS.
5. If no errors exist, the changes made to the CSV file appear in the MarkView Profiles.

Synchronize for the first time

To complete the initial AUSS setup, run the synchronization for the first time. Either follow manual steps in this section, or configure AUSS automatic synchronization schedule as described in Synchronization schedule and options.

1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration**.
2. Ensure that your Source System Group to MarkView Profile mappings are correct and complete.
3. On the **Synchronization** tab, click **Synchronize** to synchronize users.
   The Start Manual Synchronization window opens.



4. In the Start Manual Synchronization window, select **Override manually created MarkView users** if you want to update manually created MarkView users during AUSS synchronization.

This option determines whether to update manually created users or not. If the option is selected and there is a Source System user with the same user name as a manually created user, the MarkView user receives assignments in accordance with AUSS mappings and loses all the previous assignments that do not match AUSS mappings. Such overridden user becomes managed by AUSS in subsequent synchronizations. If the option is not enabled, AUSS does not update such users. Subsequent incremental synchronizations can also override manually created MarkView users with the option enabled, but only for the users which AUSS detects as updated since the previous synchronization.

If you will need to override manually created MarkView users at a different time later, you will be able to do it by running manual synchronization with both **Override manually created MarkView users** and **Force full synchronization** options enabled.

5. Select a synchronization method:
   - **Synchronize all Source System users**: For the first-time synchronization, adds all Source System users to MarkView even if they do not belong to any Source System Group configured in AUSS.
   - **Synchronize only AUSS managed users**: For the first-time synchronization, adds only the Source System users that belong to at least one Source System Group configured in AUSS.
6. For the initial synchronization, do not select **Force full synchronization**.
7. Click **Start sync** to start synchronization.

About using AUSS

With Kofax MarkView AUSS, you can map your Source System Group users to corresponding MarkView Groups and Roles through MarkView Profiles.

In addition to the AUSS settings specified in Configure AUSS, use the following AUSS options:

- View the information about the current AUSS state and analyze synchronization data in near real time.
- Create a backup file with the current AUSS configuration data.
- Reset AUSS configuration and revert to initial setup.
- Enable email notifications about successful or unsuccessful synchronization.
- Configure the synchronization schedule and options.
- Review the synchronization history and track changes.

Current Status

The Current Status screen displays the overview information about the current AUSS state. Select the Current Status tab to review and analyze the following near real-time data. The data updates every 10 seconds.

- **Synchronization Status**: Displays current synchronization progress including the AUSS state in general (success, failure, or unknown after the first upgrade), the date and time of last successful and unsuccessful synchronization with the synchronized users count and the duration of the process.

  If required, download log files to view the synchronization details.

- **Current Synchronization**: Displays the information about current synchronization status including the percentage value of the process completeness, the start time and duration, synchronization options, and the synchronized users count. If sync is started, a user may see the process by clicking the link View process log.

  During the synchronization process, you may view the process log.
- **System Statistics**: Displays general information about synchronization statistics including MarkView profiles count and source system groups count. Click the corresponding links to review the full list of profiles and groups. System Statistics provides the maximum memory data and the schedule details. Click **Edit schedule** to configure the synchronization schedule.

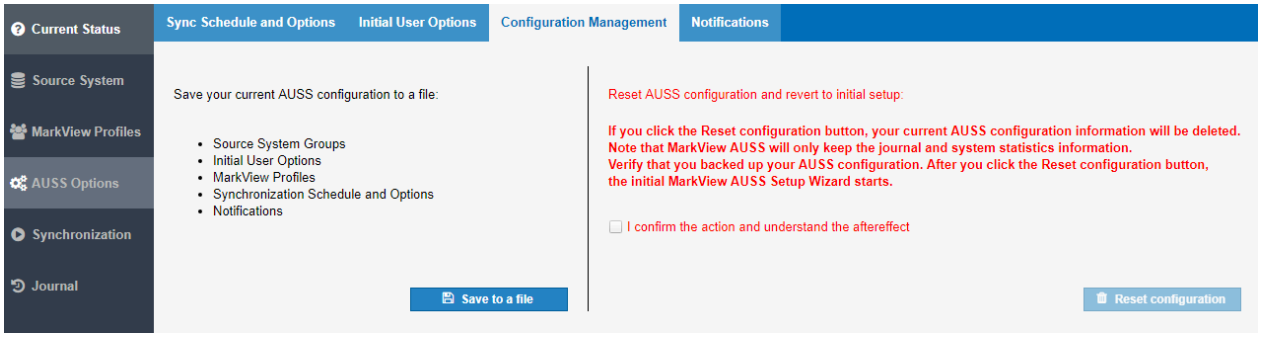
  The System Statistics information remains if you clear the configuration.

AUSS Options

Use the following additional options to set up AUSS:

- Set the initial password that users need when logging in to MarkView for the first time on the **Initial User Options** tab.
- Define print and export queues to use for AUSS.
- Enable automatic synchronization. See Synchronization schedule and options.
- Back up your current AUSS configuration or reset the configuration information.
- Configure email notifications about successful or failed jobs.

Configuration Management



In **Configuration Management**, you can create a backup file with your AUSS configuration data. Use this file if you Run the MarkView AUSS Setup Wizard.

The backup file includes the information about a source system, MarkView profiles, a synchronization schedule and options, notifications, and initial user options.

Use **Configuration Management** to delete the AUSS configuration. MarkView AUSS will only keep the Journal and System Statistics information. Before you click **Reset configuration**, verify that you backed up your current AUSS configuration.

Once you click **Reset configuration**, your Source System Groups, Initial User Options, MarkView Profiles, Synchronization Schedule and Options, and Notifications will be deleted.

After you reset the configuration, MarkView AUSS Setup Wizard starts. For details, see Run the MarkView AUSS Setup Wizard.

Notifications

Use the AUSS Notifications tab to configure email notifications that indicate if the synchronization process is a success or a failure.

To send email notifications, select **Enable the Successful Job notification** and **Enable the Failed Job notification**. Customize the email address from which notifications are sent, email recipients, email subject and content.

The **From** field is filled in automatically according to the MVFC_OUTBOUND_SMTP_USER preference value.

Do not use spaces in the **To** field for email recipients.

If you enable the Failed Job notification, you can also select the option to attach a log file that does not exceed 10 MB to the notification. After you verify the settings, save changes.

After you fill in all required fields, you may type a test email address in the **To** field and click **Verify** to receive the example of notification immediately.

Synchronization

AUSS synchronization adds new users to MarkView from the source system and updates groups and roles to which users are assigned.

The initial AUSS synchronization moves the group and user data from the source system to MarkView. AUSS assigns users to the appropriate MarkView Groups and Roles, based on MarkView Profile mappings. After running the initial synchronization, you can configure an automatic synchronization schedule to keep Source System user changes synchronized with MarkView user data and assignments. To enable automatic synchronization, see Synchronization schedule and options.

AUSS performs synchronization in one direction only: from the source system to MarkView. Do not maintain users in MarkView that you manage with AUSS. Manual changes in MarkView might be overwritten the next time you synchronize users.

If a user record is deleted in your source system, AUSS disables the MarkView user record. AUSS does not delete MarkView user records.

If the synchronization is running, the Synchronization window displays manual synchronization status, including the time when the process was started, the user who started it, the synchronization duration, options, and processed users count. The window also displays the last lines of a log file as they appear in a real-time mode. The **Synchronize one user** and **Synchronize** buttons are disabled during the synchronization. If the synchronization is not running, you may start the synchronization for a selected user or for all users with the required options.

The synchronization process varies depending on your situation:

- For the first synchronization after a new MarkView installation, see Synchronize for the first time on page 129.

- For the first synchronization after an upgrade, see Manually synchronize the source system and MarkView after initial synchronization on page 134.
- To set up periodic synchronization, see Synchronization schedule and options.

Synchronization schedule and options

Use Sync Schedule and Options to enable automatic synchronization.

1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration**.
2. On the **AUSS Options** tab, click **Sync Schedule and Options**.
3. Select the required synchronization options from the list.
   a. Select or clear **Override manually created MarkView users**.

      Scheduled synchronization searches for changes in the source system since the previous synchronization. Only users updated since the previous synchronization or users that belong to updated Source System Groups are processed during incremental synchronization and thus affected by the **Override manually created MarkView users** option. To process all Source System users and override manually created MarkView users, run manual synchronization with both the **Override manually created MarkView users** and **Force full synchronization** options enabled.

   b. Select a synchronization method:
      - **Synchronize all source system users**: Adds/modifies all Source System users that were added/updated since the previous synchronization or belong to updated Source System Groups.
      - **Synchronize only AUSS managed users**: Adds/modifies Source System users that belong to updated Source System Groups. Modifies only those updated users who already exist in MarkView. For example, if there is a new Source System user added since the previous synchronization and this user does not belong to any Source System Group managed by AUSS, then this user is not added in MarkView in this case.
4. In the synchronization schedule, select one of the following options and configure the synchronization time if required:
   - **One-Time**: In the drop-down list, select the HH:MM value that increments by 30 minutes.
     The synchronization starts in HH:MM.
   - **Daily**: In the drop-down list, select the HH:MM value that increments by 30 minutes.
     The synchronization starts every day at HH:MM.
   - **Periodically**: In the **Time interval (hours)** field, specify the time period over which the synchronization repeats.
     Select the **Starting point** field if you want to set the time of the day when the synchronization starts. The synchronization starts when the next time interval is reached.
   - **Disable**: Select to disable automatic synchronization schedule.
5. Click **Save changes** to apply the synchronization settings.

Manually synchronize the source system and MarkView after initial synchronization

To synchronize MarkView users with AUSS:

1. Log in to MarkView and navigate to **Administration** > **AUSS Mapping Administration**.
2. Ensure that your Source System Group to MarkView Profile mappings are correct and complete.
3. If you want to synchronize all users manually, navigate to **Synchronization** and click **Synchronize**.
   a. Determine whether or not to overwrite your manually created MarkView user information with user information from Active Directory or Oracle. If you select **Override manually created MarkView users**, this option replaces the MarkView user information with the Source System user information provided that the following conditions are met:
      - A user exists in both MarkView and Active Directory or Oracle
      - A user is enabled and active in the source system

      To overwrite your MarkView user information, select **Override manually created MarkView users**. The synchronization replaces the MarkView user information with the Source System user information for any user who appears in both places. Unless you select the **Force full synchronization** option, AUSS will process only users added/updated since the previous synchronization or users that belong to updated Source System Groups. The **Override manually created MarkView users** option affects only the users to be processed in the current synchronization session.

      To keep your existing MarkView user information, clear **Override manually created MarkView users**. The synchronization keeps the MarkView user information for any user who appears in both places.

   b. Select a synchronization method:
      - **Synchronize all Source System users**: Updates all users that have a valid record in the ERP system. For incremental synchronization, adds/modifies all Source System users that were added/updated since the previous synchronization or belong to updated Source System Groups. For full synchronization, adds/modifies all Source System users even if they do not belong to any Source System Group configured in AUSS.

        Full synchronization is performed initially. All subsequent synchronizations are incremental, unless you select the **Force full synchronization** option.

      - **Synchronize only AUSS managed users**: Updates only such Source System users that have at least one assignment to a Source System Group. For incremental synchronization, adds/modifies Source System users that belong to updated Source System Groups. Modifies only the updated users who already exist in MarkView. For full synchronization, adds/modifies only the Source System users that belong to at least one Source System Group configured in AUSS.

   c. Select **Force full synchronization** if required.

- If the **Force full synchronization** option is disabled, the synchronization will only capture changes since the previous synchronization. If any user information is missing and is not re-captured the next time you synchronize, use **Force full synchronization** to synchronize all the differences between the source system and MarkView according to the current AUSS settings. During the full synchronization AUSS also disables all the users who are currently inactive in the source system and removes manual assignments to groups and roles for other users.
- If you use Oracle EBS as a source system, with Role Based Access Control (RBAC) configured, incremental synchronization will not track Role Hierarchy changes correctly because Oracle EBS does not track such changes. For example, if a user has Role A and Responsibility B is connected to this role, the user will indirectly have Responsibility B and the respective record in the database. However, if Responsibility B is deleted from Role A in Role Hierarchy, the respective record for the user will not be end-dated but completely removed in Oracle EBS, so incremental synchronization will not be able to track such a change. In this case, use the **Force full synchronization** option to synchronize all the differences including indirect responsibilities deleted as a result of Role Hierarchy changes.

4. To manually synchronize a specified user, click **Synchronize one user**. If you choose this type of synchronization, the selected user will be removed from any groups and roles manually assigned in MarkView. To remove manual assignments for a MarkView-created user (a manually created user with a valid record in the ERP system), also select the **Override manually created MarkView users** option (see Step **b** below).
   a. In the **Start User Manual Synchronization** window, start typing the name of the user you want to synchronize and select the user in the drop-down list.

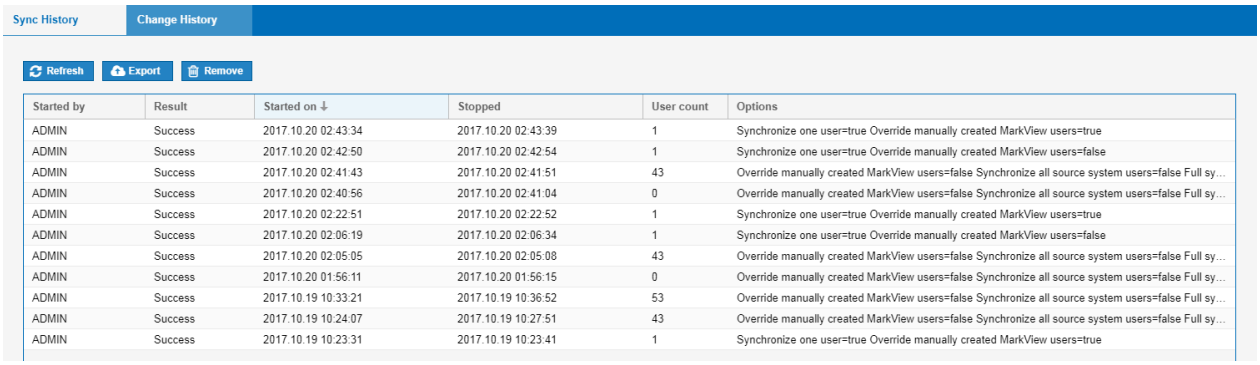
      You can only synchronize one user at a time.

   b. Determine whether or not to overwrite your manually created MarkView user information with user information from Active Directory or Oracle. If you select **Override manually created MarkView users**, this option replaces the MarkView user information with the Source System user information provided that the following conditions are met:
      - A user exists in both MarkView and Active Directory or Oracle
      - A user is enabled and active in the source system

      To overwrite your MarkView user information, select **Override manually created MarkView users**. The synchronization replaces the MarkView user information with the Source System user information for any user who appears in both places.

      To keep your existing MarkView user information, clear **Override manually created MarkView users**. The synchronization keeps the MarkView user information for any user who appears in both places.
5. Click **Start sync** to start synchronization.

Journal



Started by	Result	Started on	Stopped	User count	Options
ADMIN	Success	2017.10.20 02:43:34	2017.10.20 02:43:39	1	Synchronize one user=true Override manually created MarkView users=true
ADMIN	Success	2017.10.20 02:42:50	2017.10.20 02:42:54	1	Synchronize one user=true Override manually created MarkView users=false
ADMIN	Success	2017.10.20 02:41:43	2017.10.20 02:41:51	43	Override manually created MarkView users=false Synchronize all source system users=false Full sy...
ADMIN	Success	2017.10.20 02:40:56	2017.10.20 02:41:04	0	Override manually created MarkView users=false Synchronize all source system users=false Full sy...
ADMIN	Success	2017.10.20 02:22:51	2017.10.20 02:22:52	1	Synchronize one user=true Override manually created MarkView users=true
ADMIN	Success	2017.10.20 02:06:19	2017.10.20 02:06:34	1	Synchronize one user=true Override manually created MarkView users=false
ADMIN	Success	2017.10.20 02:05:05	2017.10.20 02:05:08	43	Override manually created MarkView users=false Synchronize all source system users=false Full sy...
ADMIN	Success	2017.10.20 01:56:11	2017.10.20 01:56:15	0	Override manually created MarkView users=false Synchronize all source system users=false Full sy...
ADMIN	Success	2017.10.19 10:33:21	2017.10.19 10:36:52	53	Override manually created MarkView users=false Synchronize all source system users=false Full sy...
ADMIN	Success	2017.10.19 10:24:07	2017.10.19 10:27:51	43	Override manually created MarkView users=false Synchronize all source system users=false Full sy...
ADMIN	Success	2017.10.19 10:23:31	2017.10.19 10:23:41	1	Synchronize one user=true Override manually created MarkView users=true

The **Journal** tab displays the synchronization history and change tracking.

The **Sync History** table includes the following data:

- **Started by**: The user who started the synchronization.
- **Result**: The actual status of the synchronization. For example, **Success**.
- **Started on**: The date and time when the synchronization started.
- **Stopped**: The date and time when the synchronization ended.
- **User count**: The number of synchronized users.
- **Options**: The synchronization method and the **Override manually created MarkView users** option selection.

Use additional **Sync History** options to refresh the page, to export the information to a XLS file, or to remove records.

The **Change History** table displays:

- **Action**: Added, Changed, or Deleted
- **Area**: The area where the change took place.
- **Element**: The item that was changed. This field can include MarkView Groups and MarkView Roles, fill-in fields in AUSS Options.
- **Old value**: If the item was added, the column is blank.
- **New value**: If the item was deleted, the column is blank.
- **User name**: The user who performed the action.
- **Date**: The date and time when the action was performed.

It may help to troubleshoot some issues. The administrator user can export the information to a XLS file.

Set email addresses for system alerts

1. Log in to MarkView and navigate to **Administration** > **Module Admin**.

2. Select **Organizations** > **Global Configuration** > **AP Settings**.
3. Click **Update**, complete the **Email Address** fields, and click **Update** again to save the information.

Prepare for mobile access

Use the following procedure as a guideline to set up your system to allow user access to MarkView Viewer through mobile devices.

1. Install and configure MarkView for Accounts Payable.
2. Contact your mobile device users and instruct them to do the following on their mobile browsers:
   a. Enable **Cookies**.
   b. Disable **Private Browsing**.

If your company uses reverse proxy for security purposes, you may need to perform additional mapping in the reverse proxy. For the mobile user to view document images, they need access to the MarkView document server.

If you mapped the proxy server on the MarkView server, you do not need to perform any additional setup.

(Optional) Information for adding a bookmark

Most users will follow a link in an email notification to access invoices in the mobile viewer. However, you might have users who want to add a bookmark to their mobile devices for easy access to their Web Inbox.

To allow users to create a bookmark, give them:

- The MarkView mobile-access URL, such as http://IP_address:port/mobile
- The host name, such as http://<host>:<port>/mobile

The URL or host name must access the MarkView application server. Access can be through wireless connection or through a VPN connected to the your network. The system setup must be able to accurately translate the server name to an IP address to allow access.

Giving users the mobile-access URL or host name is not required for mobile access. However, users need the mobile-access URL or host name to create bookmarks on their mobile devices.

Configure what appears on the mobile device

MarkView lets you control what appears when a mobile user accesses their Web Inbox or views an invoice in the viewer. Settings that you establish for viewing on a mobile device affect what appears on all mobile devices that access the system. However, the settings for mobile do not affect the settings that you establish for desktop access to the Web Inbox and viewer.

Use the following procedure as a guideline for configuring mobile devices. Details about using Module Admin appear throughout this guide, depending on what you are doing.

1. Log in to MarkView and navigate to **Administration** > **Module Admin**.
2. Continue as follows:
   - To configure what a mobile user sees in their Web Inbox, see Configure what appears in Web Inbox on page 138.
   - To configure what a mobile user sees when they view an invoices in the mobile viewer, see Configure what appears in MarkView Viewer.

Configure what appears in Web Inbox

By default, MarkView ships with a number of fields visible in Web Inbox, such as Invoice Number.

1. Log in to MarkView and navigate to **Administration** > **Module Admin**.
2. Select the **Display Type** tab.
3. Under **Name**, locate the option to make visible in the mobile Web Inbox, scroll to the **Query Page** column, and click **Show Query**.
4. Locate the line with the field name to appear, scroll to the far right, and click **Update**.
5. Under **Include in Mobile**, select Y to display the field, or select N to hide the field.
6. Under **Mobile Display Order**, enter a number to specify where in the order of fields the field will appear.
7. Click **Update**.
   When a user accesses the Web Inbox, the fields that you selected appear.

Configure what appears in MarkView Viewer

By default, MarkView ships with a number of fields associated with detail types visible when a user views an invoice in MarkView Viewer, such as the Supplier Name in the Invoice Details section.

1. Log in to MarkView and navigate to **Administration** > **Module Admin**.
2. Select the **Detail Type** tab.
3. Under **Detail Name**, locate the option to make visible in the mobile Web Inbox, scroll to the **Layout Page** column, and click **Show Layout**.
4. Locate the line with the field name to appear, scroll to the far right, and click **Update.**
5. Under **Layout Query**, click **Show Query**.
6. Locate the field name to appear, scroll to the far right, and click **Update**.
7. Under Include in Mobile, select Y to display the field or N to keep from displaying the field.
8. Under **Mobile Display Order**, enter a number to specify where in the order of fields the field will appear.
9. Click **Update**.
   When a user views an invoice in MarkView Viewer, the field containing the information that you configured appears as part of the invoice details.

Perform additional setup in Oracle

Configure the Oracle concurrent managers

Configure the Oracle concurrent managers to run a MarkView procedure as part of a RequestSet with Oracle Invoice Validation. The MarkView procedure alerts a MarkView event that causes work items to transition to the appropriate next queue in the workflow based on the status of each invoice.

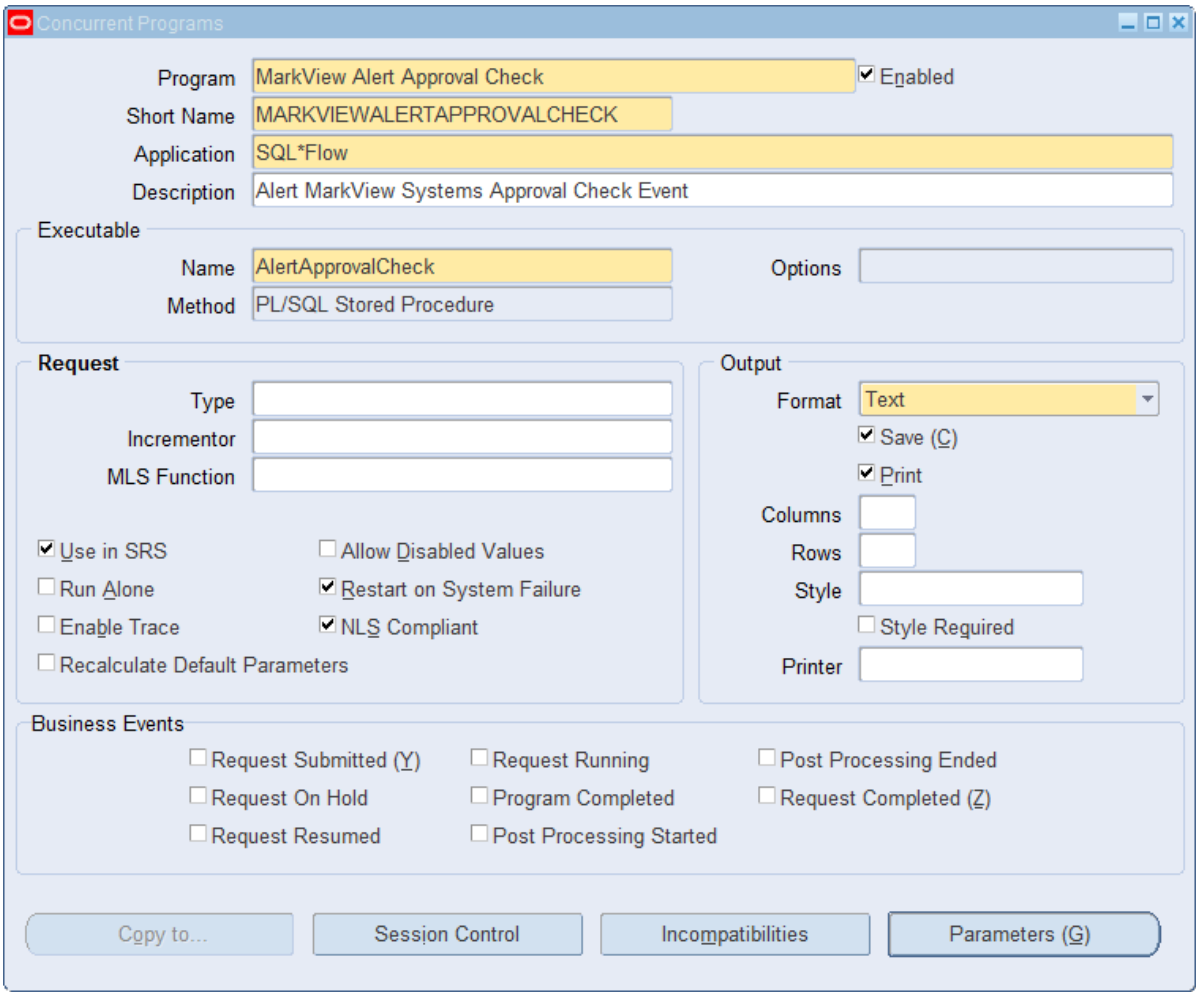
The MarkView procedure must run right after the Oracle Payables Approval request runs.

Specify Concurrent Program Executable

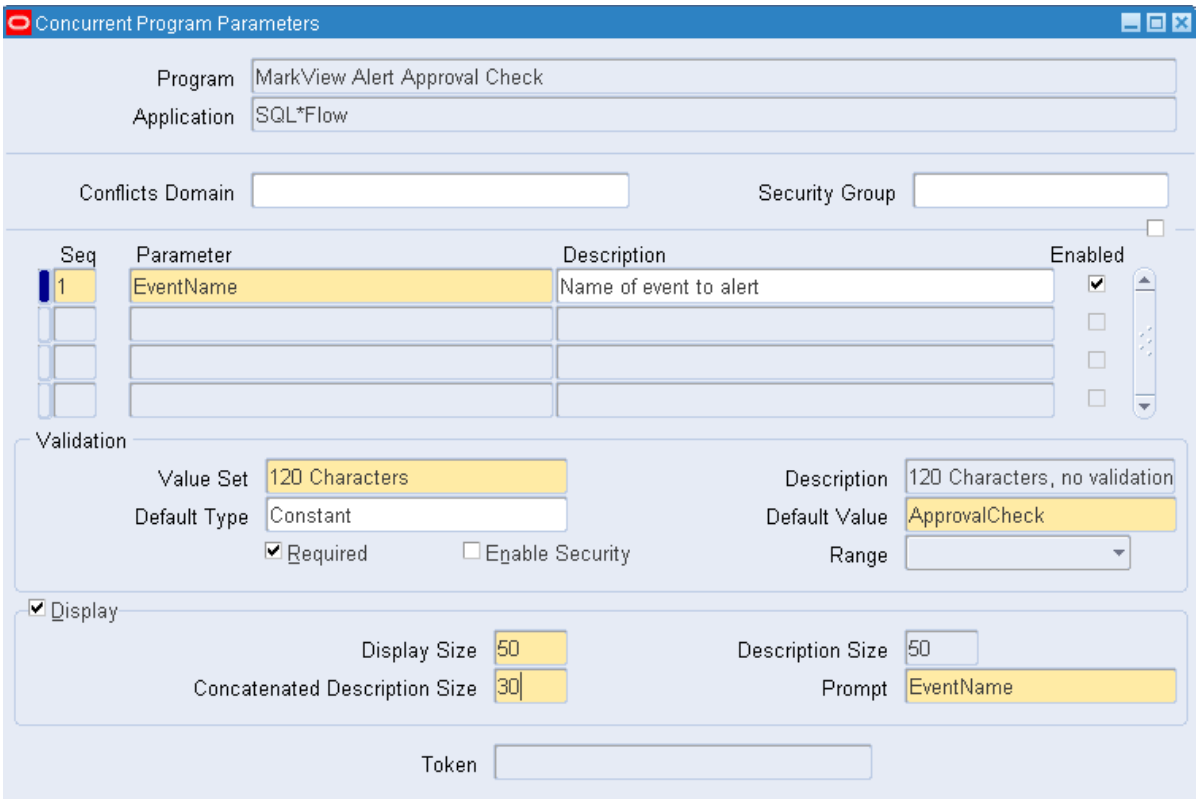
1. Log in as a user with access to Application Developer responsibility to open Oracle E-Business Suite home.
2. In the **Concurrent** category, click the **Executable** link.
   An Oracle Applications menu appears, containing a Navigator window.
3. Fill out the **Concurrent Program Executable** form:
   - **Executable:** AlertApprovalCheck
   - **Short Name:** AlertApprovalCheck
   - **Application:** SQL*Flow
   - **Description:** Alert MarkView Accounts Payable Approval Check Event
   - **Execution Method:** PL/SQL Stored Procedure
   - **Execution File Name:** mvoain_workflow_util.AlertEventFromManager
   - **Subroutine Name:** Leave blank
   - **Execution File Path:** Leave blank
4. Click **Save**.

Configure concurrent programs

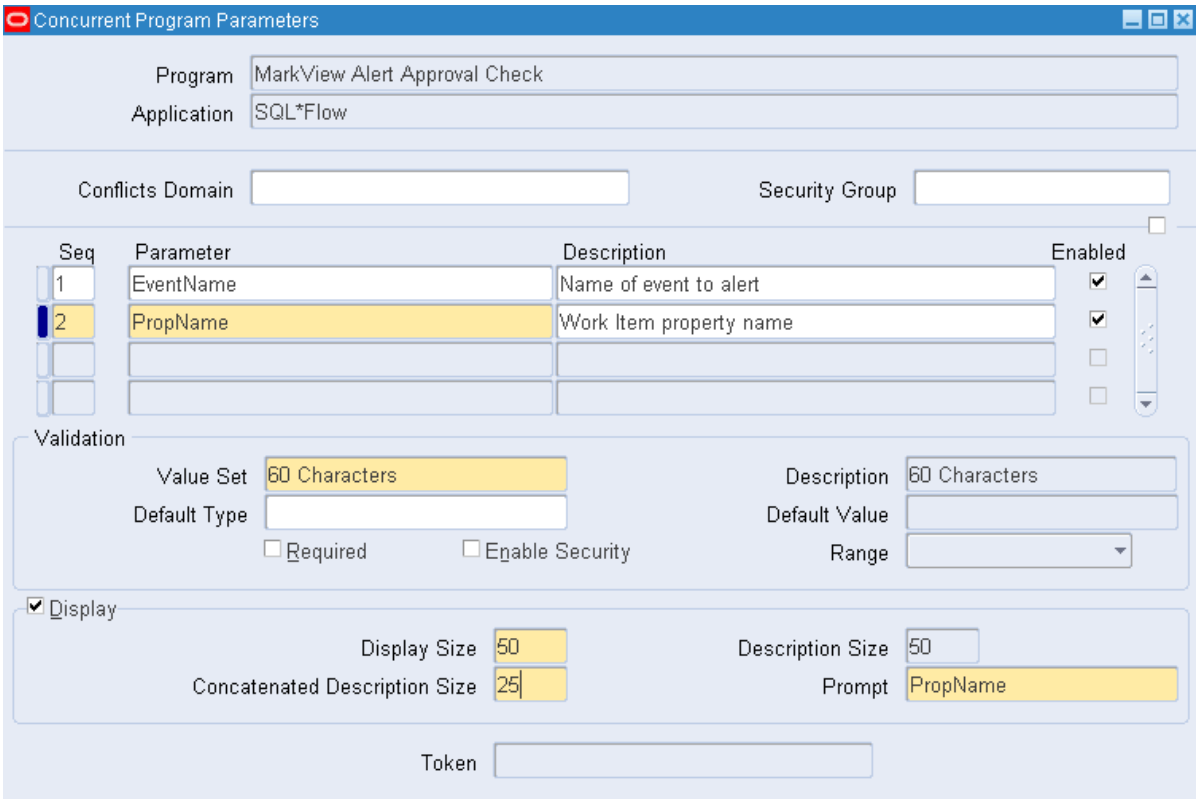
1. To ensure that you have Application Developer responsibility:
   a. Click the **top hat icon**.
   b. On the **Responsibilities** menu, select **Application Developer** .
2. On the **Navigator** menu, select **Concurrent** > **Program**.
3. Complete the **Concurrent Programs** form as shown next.



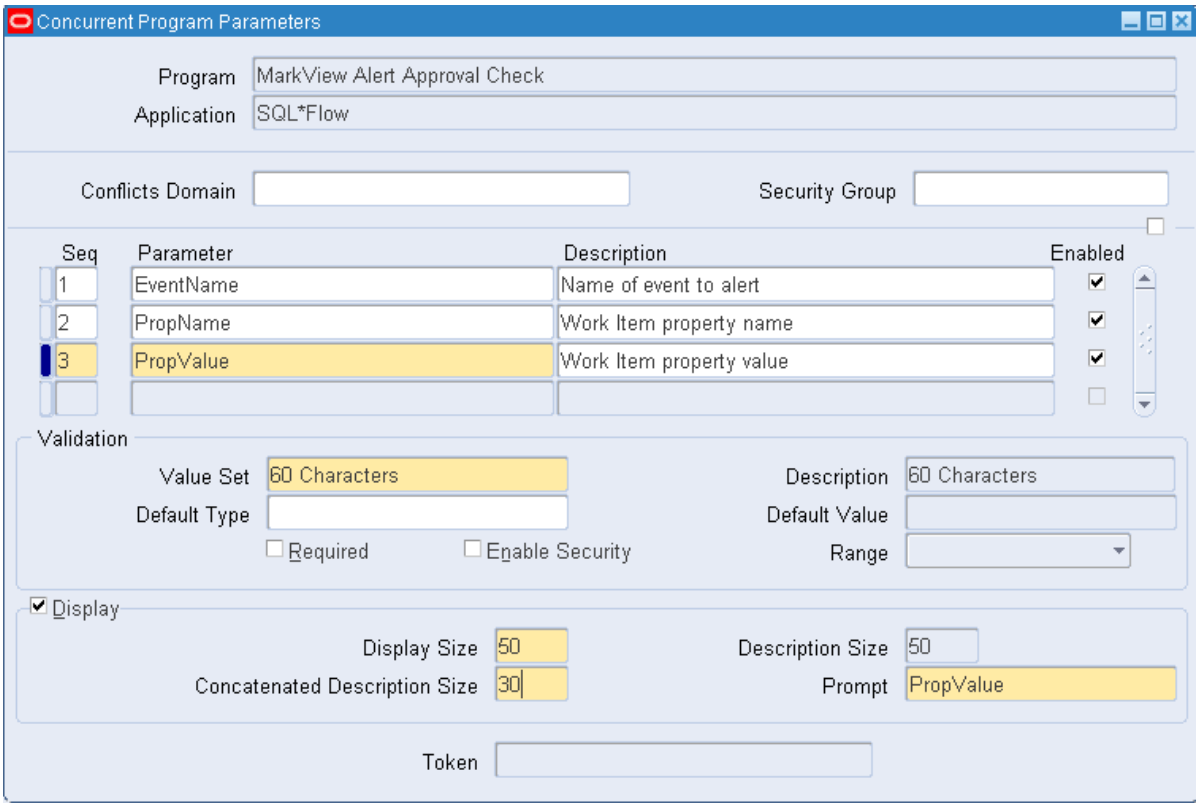
4. Click **Parameters** to open the **Concurrent Program Parameters** form.
5. Specify the EventName, add a description, and select the **Enable** check box. Complete the **Validation** and **Display** panels as shown.



6. Specify the **PropName** as shown and complete the Validation section as follows.
   - If every organization will use the same validation process, leave the **Default Type** field blank.
   - If you use **Oracle Invoice Validity** to validate on a per-organization basis, set **DefaultType** to **Constant**, and **DefaultValue** to **OrganizationID**.



7. Specify the **PropValue** as shown and complete the **Validation** section as follows.
   - If every organization will use the same validation process, leave the **Default Type** field blank.
   - If you use **Oracle Invoice Validity** to validate on a per-organization basis, set **DefaultType** to **Constant** and the **DefaultValue** to the organization ID.



8. Save and close the Concurrent Program Parameters form.

Set up one executable for each organization for which the Oracle Invoice Validation process is configured.

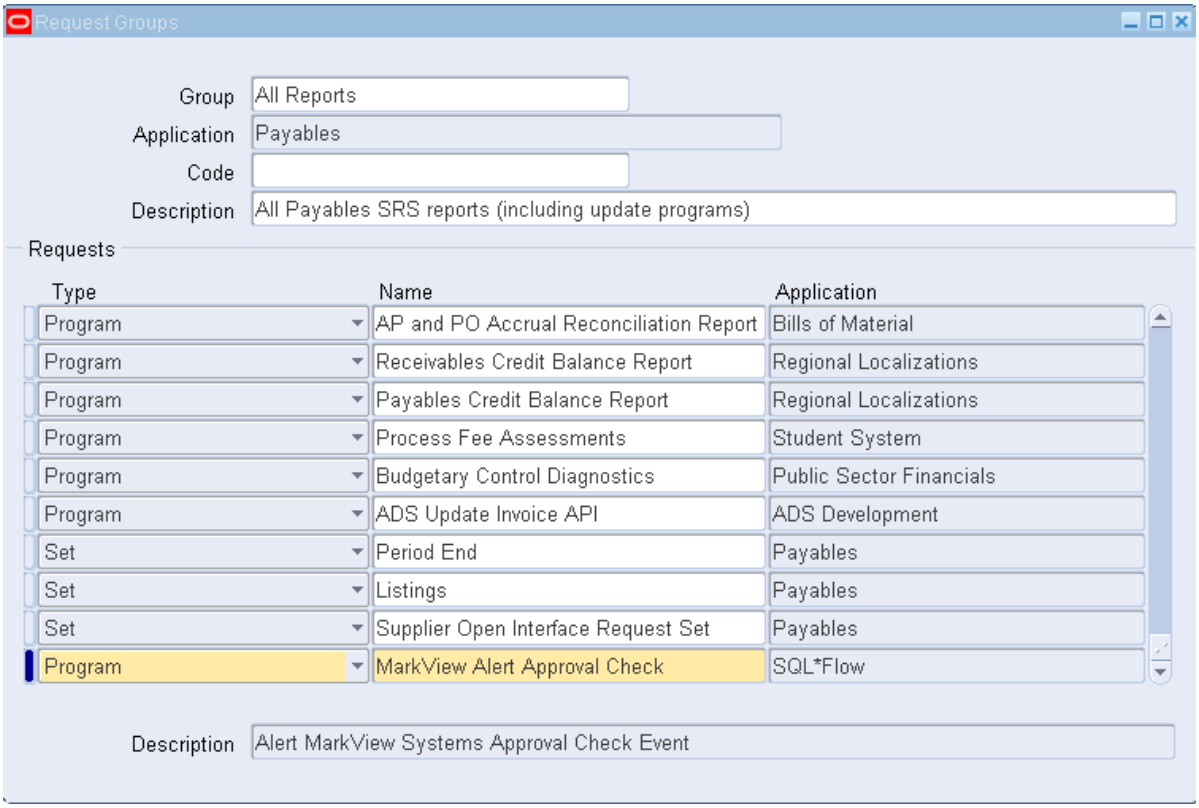
Associate a program with a group

1. Click the top hat icon to switch to **System Administrator** responsibility.
2. On the **Responsibilities** menu, select **System Administrator**.
3. On the **Navigator** menu, select **Security** > **Responsibility** > **Request**.
4. In the **Request Groups** form:
   - Click the Flashlight to search for **All Reports**.
   - Select the record with **All Reports** and with the **Application** set to **Payables** (the text may differ slightly, depending your version of Oracle Applications.)
     If the **Find** window does not load, close and re-open the **Request Groups** window.

     Although the system automatically populates the remainder of the form, add another request.

     Scroll to the bottom of the existing requests and add a new entry with the following settings:
     - **Type**: **Program**.

- **Name**: **MarkView Alert Approval Check**.



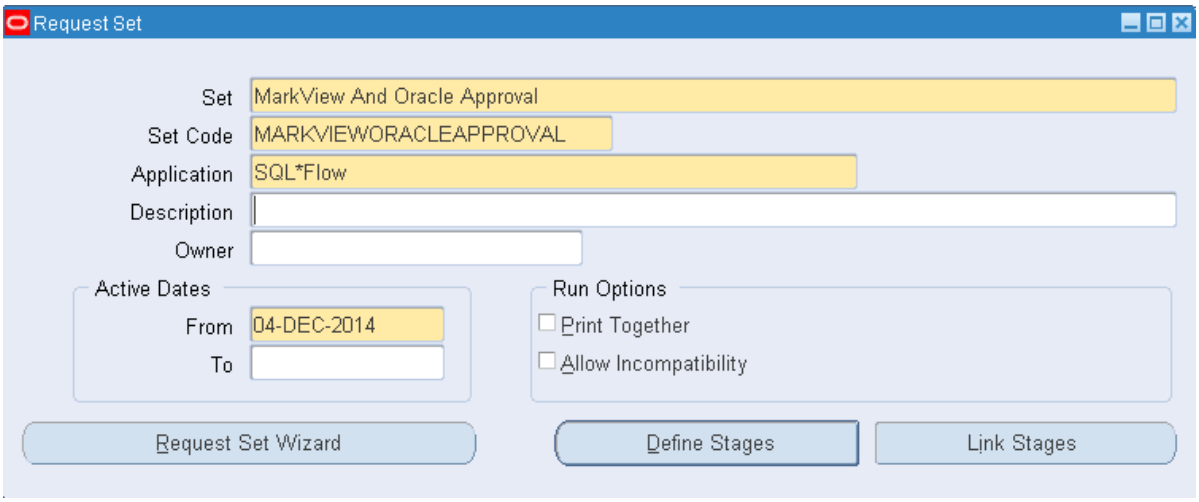
The system sets **Application to SQL*Flow** (MarkView Process).

5. Save and close the **Request Groups** form.

Specify a concurrent request set

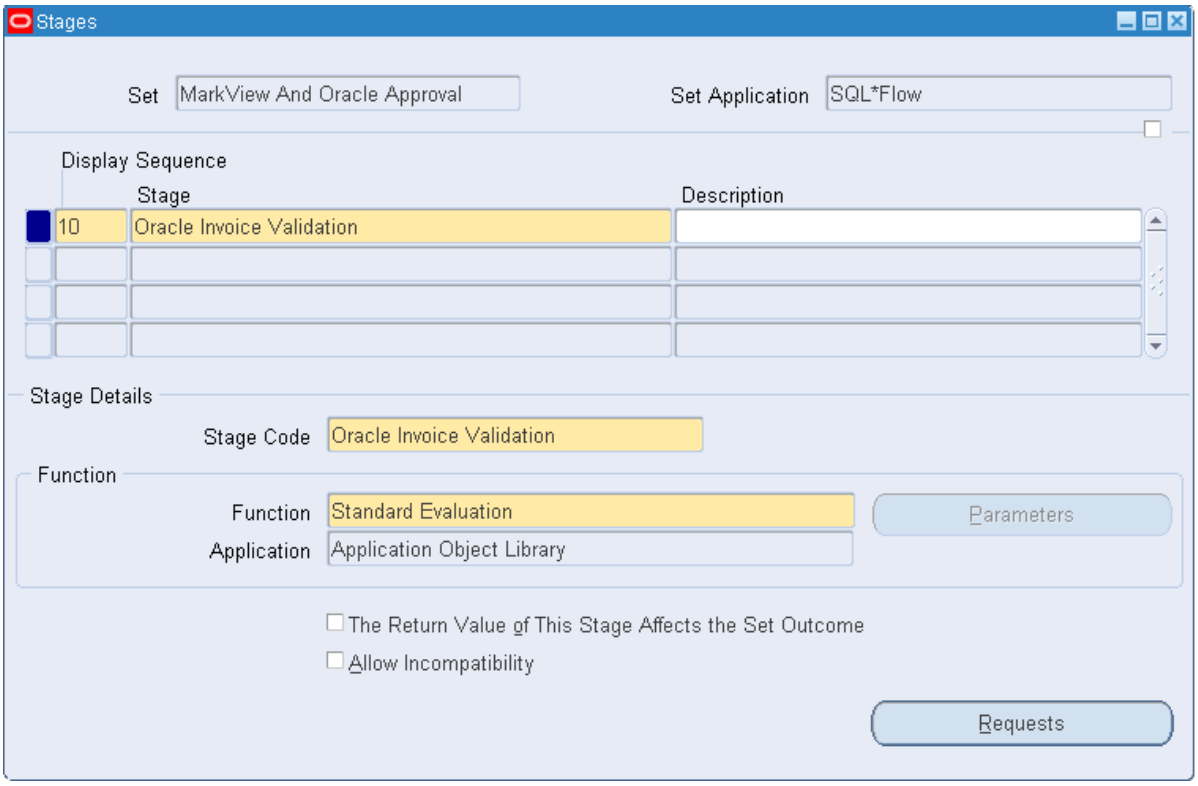
After completing the MarkView installation, configure Oracle Applications to run Alert Approval Check immediately after running the Oracle Payables Approval request:

1. Click the top hat icon to switch to **Payables Manager responsibility**.
   The **Responsibilities** form appears.
2. In the **Responsibilities** form, select **Payables Manager**.
3. On the **Navigator** menu, select **Other** > **Requests** > **Set**.
4. Complete the **Request Set** form as shown next, except for the **Active Dates** field. The **Active Dates** field must be your current date.

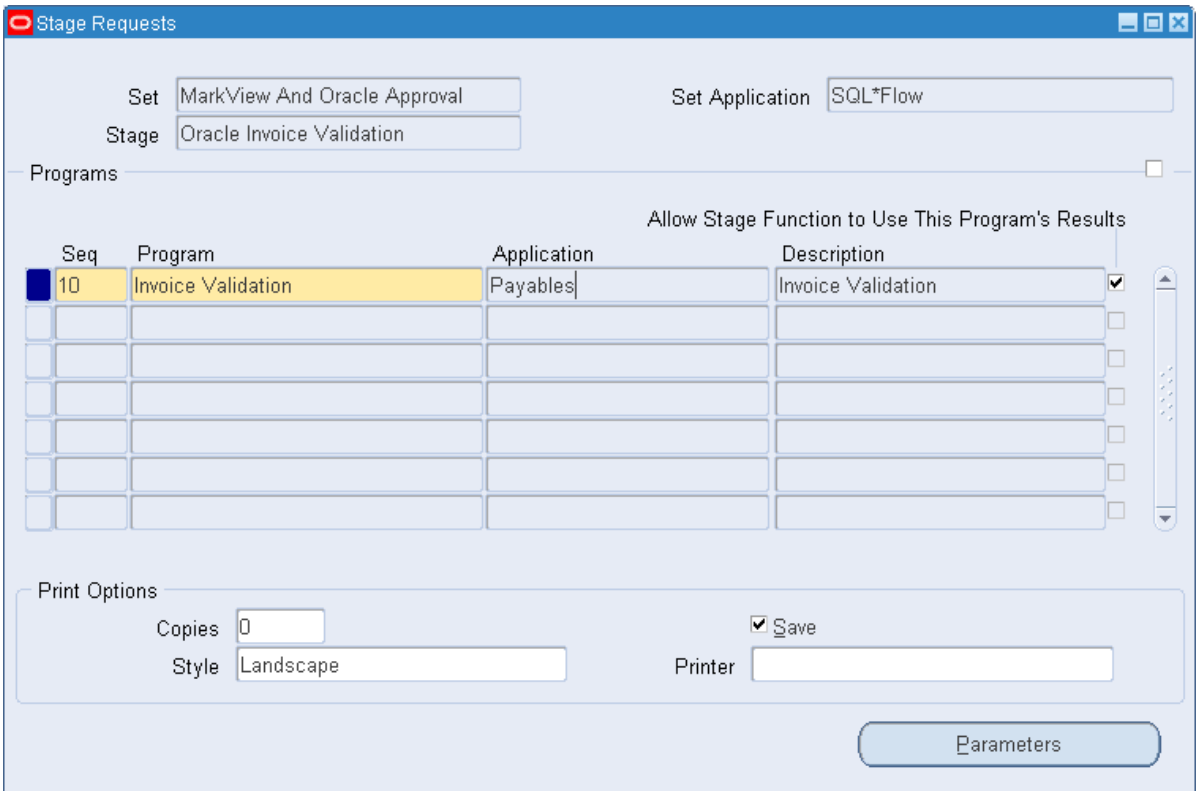


If a pre-populated field does not match the information shown here, change the information.

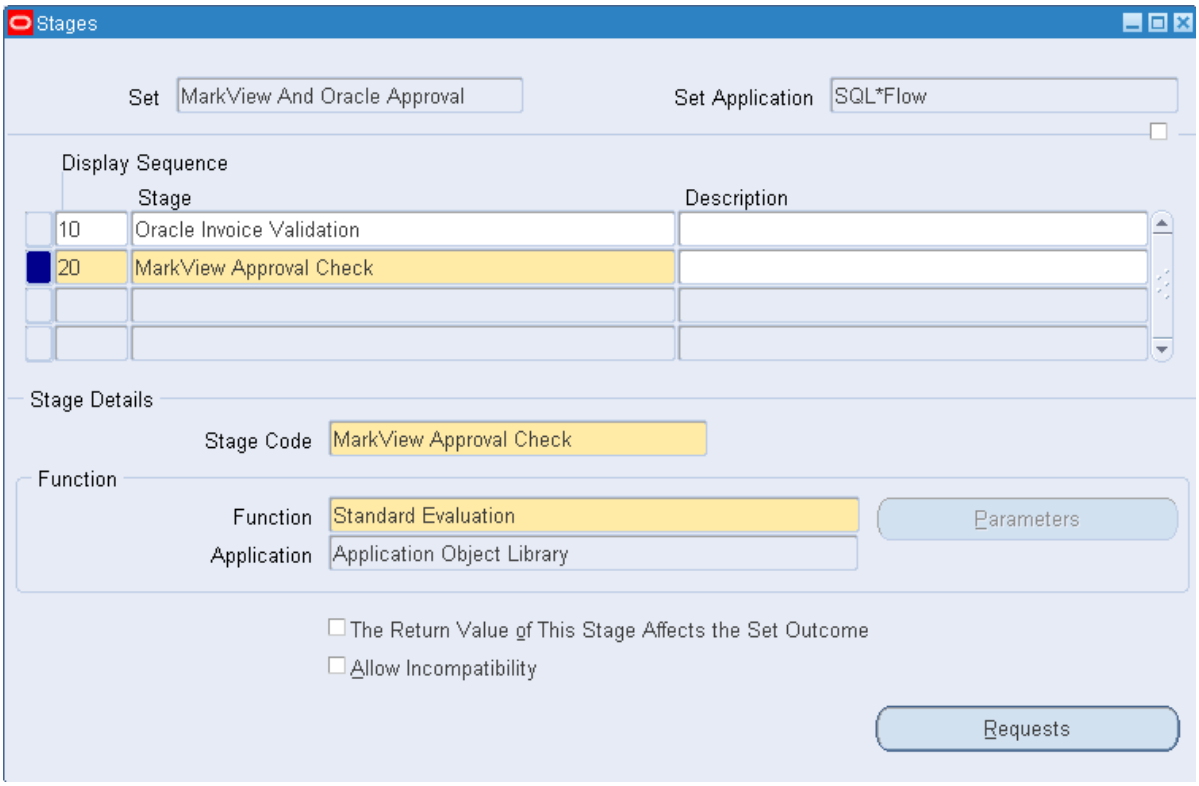
5. Click **Define Stages** and complete the **Stages** form as shown next.



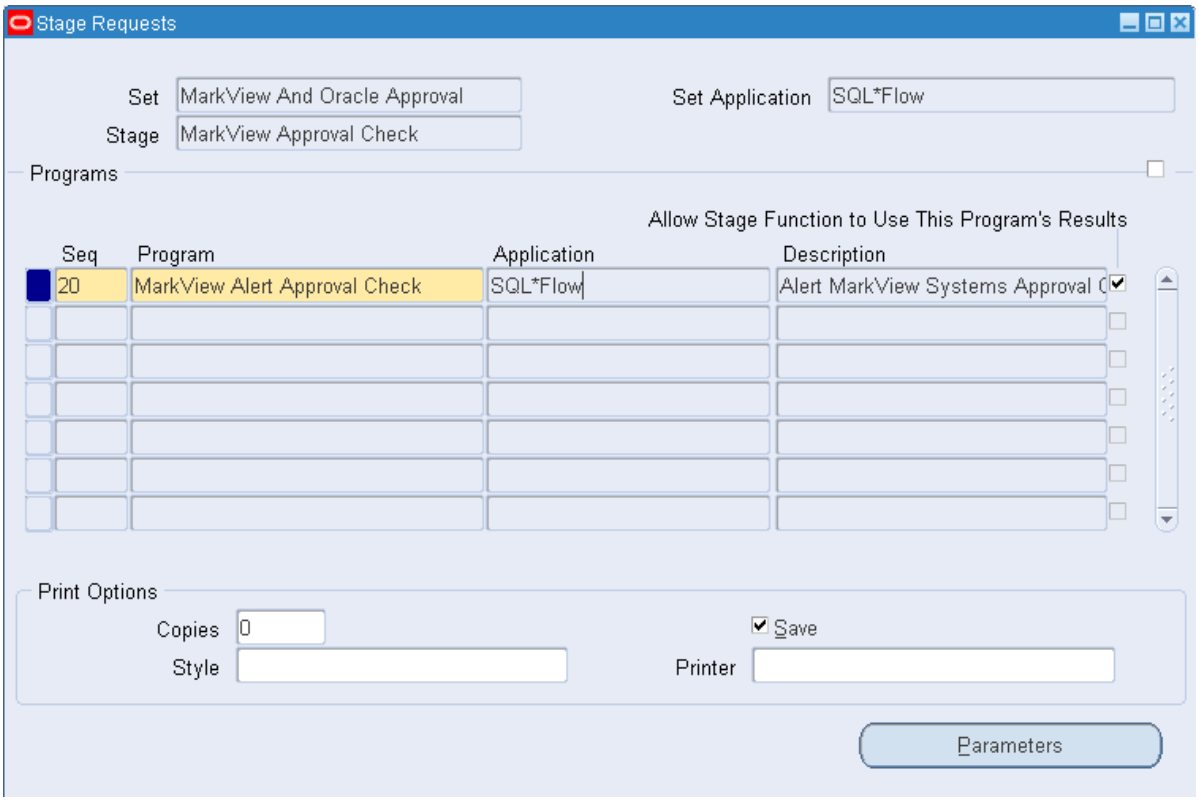
6. Click **Requests** and complete the **Stage Requests** form as shown next.



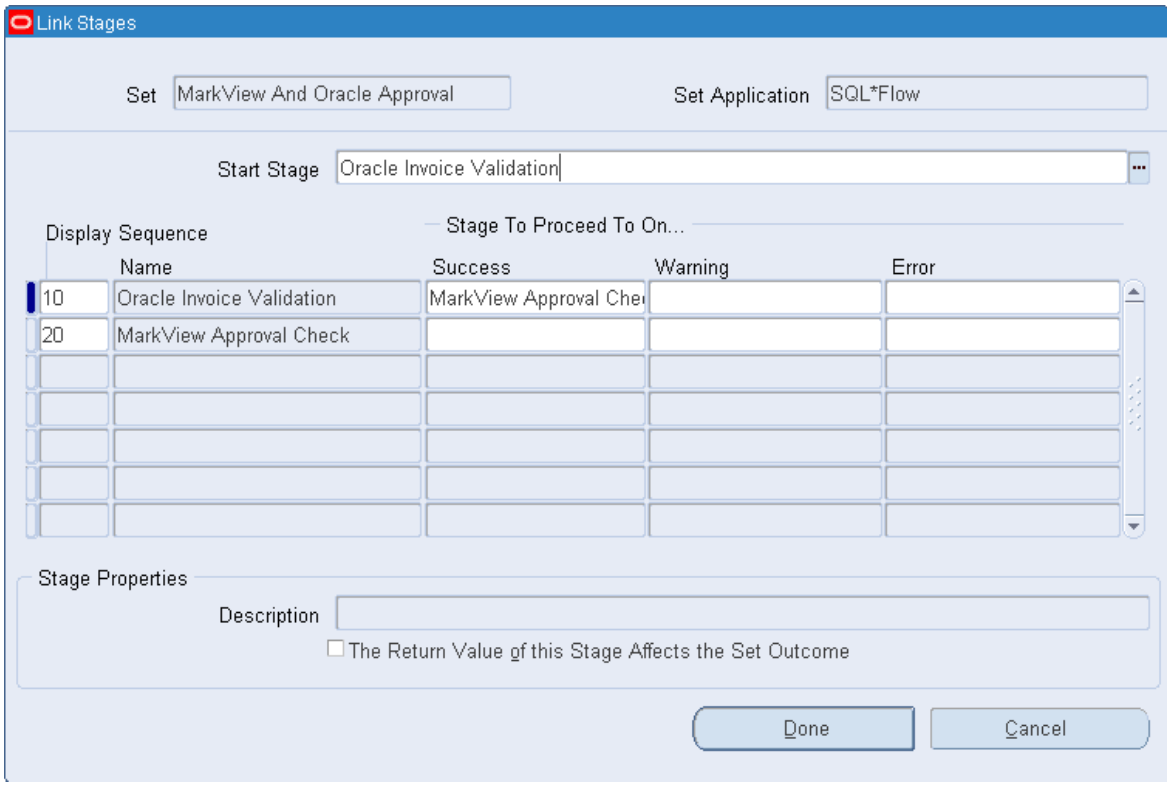
7. Save and close the **Stage Requests** and **Stages** forms.
8. In the **Request Set** form, click **Define Stages** to reopen the Stages form.
9. Add a second stage, completing the form as shown next.



10. Click **Requests** and complete the **Stage Requests** form as shown next.



11. Save and close the **Stage Requests** form.
12. Save and close the **Stages** form.
13. To link the stages you created:
    - In the **Request Set** form, click **Link Stages**.
    - Complete the **Link Stages** form as shown next.



- After completing the **Link Stages** form, click **Done**.

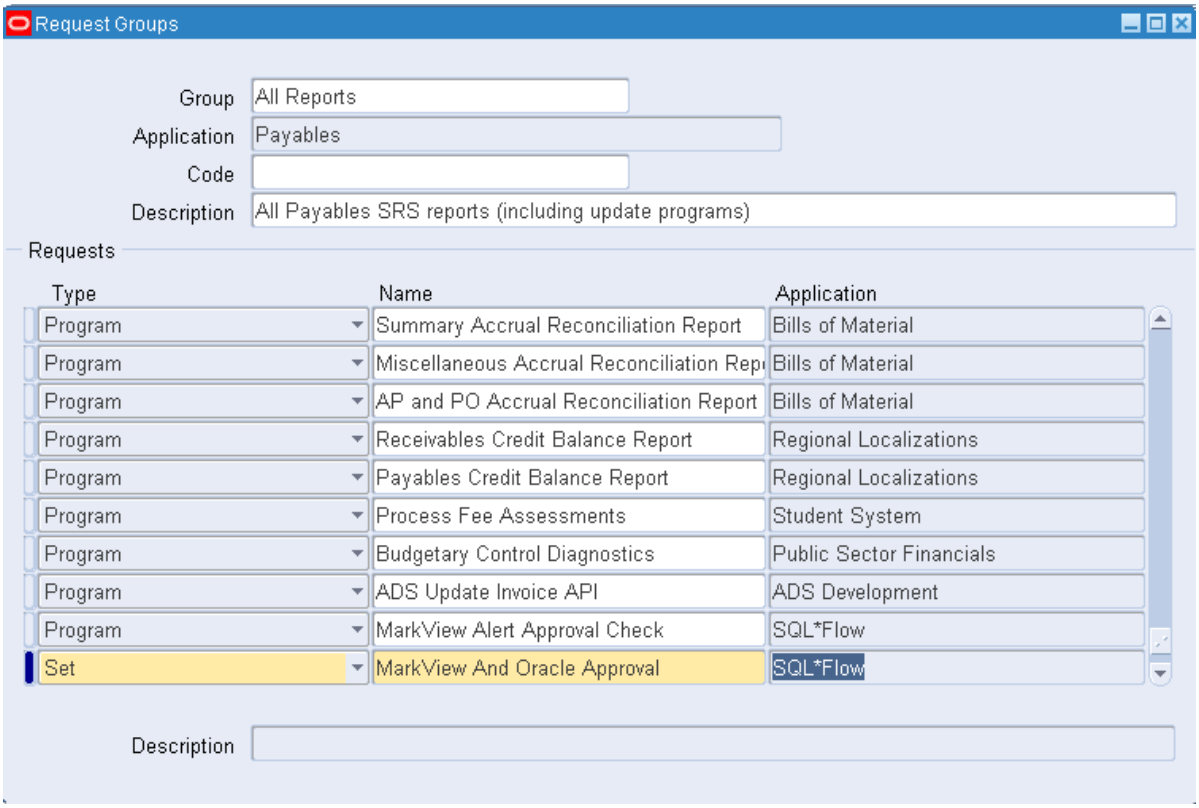
(Optional) Add concurrent programs or sets to Request Groups

Perform this step if one of the following is true:

- You completed the tasks in Specify a concurrent request set as someone without Payables Manager responsibility.
- You need to add this requisition set to other responsibilities within Oracle Applications.

The following example illustrates how to add a concurrent program to the All Reports request group. Identify the request group for the concurrent programs or sets that you created in this chapter and use the following format to complete the setup.

1. Click the top hat icon to open the **Responsibilities** form.
2. In the **Responsibilities** form, select System Administrator.
3. In the **Navigator** form, select **Security** > **Responsibility** > **Request**.
4. In the **Group** field, enter the group to add.
5. Set up the new concurrent set as shown next.



Add workflow menus to user responsibilities

When you assign a user to your accounts payable organization, add the workflow menus to that user's responsibilities.

1. Log in to **Oracle Applications Navigator** as the system administrator.
2. Select **Application** > **Menu**. The **Menus** window opens.
3. In the **Menu** field, enter the name of the menu to update.
4. In the additional fields, add the name of the menu to add to the user's responsibilities.

   You do not need to sequentially number the submenus. Leave gaps in the numbering to allow you to add menus later. For example, if you number menus by fives, you could add another menu between ten and fifteen if needed.

5. Click **Save**.

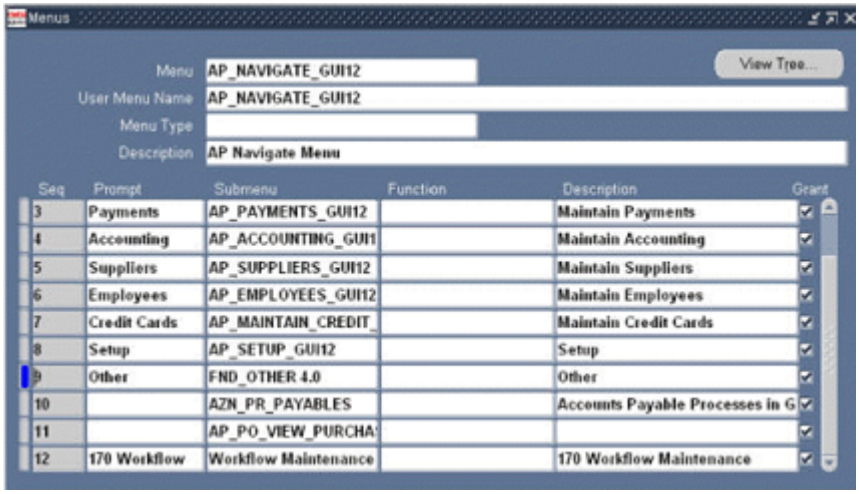
Add the Workflow Maintenance menu to responsibility menus

The creation process adds the MarkView Workflow Maintenance menu to the AP_NAVIGATE_GUI12 menu. To include the Workflow Maintenance menu on other responsibility menus, manually add it to those menus.

The following procedure using the "AP_NAVIGATE_GUI12" (Payables Manager responsibility) menu as an example. When you use the procedure, substitute the responsibility menus that need to access workflow forms.

To add the MarkView Workflow Maintenance menu to other responsibility menus:

1. Select **Apps Logon Links** and navigate to the **E-Business** home page.
2. Log in as the system administrator.
3. Click **System Administrator**.
4. In the Oracle Navigator:
   a. Select **Security:Responsibility** > **Define**.
   b. Query the responsibility name.
      The form displays the main menu name associated with the responsibility in the **Menu** field.
   c. Search for the Payables Manager responsibility and click **OK**. The main menu is AP_NAVIGATE_GUI12.
5. In the Oracle Navigator:
   a. Select **Application** > **Menu**.
   b. Query the menu name you retrieved.
   c. Search for **AP_NAVIGATE_GUI12**.
   d. In the **Menus** form that appears, add the **Workflow Maintenance** menu for the **Payables Manager** responsibility, as shown next.



   Use the value in the **Seq** column to create space between menu items and allow for future modifications.
6. Add the **Workflow Maintenance** menu to each responsibility that needs access to the workflow forms.
7. Close the **Oracle Applications** window.

Chapter 12

Expense Management Configuration

MarkView Expense Management is an optional MarkView product. If a user enters an expense report that requires receipts, MarkView temporarily stores the current Oracle expense report status in a configurable field and assigns a MarkView status of "Awaiting Receipts". After the user submits and attaches the required receipts to the expense report, MarkView changes the report status to the original status and releases the expense report to continue through the Oracle workflow.

MarkView Expense Management uses a system-level preference, EXPENSE_REPORT_STATUS_BACKUP_ATTRIBUTE, to store the value of the configurable field in the Oracle iExpense table ap_expense_report_headers_all. Valid values are ATTRIBUTE1 through ATTRIBUTE15. The default value is ATTRIBUTE15. Change the default value of this preference if you already use ATTRIBUTE15 for other purposes.

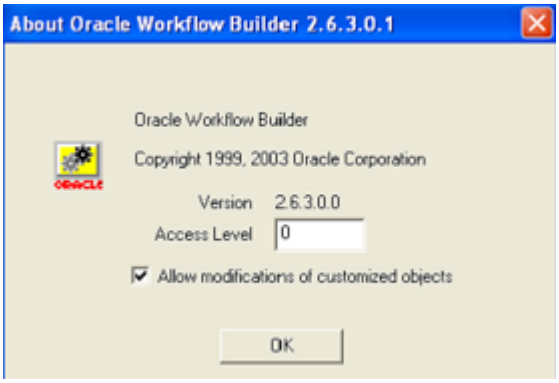
Configure Oracle Expenses workflow

To configure MarkView for Expense Management, you must have Oracle Workflow Builder installed and your system must include data.

The windows in this chapter may differ from the windows on your Oracle user interface. The appearance depends on the version of Oracle Internet Expenses to which you are integrating. Regardless of the appearance, the integration steps are identical.

Set the administrator access level

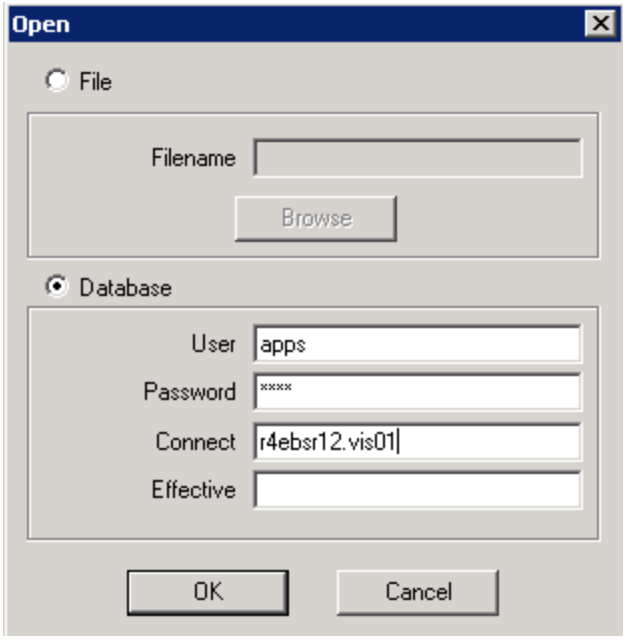
1. Open **Oracle Workflow Builder**.
2. In **Oracle Workflow Builder**, select **Help** > **About Oracle Workflow Builder**.
   The **About Oracle Workflow Builder** window appears.



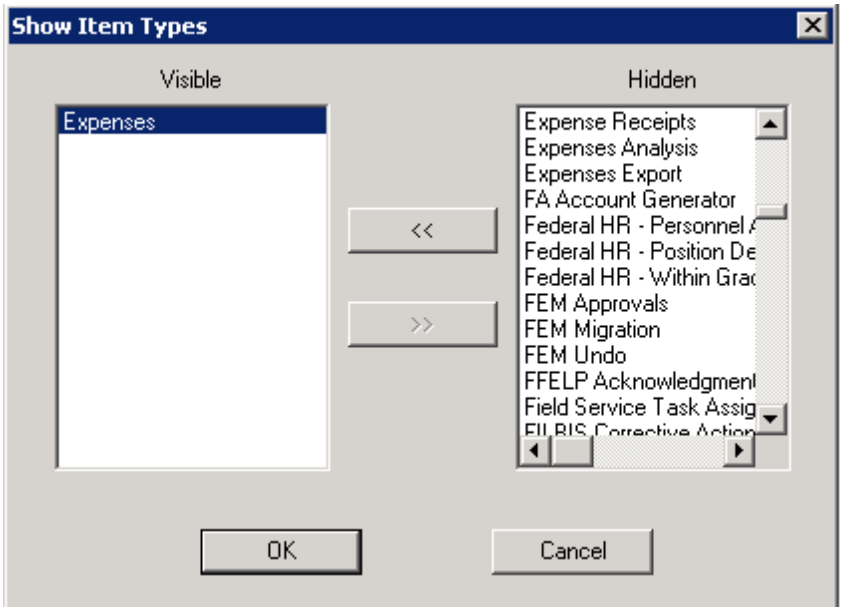
3. Set the values in the **About Oracle Workflow Builder** window:
   - Set **Access Level** to **0**.
   - Select **Allow modification of customized objects**.
4. Click **OK**.

Open the Expenses workflow

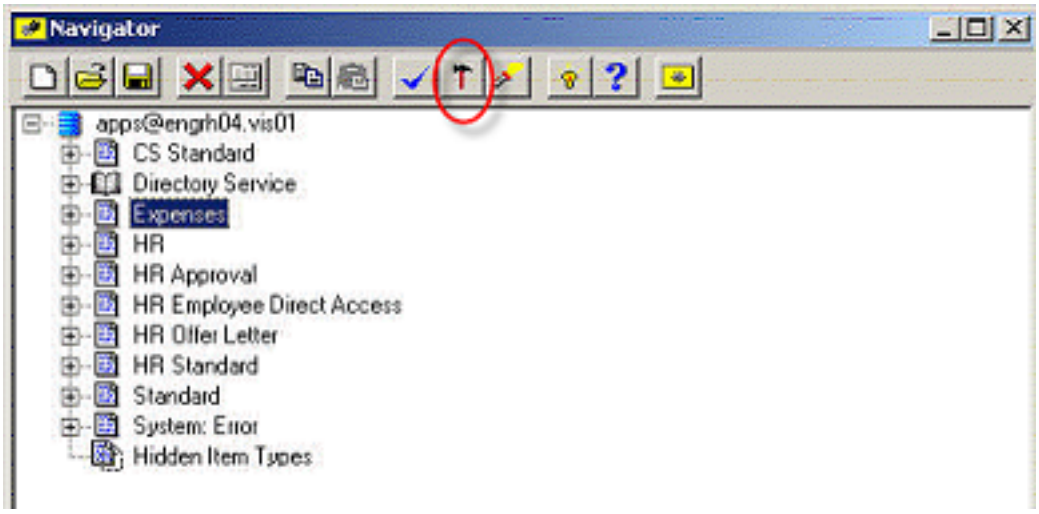
1. Start **Oracle Workflow Builder**.
2. Select **File** > **Open**.
   The **Open** window appears.



3. Enter the following information in the **Open** window:
   - **Select Database**.
   - **User**: Enter the database user name.
   - **Password**: Enter the password associated with the database user name.
   - **Connect**: Enter the connect string information.
   - **Effective**: Leave blank.
4. Click **OK**.
   The **Show Item Types** window opens.



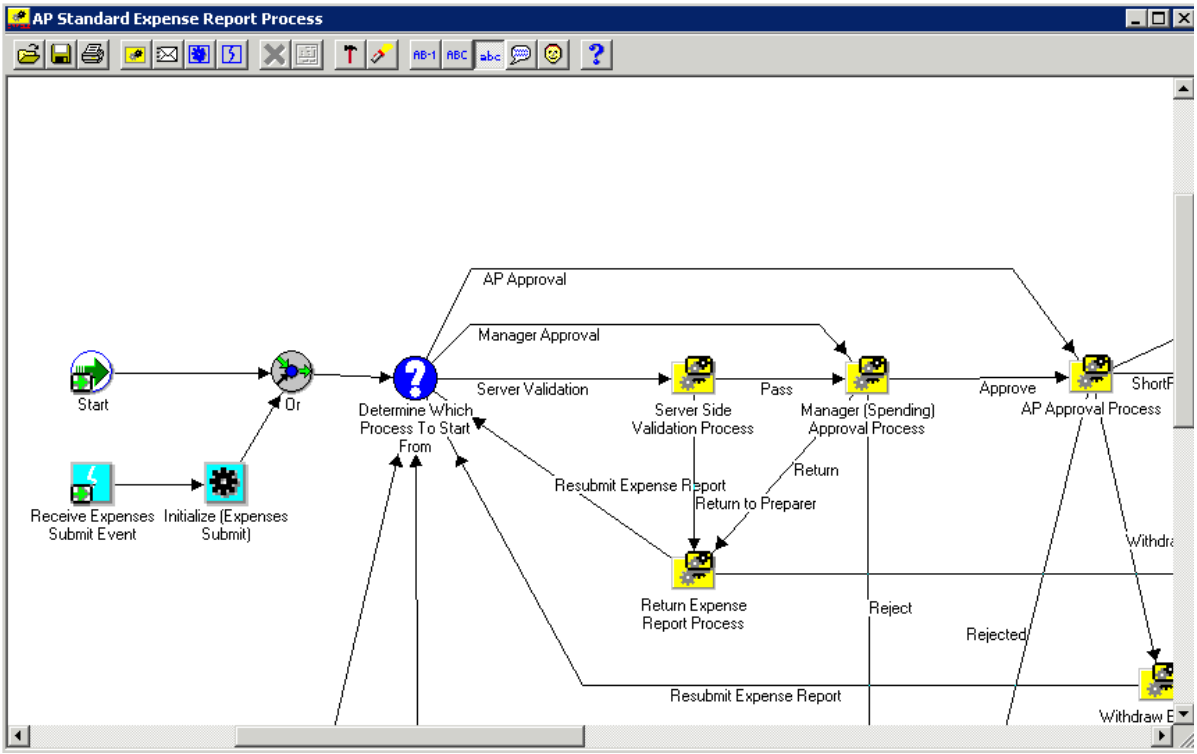
5. Move **Expenses** from the **Hidden** column to the **Visible** column and click **OK**.
   The expenses item type appears in a tree structure.
6. Expand the tree to display all the options under the **Expenses** menu tree. The Expenses workflow is now visible.
7. Ensure that the Developer mode is off in Oracle Workflow Builder. Clear the hammer icon in the button bar.



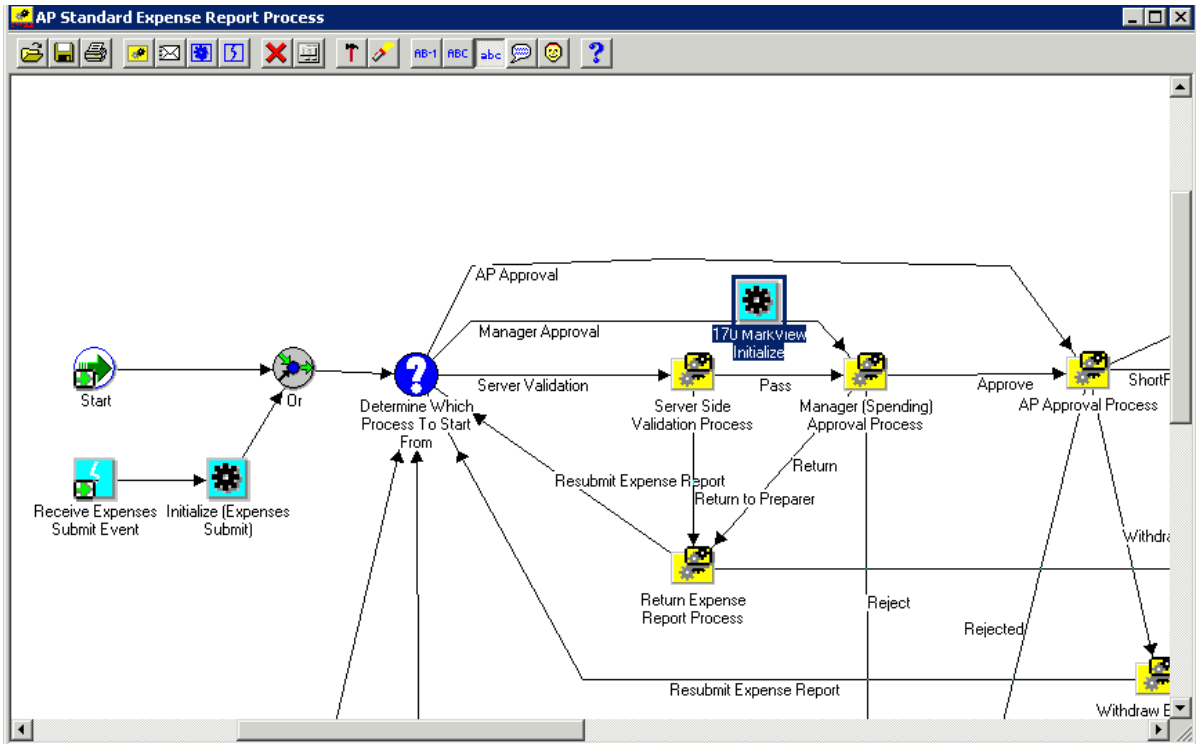
Add functions to the workflow process

1. Open **Oracle Workflow Builder**.
2. Log in with the Oracle Applications database user name and password.
3. In the **Expenses** item type, expand the **Processes** section.

4. Double-click **AP Standard Expense Report Process**.
   The main workflow opens in an edit window and the starting process diagram appears.



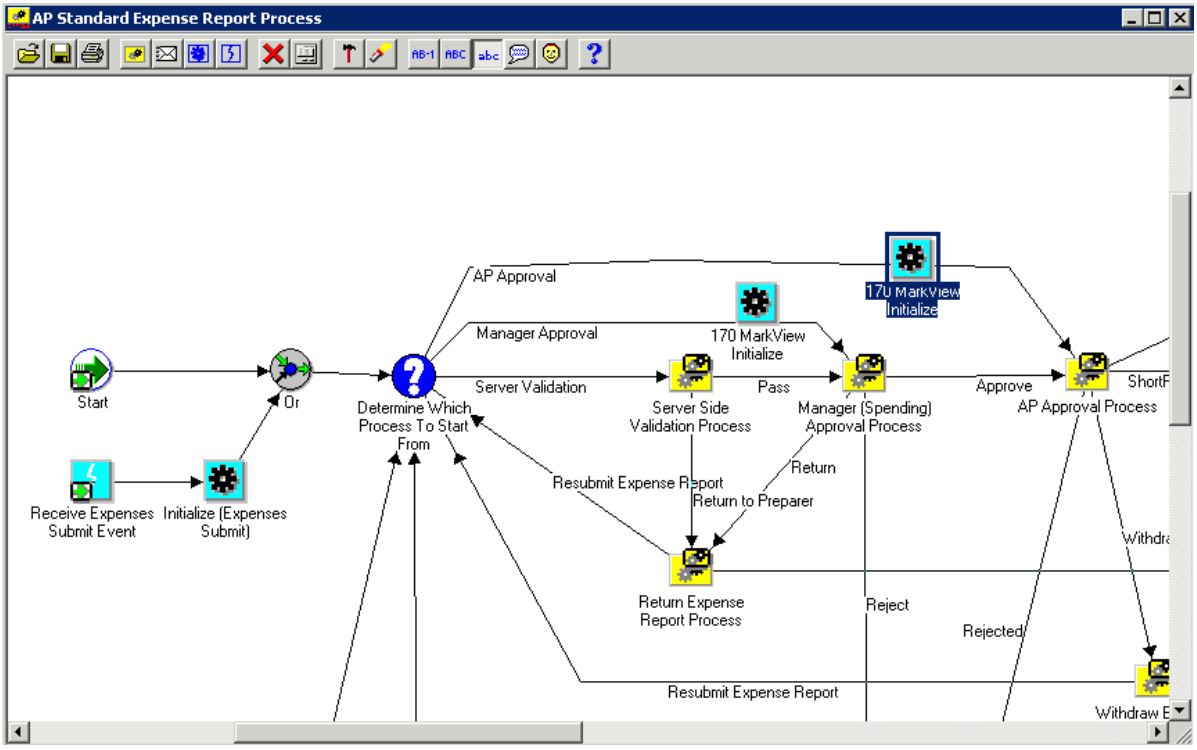
5. In the **Navigator** window, drag the **MarkView Process Initialize** function onto the **Manager Approval** transition.



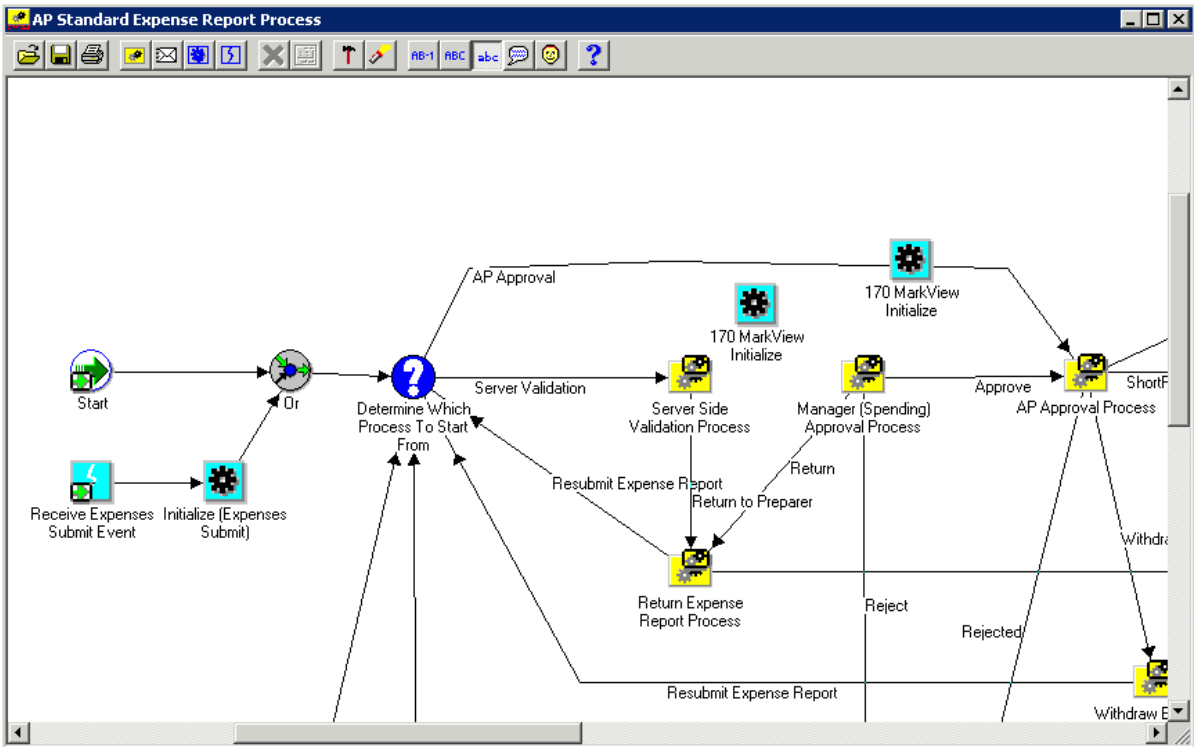
6. In the **Navigator** window, select and drag the MarkView Process Initialize function onto the AP Approval transition.

   The process diagram contains two instances of MarkView Process Initialize.

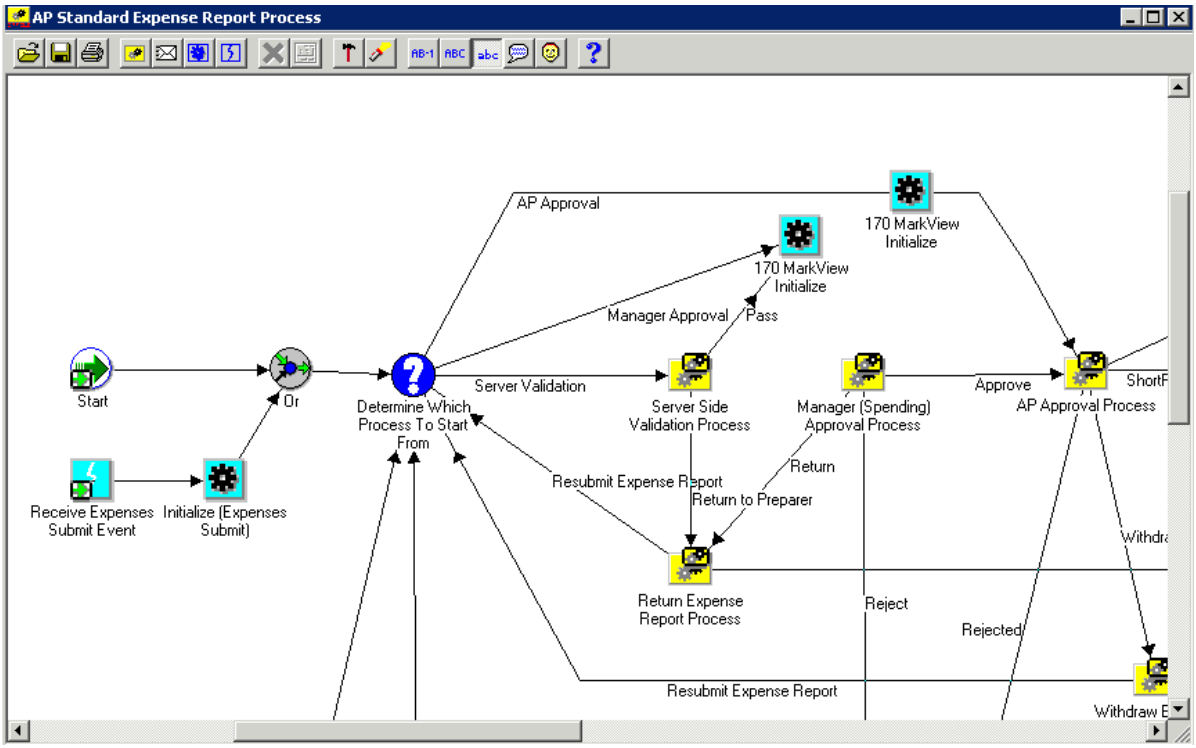
   The instances of MarkView Process Initialize may be labeled SQLFLOW_INIT.



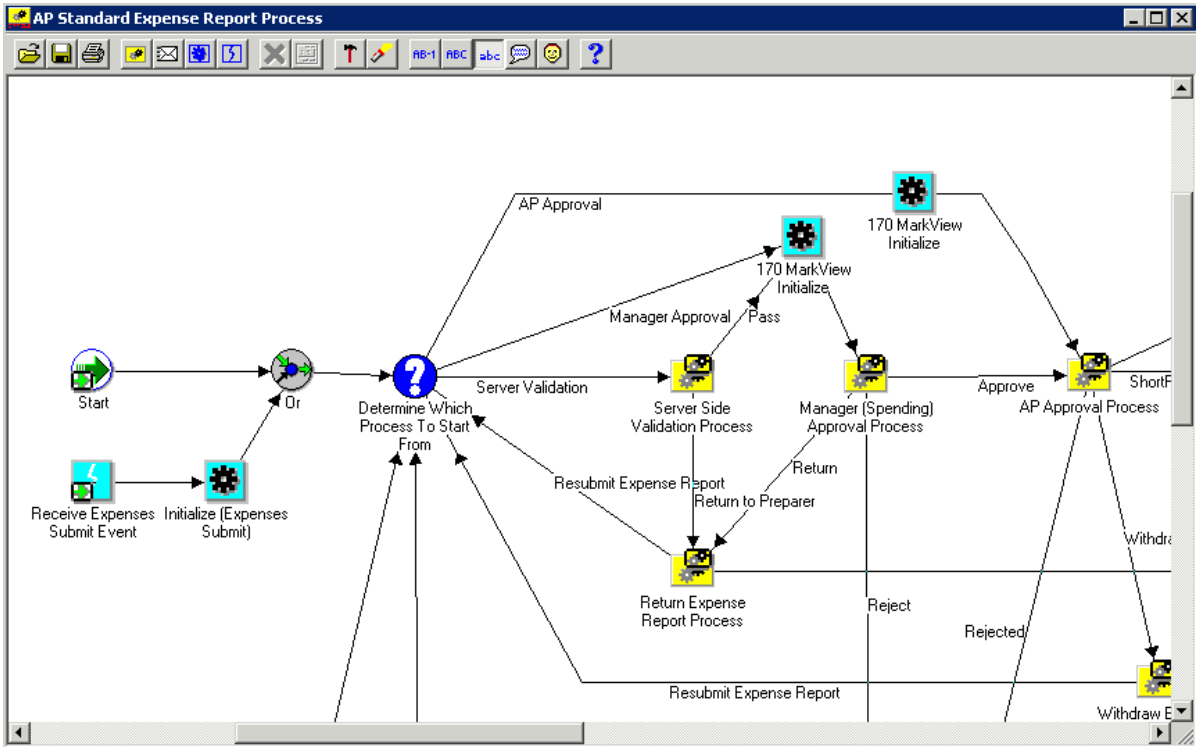
7. Delete the **Manager Approval** transition between **Determine Which Process To Start From** and **Manager (Spending) Approval Process**. Right-click the arrow and select **Delete Selection**.
8. Delete the **Pass** transition line between **Server Side Validation Process** and **Manager (Spending) Approval Process**. Right-click the arrow and select **Delete Selection**.



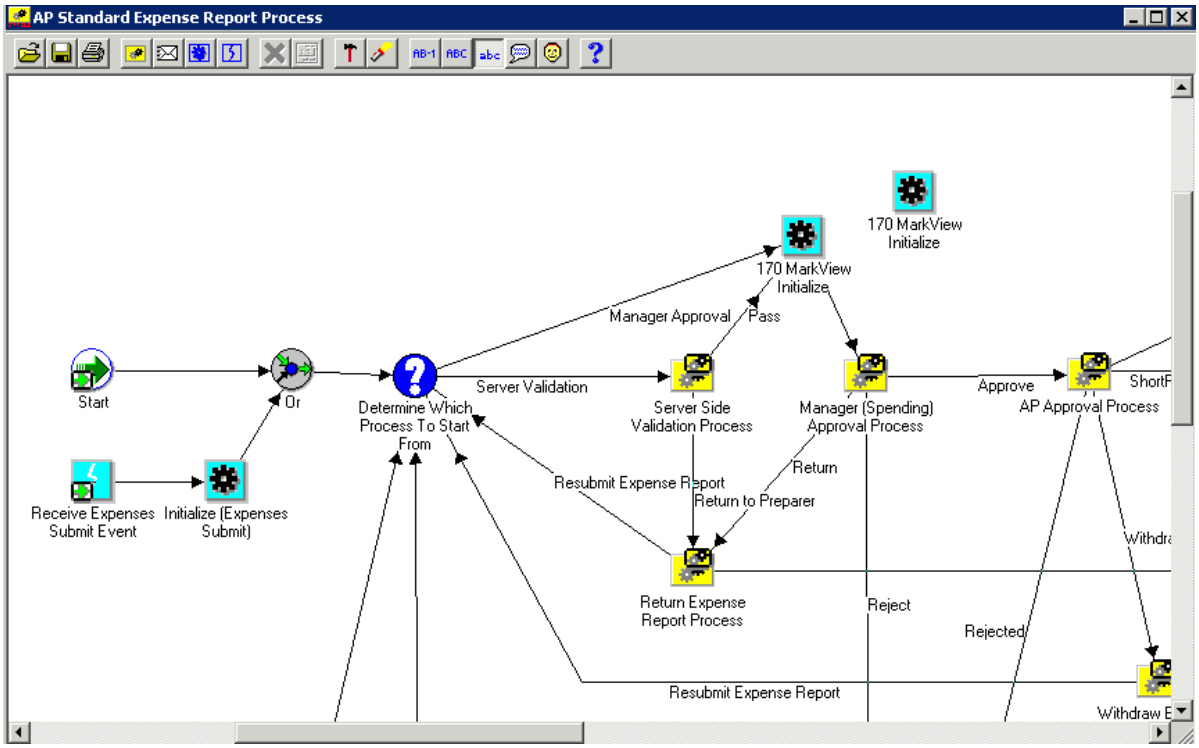
9. Create a transition between the **Determine Which Process To Start From** and **MarkView Process Initialize**:
   - Right-click and hold **Determine Which Process To Start From**.
   - Drag the cursor over MarkView Process Initialize.
   - Release the mouse button. A menu appears.
   - Select **Manager Approval**.
10. Create a transition between **Server Side Validation Process** and **MarkView Process Initialize**:
   - Right-click and hold **Server Side Validation Process**.
   - Drag the cursor over **MarkView Process Initialize.**
   - Release the mouse button. A menu appears.
   - Select **Pass**.



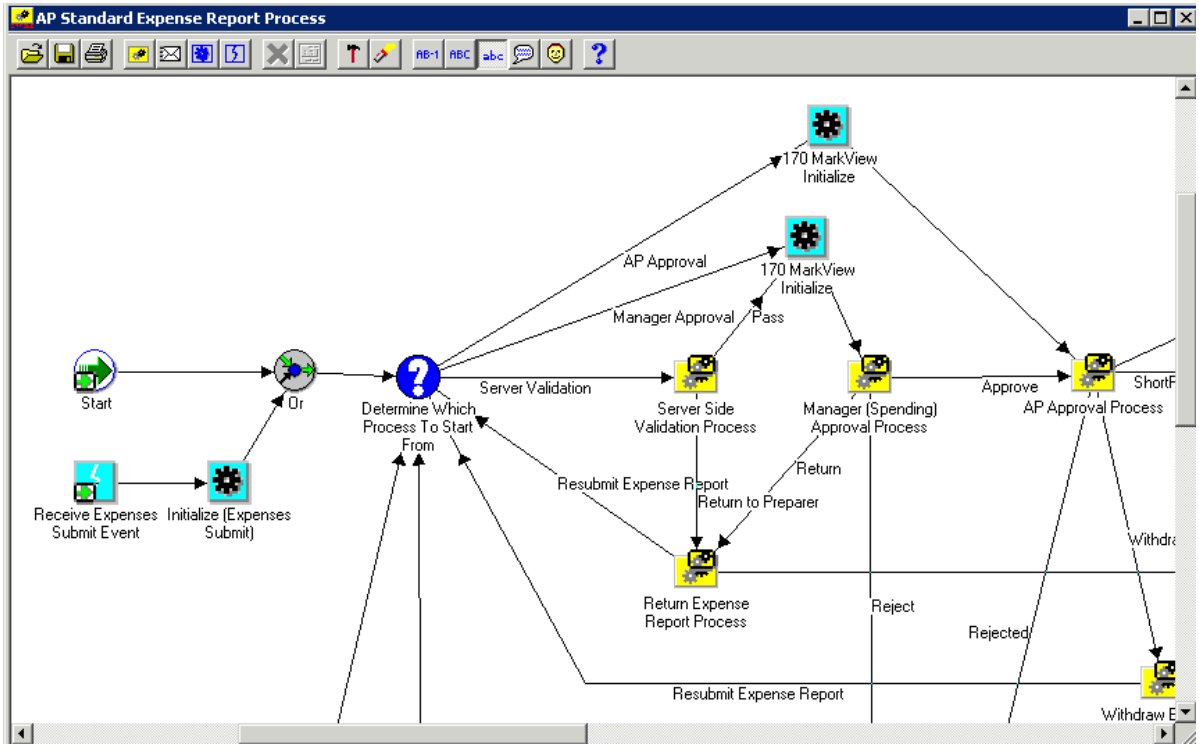
11. Create a transition between **MarkView Process Initialize** and **Manager Approval Process**:
    - Right-click and hold **MarkView Process Initialize**.
    - Drag the cursor over **Manager Approval Process.**
    - Release the mouse button.



12. Delete the **AP Approval** transition line between **Determine Which Process To Start From** and **AP Approval Process**:
    - Position the cursor on the arrow that connects them.
    - Right-click and select **Delete Selection**.



13. Create a transition between **Determine Which Process to Start From** and the second **MarkView Process Initialize** function:
    a. Right-click and hold **Determine Which Process to Start From**.
    b. Drag the cursor over MarkView Process Initialize.
    c. Release the mouse button. A menu appears.
    d. Select **AP Approval**.
14. Create a transition between MarkView Process Initialize and AP Approval Process:
    a. Right-click and hold **MarkView Process Initialize**.
    b. Drag the cursor over **AP Approval**.
    c. Release the mouse button.



15. Click **Save**. Saving your changes can generate multiple validation failed for activity errors such as:

```
'SAVE validation failed for activity 'HRSSA/HR_SAVE_FOR_LATER'.
```

Ignore errors that do not relate to your changes.

Configure the missing-receipt timeout

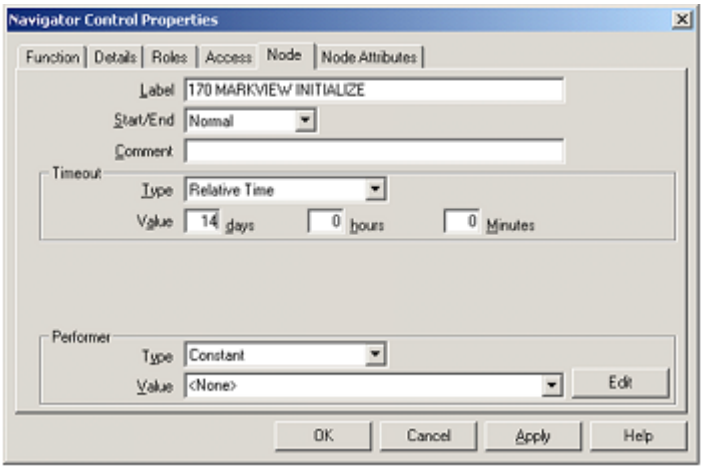
When the MarkView Initialize function starts, the system creates the MarkView work item and waits for receipts.

If employees take too long to submit receipts, you can automatically move their expense reports into the Oracle Applications rejection process by configuring the system to reject expense reports after a specified number of days.

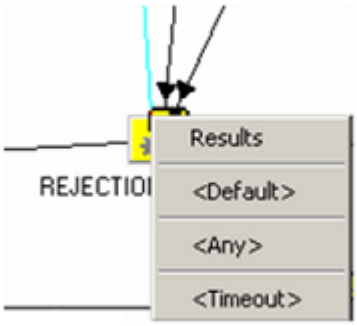
To configure the missing-receipt timeout:

1. Open **Oracle Workflow Builder** and log in as the application system user.
2. Open **Expenses (APEXP) Item Type**.
3. Expand the **Processes** list, and double-click the **AP Standard Expense Report** process. The process diagram opens.
4. Right-click the MarkView Initialize function and select **Properties**.
   The system displays the **Navigator Control Properties** window.
5. Select the **Node** tab.
6. In the **Timeout** section of the tab, change **Type** to **Relative Time**.

7. In the **Value** fields, enter the total time after which an expense report should time out. Enter whole numbers in the **Value** fields.



8. Right-click the **MarkView Initialize** function and draw a line to the REJECTION_PROCESS function. A menu appears.



9. Select **<Timeout>** and save your changes.
10. Repeat this procedure for all other functions that have names similar to MarkView Initialize, such as MarkView Initialize-1.

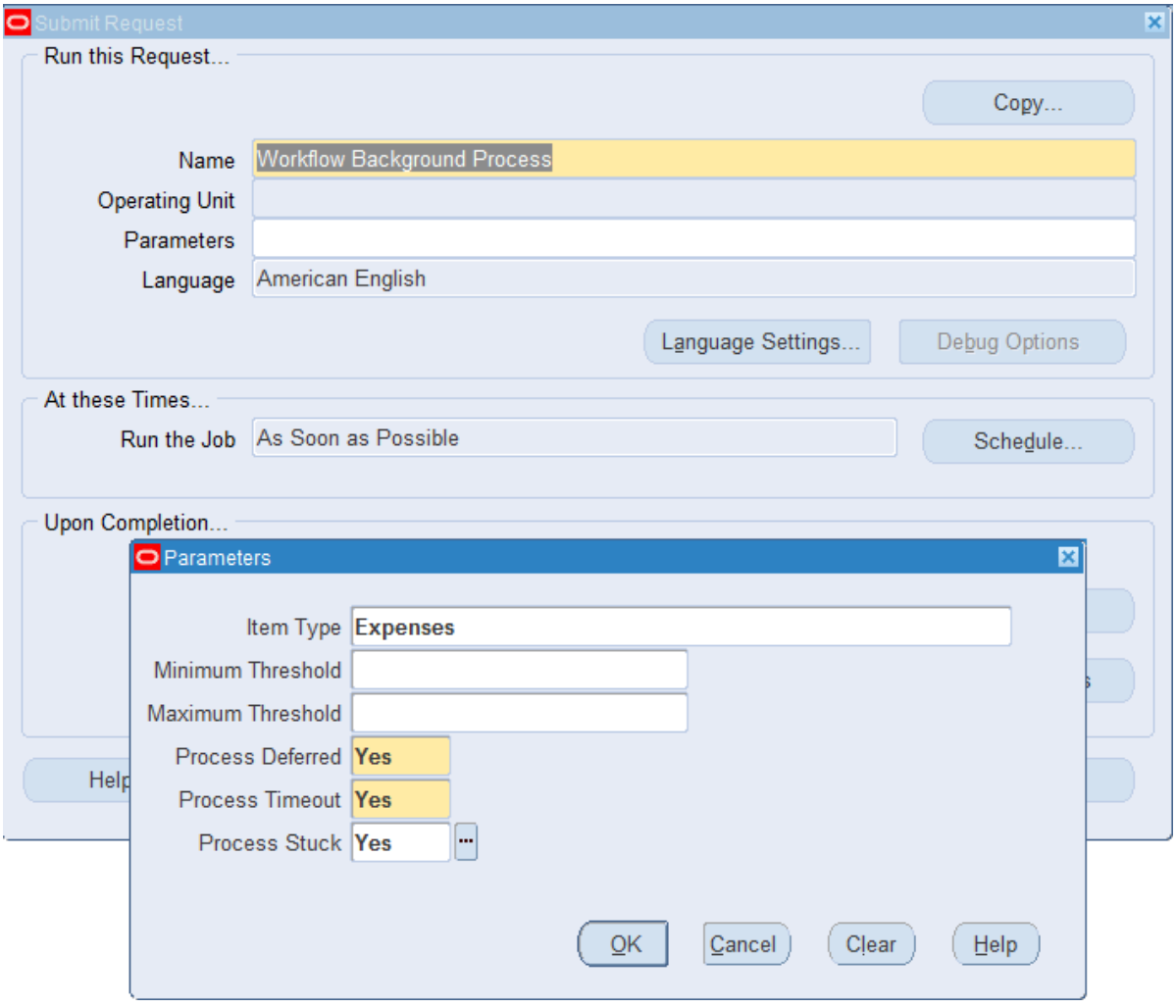
For this timeout subprocess to work, schedule the Workflow Background Process job to execute on a regular basis. A system integrator can configure the Workflow Background process.

Configure the workflow background process

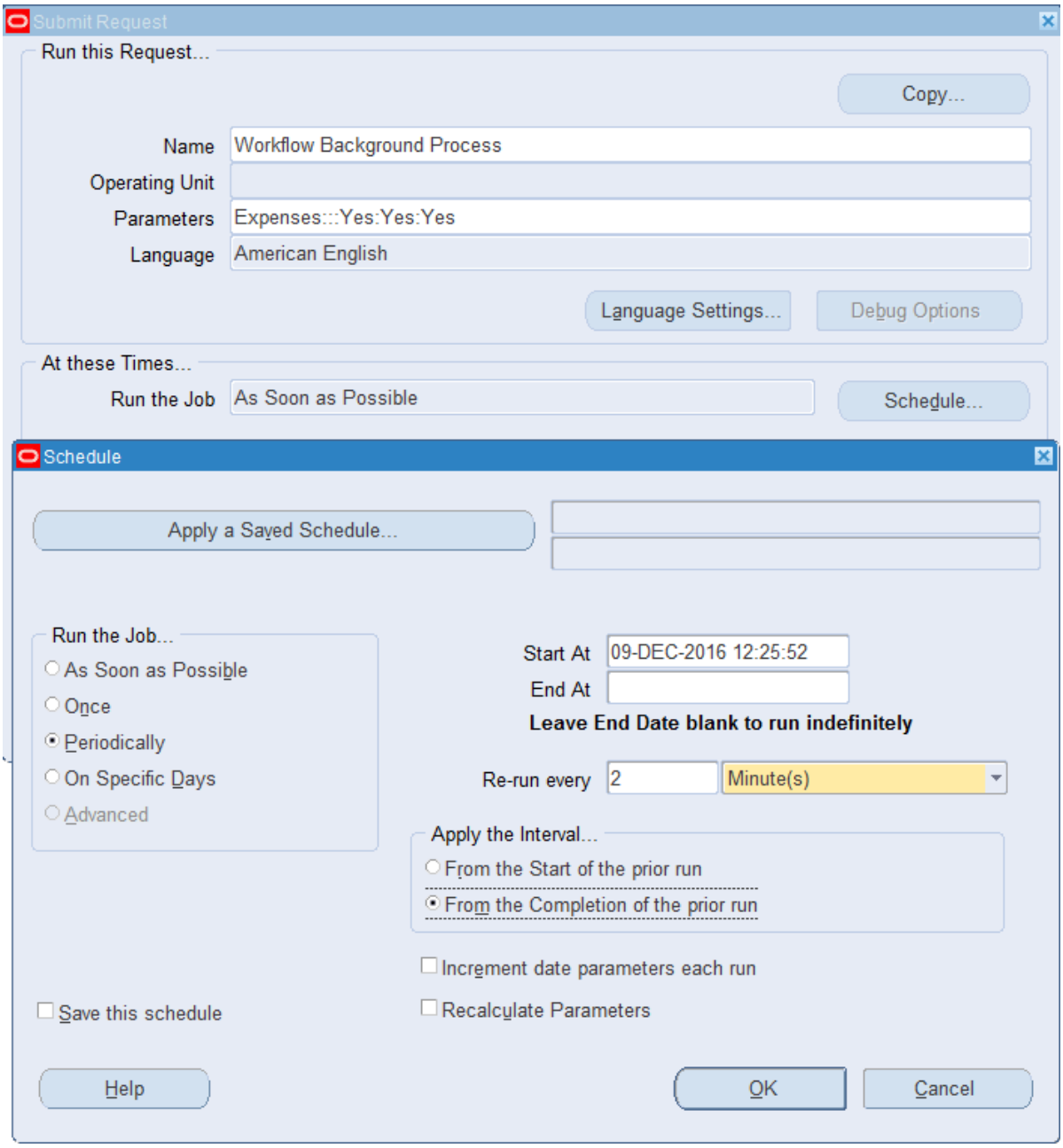
Schedule the Workflow Background Process concurrent request to run periodically in Oracle Concurrent Manager. This concurrent request handles items in the Oracle workflow that are timed out, stuck, or notified. The following steps describe the settings required for use with your MarkView system. For information about setting up this process, see Oracle MetaLink note 182936.1, the Oracle Workflow Developer's Guide, and the Oracle Applications User's Guide.

1. Log in to **Oracle Concurrent Manager** as a system administrator.
2. Follow the instructions in MetaLink note 182936.1 and the Oracle Applications User's Guide for submitting the **Workflow Background Process** as a concurrent program.

3. When the **Parameters** window appears, enter the following information.
   - **Item Type**: Expenses
   - **Minimum Threshold**: Leave blank
   - **Maximum Threshold**: Leave blank
   - **Process Deferred**: Yes
   - **Process Timeout**: Yes
   - **Process Stuck**: Yes
4. Click **OK**.
5. Click **Schedule**.



   The **Schedule** window appears.
6. Schedule the job to run at 2-minute intervals.



Ensure that the Expense Report Export request is completed. After that, in the Process Monitor, you can view the expense reports exported as invoices.

Chapter 13

Configure Self-Service Invoice

To configure SSI with MarkView:

- Schedule periodic Payables import scheduling with hold. See Configure the SSI Oracle Payables Open Interface job on page 166.
- If you plan to use AUSS to configure your SSI users, use the Self-Service Invoice profile in AUSS.

  You can map the Source System Group (the Oracle EBS responsibility) for those users to the Self-Service Invoice profile. See Configure AUSS on page 125 for information about configuring this profile.
- If you do not plan to use AUSS, see the *Kofax MarkView Administrator's Guide, Volume 1* to add users to the SSI Users group in MarkView.
- If you plan to enable SSI users to submit follow-up documents in email messages, install Kofax Import Connector (KIC) with the MarkView system and install an email client on the SSI user's client machine.

  The SSI_EMAIL_ADDRESS preference points to an address Kofax Import Connector monitors. See the *Kofax MarkView Administrator's Guide, Volume 1* for information about setting preferences.
- After initial setup, see the *Kofax MarkView Administrator's Guide, Volume 1* for information about:
  - Setting SSI Preferences: At a minimum, set SSI_EMAIL_ADDRESS and review the default settings for
    - SSI_FOLLOWUP_REMINDER_01
    - SSI_FOLLOWUP_REMINDER_02
    - SSI_FOLLOWUP_REMINDER_03
  - Setting Invoice Header and Invoice Line field display for SSI invoice requesters.
  - Configuring scan and email settings.

Configure the SSI Oracle Payables Open Interface job

Configure the Oracle Payables Open Interface import job to move data from the AP Invoice Interface tables to the AP Invoice tables. The Payables Open Interface Import job creates the invoices in the Oracle AP Invoice tables after SSI has prepared the invoice and image data. This concurrent request can be submitted as a single or recurring request. The key parameters for this Payables Open Interface Import concurrent request are:

- Source: MarkView Self-Service Inv
- Hold Name: 170_SYSTEMS_HOLD
- Hold Reason: 170_SYSTEMS_HOLD

The default Hold Name is 170_SYSTEMS_HOLD. If you changed this value, your hold name may be different. See Configure the Oracle Payables Open Interface Import job on page 116 for more information.

When configuring and scheduling the Payables Open Interface Import, configure the import to apply the 170_SYSTEMS_HOLD during the process. Doing so guarantees that MarkView immediately applies the hold to each imported invoice. The hold remains in place until all workflow actions are completed and the invoice is ready for payment. Applying the hold prevents an imported invoice from circumventing the workflow if a system component malfunctions.

For information about configuring Oracle Payables Open Interface import jobs, see the Oracle documentation.

Chapter 14

Integration with other Kofax products

After you install MarkView, follow the steps in this chapter to integrate with

- Kofax Capture (KC)
- Kofax Import Connector (KIC)
- Kofax Transformation Modules

Integration with Kofax Capture and Kofax Transformation Modules

Kofax MarkView Export Connector enables you to export documents from Kofax Capture to MarkView.

Kofax MarkView Export Connector does not support the following:

- Exporting non-image files, PDF files, or OCR full text files
- Using the original file name, as defined for Export Properties in Kofax Capture

Kofax Transformation Modules requires the Data Export Server to provide data from Oracle to Kofax Transformation Modules for validation.

Before you install Kofax MarkView Export Connector, verify that your system meets the minimum system requirements. For the version numbers, see the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site.

MarkView requires:

- Kofax Capture and 32-bit ODBC drivers

  (64-bit ODBC drivers are required for MarkView Capture and Output components version 10.5.0. For more information, see the *Kofax MarkView Technical Specifications* document).
- ODAC with the following required components:
  - Oracle Data Provider for .NET
  - Oracle Provider for OLE DB
- For transformation, you also need Kofax Transformation Modules

Install Kofax Capture Server on the server, and the Kofax Capture client on all workstations before installing Kofax MarkView Export Connector.

MarkView does not support the Kofax Transformation Modules annotation feature. See the Kofax Transformation Modules documentation for information about disabling annotation for MarkView.

Install Oracle Database 19c Client (19.3) for Microsoft Windows

For the Oracle Data Access Components supported, see "Required Third-Party Technologies" in the *Kofax MarkView Technical Specifications* document. Look at the table and select between the 32-bit or 64-bit version.

If you plan to integrate with Kofax Capture and Kofax Transformation Modules on Windows Server 2019, complete the following procedure.

1. Install Oracle Database 19c Client (19.x) (ODAC).
   a. Run the installer.
   b. Select the **Custom** installation type.
   c. On the **Available Product Components** page, select the following components.
      - Oracle ODBC Driver.
      - Oracle Provider for OLE DB.
      - Oracle Data Provider for .NET.
   d. Install the product.
2. If you installed ODAC Xcopy version, register Oracle.DataAccess.dll in the GAC by running the following commands:

```
OraProvCfg.exe /action:gac /providerpath:<oracle_client>\odp.net\bin
\4\Oracle.DataAccess.dll
OraProvCfg.exe /action:config /force /product:odp /frameworkversion:v4.0.30319
/providerpath:<oracle_client>\odp.net\bin\4\Oracle.DataAccess.dll
```

3. If you installed ODAC Xcopy version and you encounter problems with database connectivity, run the following commands to register Oracle products in the GAC manually.

```
cd <oracle_client>\odp.net\bin\4
```

```
OraProvCfg.exe /action:ungac /providerpath:<oracle_client>\odp.net\bin
\4\Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy
\4\Policy.4.112.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy
\4\Policy.4.121.Oracle.DataAccess.dll
```

```
cd <oracle_client>\odp.net\bin\4
```

```
OraProvCfg.exe /action:gac /providerpath:<oracle_client>odp.net\bin
\4\Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy
\4\Policy.4.112.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy
\4\Policy.4.121.Oracle.DataAccess.dll
```

```
cd <oracle_client>\odp.net\bin\2.x
```

```
OraProvCfg.exe /action:ungac /providerpath:<oracle_client>\odp.net\bin\2.x
\Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.102.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.111.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.112.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:ungac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.121.Oracle.DataAccess.dll
```

```
cd <oracle_client>\odp.net\bin\2.x
```

```
OraProvCfg.exe /action:gac /providerpath:<oracle_client>\odp.net\bin\2.x
\Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.102.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.111.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.112.Oracle.DataAccess.dll
```

```
OraProvCfg.exe /action:gac
/providerpath:<oracle_client>\odp.net\PublisherPolicy\2.x
\Policy.2.121.Oracle.DataAccess.dll
```

Where `<oracle_client>` is the Oracle Database 19c Client installation folder.

Some Windows folders (such as `C:\Users\<USER NAME>`) may be protected and have permission restrictions.

Folder location values that contain spaces must be enclosed in double quotation marks. Example: `"C:\oracle client\network\admin"`.

Install Kofax MarkView Export Connector

Perform the following procedure on all machines running Kofax Capture or Kofax Transformation Modules, including all scan and validation stations.

1. Log in as an administrator.
2. On the MarkView Application Server host, navigate to the MarkView installation directory, open the export-connector folder, and locate the kcec-markview.msi file.

   For example: `<installation_directory>/export_connector/kcec-markview.msi`
3. Copy kcec-markview.msi to a temporary directory on the Windows machine on which Kofax Capture is installed.

4. To start the installation, run kcec-markview.msi as Administrator or use the Administrator command line.
5. When the installation wizard opens, follow the prompts.
   When the installation is complete, a message indicates that Kofax MarkView Export Connector was successfully installed.
6. Click **Finish**.
7. Verify that the Kofax Capture service is running.
8. Repeat these steps on all scan and validation stations.

Set up the ODBC Data source

Configure the ODBC Data source on both the Kofax Transformation Modules server and Kofax Capture Network Server (KCNS). If you are not using Kofax Capture Network Server, also configure an ODBC data source on each MarkView scan station.

1. Configure a data source using the Microsoft ODBC Administrator application.
   - For 32-bit operating systems, start Microsoft ODBC Administrator on the Microsoft Start menu.
   - For 64-bit operating systems without Kofax Transformation Modules, run `\Windows \SysWOW64\odbcad32.exe` to launch the 32-bit version of Microsoft ODBC Administrator.
   - For 64-bit operating systems with Kofax Transformation Modules, start Microsoft ODBC Administrator on the Microsoft Start menu.
2. In the **ODBC Data Source Administrator** window, select the **System DSN** tab.
3. Click **Add**.
   The **Create New Data Source** window opens.
4. In the list of drivers, select the driver installed by Oracle ODAC, usually **Oracle in OraClientxxx_home1**, and click **Finish**.
   The configuration window opens.
5. Enter values in the following fields:
   - **Data Source Name** (DSN): Enter the name, such as MarkView. Use this when Prepare the Kofax Transformation Modules project template for use.
   - **Description** (optional)
   - **TNS Service Name**: Configure the TNS Service Name and User ID to connect to the MarkView schema.
   - **User ID**: Enter a MarkView schema name.
6. Clear **Enable Query Timeout**.
7. Click **Test Connection**.
   The **Oracle ODBC Driver Connect** window opens.
8. When prompted, enter the password.
   If you see an error message, confirm the field settings.
   If the test is successful, you see a **Connection Successful** message.
9. Click **OK** to close the success message.
10. Click **OK** to close the configuration window.
    The **MarkView Data Source** appears in the **Data Source Name** list. This ODBC connection corresponds to a listener running on your database server. Use the DSN to connect.

11. For 64-bit operating systems with Kofax Transformation Modules, you need to also configure 32-bit ODBC drivers:
    a. Run `\Windows\SysWOW64\odbcad32.exe` to launch the 32-bit version of Microsoft ODBC Administrator.
    b. Repeat steps 2 through 10 to install and configure 32-bit ODBC drivers.

About MarkView instances

Prior to setting up Kofax MarkView Export Connector, create at least one generic instance to work with Kofax Capture.

If you are using Kofax Transformation Modules, create two MarkView instances to define the parameters for communication between Kofax Capture and MarkView for invoice and non-invoice documents.

Create instances

Use the MarkView Import API Configuration Utility, which installs with Kofax MarkView Export Connector, to create the following, generic instance:

1. Log in as an administrator.
2. Locate the MVImportAPIConfig.exe file and create a shortcut on your desktop for future use. The file is located in the \bin directory on the server where Kofax Capture is installed.
3. Run MVImportAPIConfig.exe.
   The **Import API Configuration** window opens.
4. Click **New** to create a new instance.
5. Enter the name of the new instance, such as MarkView Doc.
6. Select the **MarkView** tab and enter the appropriate information.

Field	Description
Database User	The MarkView schema user.
Database Password	The MarkView schema user password.
Database Host	The TNS alias name that was configured in the TNS names file (such as tnsnames.ora) for the database instance of the MarkView schema
MarkView User	The MarkView user: • Must be a member of a group with Scan privileges in MarkView, such as the SCAN USERS group • Must be a user in Oracle with invoice creation permissions.
MarkView Password	The MarkView user password.
Workstation Serial #	WEB_CLIENT

7. Select the **Import** tab and provide the information in the following table.

Field	Description
Import Source	Leave blank.
Server Parameter	Leave blank.
Parse XSL Transform File	Click **Browse** and select KofaxCapture82Generic.xslt. The .xslt files are located in the bin directory where Kofax Capture is installed.
Import XSL Transform File	Click **Browse** and select KofaxCapture82Generic.xslt.

8. Create a unique MarkView instance for invoice documents.
   a. Run MVImportAPIConfig.exe.
   b. When prompted, click **New**.
   c. Specify the name for the new instance, such as Invoice.
   d. Select the **MarkView** tab and provide the following information.

Field	Description
Database User	The MarkView schema user.
Database Password	The MarkView schema user password.
Database Host	The TNS alias name that was configured in the TNS names file (such as tnsnames.ora) for the database instance of the MarkView schema.
MarkView User	The MarkView user: • Must be a member of a group with Scan privileges in MarkView, such as the SCAN USERS group • Must be a user in Oracle with invoice creation permissions. The MarkView User must also have a corresponding Oracle Security (FND_USER) record. See Designate an Oracle user for MarkView Invoice Import for Oracle Open Interface (for Kofax Transformation Modules only).
MarkView Password	The MarkView schema user password.
Workstation Serial #	WEB_CLIENT

   e. Select the **Import** tab and provide the following information:

Field	Description
Import Source	Select **MVCONNECTOR**.
Server Parameter	Select **170 MarkView ocrInvoice**.
Parse XSL Transform File	Select the default (KofaxCapture82parse.xslt). The .xslt files are located in the bin directory where Kofax Capture is installed.
Import XSL Transform File	Select the default (KofaxCapture82importserver.xslt).

   f. Click **OK**.
9. Repeat this procedure on all workstations running batches for export to MarkView.

Installing Kofax MarkView Export Connector automatically registers it with Kofax Capture.

About MarkView Kofax Transformation Modules Project templates

MarkView automatically installs the project template "MarkView KTM Invoices 50" in `C:\KTM\Markview`. When you customize the project, create a new runtime version of the project directory that stores the MarkView Kofax Transformation Modules project fpr file and all the files needed for the project.

Follow the instructions in this section to prepare the project template and batch class templates. For more information, see the user documentation for Kofax Transformation Modules and Kofax Capture.

Prepare the Kofax Transformation Modules project template for use

1. Ensure that you have a read-write access to the Kofax Transformation Modules project:
   a. In Windows, navigate to your Kofax Transformation Modules project folder, such as `<MarkView_KTM_project>`.
   b. Select the Kofax Transformation Modules project and right-click **Properties**.
   c. Select the **General** tab and clear **Read-only**.
   d. Select **Apply changes to this folder subfolders and files** and click **OK**.
   e. Click **OK**.
2. Start Kofax Transformation Modules Project Builder.
3. Open the Kofax Transformation Modules project:
   a. Select **File** > **Open Project**.
   b. Locate the MarkView Kofax Transformation Modules Invoices project folder, such as `<MarkView_KTM_project>`.
   c. Open the MarkView Kofax Transformation Modules Invoices 50 project file.
4. Click **Save Project As** and save the edited project to a new name.
   MarkView creates a new directory under `<MarkView_KTM_project>`, such as `<MarkView_KTM_project>\MyProject` and stores the Kofax Transformation Modules project fpr file and all the files needed for the project.
5. Select **Project** > **Script Variables** and set the following script variables:
   - **Project type** : Enter Oracle.
   - **Oracle Version** : Enter the Oracle version.
   - **Demo**: Select True or False (set to False when connecting to a live MarkView environment).
   - **DatabaseDataSource**: Specify the connection string for the Oracle database where the MarkView schema is located in the format of tns_names_entry.SID.
   - **DatabaseUID**: Enter the MarkView schema name.
   - **DatabasePWD**: MarkView database password.
6. For R12 environments, point the **TaxCodes** database to a blank TaxCodes.txt file.

The data export service properties for **TaxCodes** do not apply to R12. However, for the Oracle R12 environment, you need to point the database to a blank TaxCodes.txt file to prevent Kofax Transformation Modules project validation errors.

- Create a blank TaxCodes.txt file in your Kofax Transformation Modules project folder, such as `<MarkView_KTM_project>\KTMSourceFiles\Databases`.
- In the Kofax Transformation Modules project, select **Project** > **Project Settings** > **Databases**.
- Select **TaxCodes** and click **Properties**.
- Specify the full path to the blank text file. For example, `<MarkView_KTM_project>\KTMSourceFiles\Databases\TaxCodes.txt`.

7. Set the **LineItems** properties:
   a. Select **Project** > **Project Settings**.
      The **Project Settings** window opens.
   b. Select the **Tables** tab.
   c. In the **Table Models** area, highlight **LineItems** and click the **Edit Table Model Properties** icon  .
      The **Properties** window opens.
   d. In the **Visible** column, enable the check boxes for the following fields for Oracle EBS 12.x:
      - **R. Code**
      - **Tax**
      - **Tax Status**
      - **J. Code**
   e. In the **Visible** column, clear the check boxes for the following fields for Oracle EBS 12.x:
      - **Receipt Year**
      - **Service Entry Sheet Number**
      - **Service Entry Sheet Line Number**
      - **Tax Code**
   f. Click **OK** to close the window.
   g. In the Project Tree panel, navigate to **Project** > **Project Class** > **Invoice** > **Fields**.
   h. Double-click the **LineItems** field definition or right-click **LineItems** and select **Properties**.
      The **Properties** window opens.
   i. In the **Always Valid** column, enable the check boxes for the following fields for Oracle EBS 12.x:
      - **Receipt Year**
      - **Service Entry Sheet Number**
      - **Service Entry Sheet Line Number**
      - **Tax Code**

j. In the **Always Valid** column, clear the check boxes for the following fields for Oracle EBS 12.x:
   - **R. Code**
   - **Tax**
   - **Tax Status**
   - **J. Code**

k. Click **OK** to close the window.

8. (Optional) If you need to set the default Organization ID value, configure the DefaultOrgId variable.

   For example, if the **Organization ID** field is blank, the vendor list is not filtered by Organization ID correctly. The DefaultOrgId variable value used by Vendor Locator (VL locator) filters vendors.

   a. Navigate to **Project** > **Script Variables**.

   b. In **Name**, locate **DefaultOrgId**.

   c. For the **DefaultOrgId** variable, set the appropriate Organization ID value and click **OK**.

9. (Optional) If you do not want to delete extracted lines for Non-PO and Pre-Approved Invoices, in **Project** > **Script Variables**, set **AfterExtractDeleteLineItems** to **False** and click **OK**.

Validate the Kofax Transformation Modules project

1. Select **File** > **Validate Project**.
   Kofax Transformation Modules displays any error messages related to the project.
2. If you see database validation warning messages, reestablish links in the project to correct the database text files.

   a. Select **Project** > **Project Settings**.

   b. Select the **Databases** tab. Find and correct any database validation issues.

3. If you see library errors, reestablish links in the project to correct the dictionary text files.

   a. Select **Project** > **Project Settings**.

   b. Select the **Dictionaries** tab.

   c. Select the dictionary with validation errors and click **Properties**.

   d. In the **Referenced import file** box, select the text file of the server with the same name as the dictionary (such as `<MarkView_KTM_project>\KTM Source Files\Dictionaries\DocumentType_Validation.txt`) and click **OK**.

   e. Click **Import** to import the dictionaries.

4. Repeat the validation until the process no longer generates errors.
5. If you want to change the default online learning folder defined for the Kofax Transformation Modules project.

   a. Select **Project** > **Project Settings**.

   b. Select the **General** tab.

   c. Under **Online Learning**, select **Enable online learning**.

   d. In the **Path to online learning** box, browse to the appropriate folder (such as `C:\KTM \OnlineLearning_MarkView`) and click **OK**.
6. Select **File** > **Save Project Settings**.
7. Click **File** > **Exit** to close **Project Builder**.

About Kofax Capture batch class templates

The following batch class templates are available when imported:

- MarkView Document: Used to separate documents that do not go through Kofax Transformation Modules.
- MarkView Invoice: Used to separate documents that go through Kofax Transformation Modules.

The batch class templates are set up with batch fields based on Kofax Capture Values, such as Batch Name, Batch ID, Batch Creation Date, Batch Creation Time, and Scan Operator.

Import the batch class templates

1. Log in to Kofax Capture as an administrator.
2. Select **Import**.
3. In the **Open** window, select `<MarkView_KTM_project>\Markview.cab` and click **Open**.
4. In the **Import/Export** window, click **OK** when the unpacking is completed.
5. In the **Import** window, click **Add All**.
6. Select **Save duplicates to new name**.
7. Click **Import**.
8. Follow the prompts to save the batch classes to a new name.
9. Click **OK** when the import is completed.

Prepare the batch class templates

1. Highlight the MarkView Document batch class.
2. Select **Properties**.
3. On the **Separation and Form Identification** tab, select **Custom**. In the list, select **MarkView Bar Code Separators** and click **Edit Profile**.
   The **Custom Separation and Form Identification Profiles** window opens.
4. Enter the following values:
   - Enable **Bar Code**.
   - In the list, select **MarkView Bar Code**.
   - Set **Found on stand-alone separator sheet** as follows:
     - To discard the bar code cover sheet after import, select this option.
     - To keep the bar code cover sheet with imported documents, deselect this option.
   - In the **Search Text** field, enter:
     ^(CP|DT)ID-
   - Enable **Treat search as regular expression**.
5. Click **Save** and **Close**.
6. Click **Apply**.

7. Select the MarkView Invoice batch class and repeat steps 2 through 6.

Prepare Kofax Import Connector to use MarkView Bar Code separators

1. From Kofax Capture Administration, highlight the MarkView Document batch class.
2. Expand the batch class to import through Kofax Import Connector until you see Sample Page 1 with a bar code.
3. Right-click **Page Level Bar Codes** and select **Properties**.
4. On the **Available Fields** pane, select **BarCode**, click **Add**, and click **Apply** to add the Bar Code index field.
5. Highlight the MarkView Document batch class.
6. Select **Properties**.
7. On the **Separation and Form Identification** tab, select **Custom**. In the list, select **MarkView Bar Code Separators12** and click **Edit Profile**.
   The **Custom Separation and Form Identification Profiles** window opens.
8. Enter the following values:
   - Enable **Bar Code**.
   - In the list, select **MarkView Bar Code12**.
   - Set **Found on stand-alone separator sheet** as follows:
     - To discard the bar code cover sheet after import, select this option.
     - To keep the bar code cover sheet with imported documents, deselect this option.
   - In the **Search Text** field, enter:
     ^(CP|DT)ID-
   - Enable **Treat search as regular expression**.
9. Click **Save** and **Close**.
10. Click **Apply**.
11. Select the MarkView Invoice batch class and repeat steps 2 through 10.

Synchronize MarkView batch classes with the Kofax Transformation Modules project

1. Open the Kofax Capture Administration module.
2. On the **Batch** tab, right-click the **MarkView Invoice** batch class and select **Synchronize Kofax Transformation Project**.
3. In the **Synchronization Tool** window, select the **Classes** tab.
4. Select **File** > **Load Project**.
5. In the **Project File** window, open the project (the .fpr file).
6. When the system notifies you that you are replacing the project, click **Yes** to keep the existing class and field settings.
7. Click **Next Step**.
   The **Synchronization Tool** window displays data in two columns: **Extraction Field** and **Index Field.**

8. If you have Kofax Capture 10, verify that Unit Price is set correctly in both the **Extraction Field** and **Index Field** columns:
   a. Scroll down in the **Extraction Field** list until you see **Unit Price**.
   b. If necessary, use the drop down list to change the value in the **Index Field** column to **Unit Price.**
9. Click **Next Step**.
10. Click **Synchronize**.
11. When synchronization is complete, verify the batch class image folder location.
    a. Right-click the batch class and select **Properties**.
    b. In the **Batch Class Properties** window in the **Image folder** field, verify the path.
12. Click **OK** to save and exit.

Set up scan users

You must configure a Kofax Capture scan user and a MarkView scan user. Otherwise, the scan operation fails and generates an error message.

- See the *Kofax Capture Administrator's Guide*, Administration Module, for information about using the Kofax Capture Administration interface to add and configure a Kofax Capture scan user.
- See the *Kofax MarkView Administrator's Guide, Volume 1* for information about using the MarkView Administration interface to add a MarkView scan user.

Scan user requirements:

- The Kofax Capture scan user and the MarkView scan user must have the same name.
- In MarkView, the scan user must be a member of a MarkView group with scan privileges, such as the SCAN USERS group.

> If separate users will perform Kofax Transformation Modules validation, add the validation users to the SCAN USERS group as well.

Set up Kofax MarkView Export Connector

After you associate a document class with a batch class in Kofax Capture, specify and set up Kofax MarkView Export Connector to use when exporting your documents.

1. Start Kofax Capture Administration.
2. Select the **Batch** tab.
3. Expand the batch class to view associated document classes.
4. Right-click the **MarkView Document class** and select **Export Connectors**.
   The **Export Connectors** window lists all available export connectors. Available export connectors are those that are registered with Kofax Capture.
5. Under the **Available Export Connectors** column on the left side of the window, select **Kofax MarkView Export Connector**.
6. Click **Add** to add **Kofax MarkView Export Connector** to the list of assigned export connectors.

7. In the **Assigned Export Connectors** section, select **Kofax MarkView Export Connector** and click **Setup**.
8. In the **Kofax Capture Export Connector - MarkView** window, specify the settings for exporting documents.
   - **Name**: MarkView Document EC
   - **Export Settings Instance**: MarkView Document
   - **Skip first page of each document**: Clear this check box
   - **Threshold**: Select **Enable** and change the **Brightness level** and **Contrast level** values, if required.
9. Click **Apply** and click **OK**.
10. Close the **Export Connectors** window.
11. Right-click the MarkView Invoice class and select **Export Connectors**.
    The **Export Connectors** window lists all available export connectors. Available export connectors are those that are registered with Kofax Capture.
12. Under the **Available Export Connectors** column on the left side of the window, select **Kofax MarkView Export Connector**.
13. Click **Add** to add **Kofax MarkView Export Connector** to the list of assigned export connectors.
14. In the **Assigned Export Connectors** section, select **Kofax MarkView Export Connector** and click **Setup**.
15. In the **Kofax Capture Export Connector - MarkView** window, specify the settings for exporting invoices, such as:
    - **Name**: MarkView Document EC
    - **Export Settings Instance**: MarkView Invoice EC
    - **Skip first page of each document**: Clear this check box.
    - **Threshold**: Select **Enable**
16. Click **Apply** and click **OK**.
17. Close the **Export Connectors** window.

Set up Database Validation for batch classes

Perform the following procedure for each MarkView Document and MarkView Invoice class. Depending on the number of database tables in your environment, changing between tabs in this process can take a long time.

1. In Kofax Capture Administration, expand the batch class, right-click the document class and select **Database Validation**.
2. Click the Browse button and select the ODBC Datasource that you created for this environment.
3. Select **Properties**.
4. Update the user name and password.
5. When prompted that changing the value will break current mappings, click **Yes**.
6. On the **Table Settings** tab, select the following values:
   - **Index field to validate**: **Kofax.Separation.BarCodeValue**
   - **Validate against table**: **MV_BAR_CODE_TYPE**

- **Match Column**: **BAR_CODE_TYPE_ID**

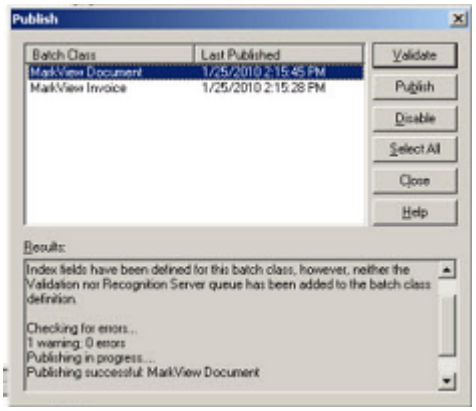
7. If you use Kofax Capture Network Server, select the **KCN Server** tab and enable the **Use KCN Server for validation** check box.
8. Click **OK**.
9. Click **Close**.

Publish a batch class

After you select the batch class settings, publish the batch class. The publishing process checks the integrity of the settings in your batch class and makes the batch class available for use. If problems exist with any of the settings, error and warning messages appear along with the recommended actions for fixing the problems.

If you edit your batch class, publish your batch class again before you use the batch class. Changes are not applied to batches created before the new publication date.

1. Open the Kofax Capture Administration module.
2. Select the **Batch class** tab.
3. Right-click the batch class and, on the context menu, select **Publish**.
   The **Publish** window opens.
4. Select your batch class and click **Publish**. Kofax Capture checks all of your batch class settings and displays the results in the **Results** box.



- If no problems exist, the message "Publishing successful" appears.
- If problems exist, error and warning messages appear along with the recommended actions to resolve the problems. Perform the recommended actions, and then try to publish the batch class again.

After successfully publishing, you can create batches based on your batch class. As your batches flow through your Kofax Capture system, they are routed from module to module. The batch class definition specifies the modules that process a batch and the order that processing occurs.

Process batches in Kofax Capture

Use the following information to enhance your understanding of exporting batches. See the Kofax Capture documentation or help for more information.

Set up scanning for MarkView documents

1. Log in to Kofax Capture Batch Manager as Admin.
2. Create a new batch.
3. In the **Create Batch** window, enter a batch name and description (optional).
4. In the **Batch Properties Queues** list, select **Scan**.
5. In Batch Manager, select the batch you just created and click **Process Batch**. The **Kofax Capture Scan** page opens.
6. In the left-hand panel, select a configured scanner as the source.
7. Scan a document with a bar code cover page.
8. To split a multi-page document, select the number of pages per document and optionally select **Retain document properties in split documents**.
9. Click **Split**.
10. In Batch Manager, click **Process Batch** to send the batch to Kofax Transformation Modules Server.
11. Click **Process Batch** to send the batch to Kofax Transformation Modules Validation.
12. Click **Process Batch** to send the batch to **Learning Server**.
13. Click **Process Batch** to send the batch to Export, and make the scanned documents available in MarkView.

Export batches

The Kofax Capture Export module processes batches based on the settings of the associated batch classes. The Export module exports documents and index data, using the properties defined during the export connector setup.

The Kofax Capture Export module usually runs as an unattended module on a Windows workstation, periodically polling the Export module for available batches. Configure the Export module to run during off-hours to avoid impact on the throughput of Kofax Capture and the network system.

Start the Export module

On the Start menu, select **Programs** > **Kofax Capture** > **Export**.

All batches queued for export are exported after initiation of the Export module.

Export a batch

Start the Kofax Capture Export module. The module main window opens. Any batches waiting to be exported are processed.

Once your batch is exported, it is removed from Kofax Capture. If any documents or pages are rejected, the batch is routed to the Kofax Capture Quality Control module.

Exit the Export module

On the Batch menu, select **Exit**.

Set up Kofax Capture and Kofax Transformation Modules for MarkView

About Auto-Categorization

Auto-Categorization allows MarkView batch classes to bypass categorization in Kofax Capture to allow Kofax Transformation Modules to perform the categorization. Depending on the batch class property setting specified for RequireCategorizationInCapture, Kofax Capture handles batch classes as follows:

- 1 (ON): Prevents documents in the batch classes from moving out of Kofax Capture unless they are completely categorized.
- 0 (OFF): Allows documents in the batch classes to continue from Kofax Capture without being categorized.

If a document that has no categorization reaches Kofax Transformation Modules, Kofax Transformation Modules tries to categorize the document automatically based on extracted values.

Prerequisites:

- The Kofax Transformation Modules version is in compliance with the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site.
- The Kofax Transformation Modules validation station is connected to the MarkView database.

Set the default document type for invoices without PO numbers

1. Open Kofax Transformation Modules Project Builder.
2. Open your MarkView Kofax Transformation Modules project and select **Script Variables**.
3. Near the bottom of the script variables table, locate **DefaultNonPODocumentType**.
4. Set the value to use as the default document type for invoices that enter the system without a PO number. Supported values include:
   - NON-PO INVOICE
   - PRE-APPROVED INVOICE

   By default, Kofax Transformation Modules uses NON-PO INVOICE, which you can override.
5. Click **OK**.
6. Save the project.

Set the RequireCategorizationInCapture property

The RequireCategorizationInCapture property specifies how Kofax Capture processes MarkView batch classes.

1. Open **Kofax Capture Administration**.
2. Right-click the **MarkView Invoice** or **MarkView Document** batch class and select **Properties**.
3. Select the **General** tab and in the **Batch Fields** table, locate RequireCategorizationInCapture.

4. Set the Default setting to one of the following:
   - 1 (ON): Requires categorization
   - 0 (OFF): Does not require categorization
5. Click **OK**.
6. Save the batch class and proceed as follows:
   - For a MarkView Invoice batch class only, synchronize the batch class to the project and publish the batch class.
   - For a MarkView Document batch class, publish the batch class.

About the MarkView Workflow Agent

The MarkView Workflow Agent enables Kofax Capture to handle MarkView batches introduced through non-scan Kofax Capture products in the same way that Kofax Capture handles batches introduced through Kofax Scan.

Kofax Capture processes MarkView batches based on the batch class settings. For example, in a batch imported through Kofax Import Connector:

- If the Workflow Agent cannot communicate with MarkView, Kofax Capture routes the batch to the Quality Control queue.
- If AlwaysStopForReview specifies that all documents go to review, Kofax Capture routes all imported batches to the configured review queue.

Workflow Agent batch class properties

Two MarkView batch class properties define how Kofax Capture processes MarkView batch classes imported through an application other than Kofax Scan. These properties do not affect MarkView batch classes imported through Kofax Scan.

- AlwaysStopForReview: When enabled, routes every document in the batch to review in Kofax Capture, whether or not the documents have a valid bar code.
  - Disable (default): 0 (False)
  - Enable: 1 (True)
- ReviewQueue: Specifies the review queue to which Kofax Capture routes documents in the batch that need review.
  - Scan (default): Routes documents to the Scan queue
  - QC: Routes documents to the Quality Control queue

To change how Kofax Capture processes a MarkView batch imported through an application other than Kofax Scan, edit the batch class properties for the destination associated with the connection. Workflow Agent properties appear on the Batch fields tab.

If you access the Document fields tab and change or add a value for the BarCode or Kofax.Separation.BarCodeValue fields, the Kofax.Separation.BarCodeValue always takes precedence.

See the Kofax Import Connector documentation for information about editing the destination.

Interaction between Kofax Capture and Workflow Agent batch class properties

The combination of batch class settings that you use determines how Kofax Capture processes non-scanned MarkView Invoice batch classes.

- If you set AlwaysStopForReview to 1 (ON), non-scanned documents always stop for review in the defined review queue.
- If you set AlwaysStopForReview to 0 (OFF) and RequireCategorizationInCapture to 1 (ON), non-scanned documents only stop for review if Kofax Capture cannot decode the bar code value.

For MarkView batch classes imported through an application other than Kofax Scan, the RequireCategorizationInCapture property appears on the Batch Fields tab of the destination that handles the batch.

Integration with Kofax Import Connector

Before configuring the integration between MarkView and Kofax Import Connector, verify that you have the following installed and configured:

- MarkView
- Kofax Capture
- Message Connector

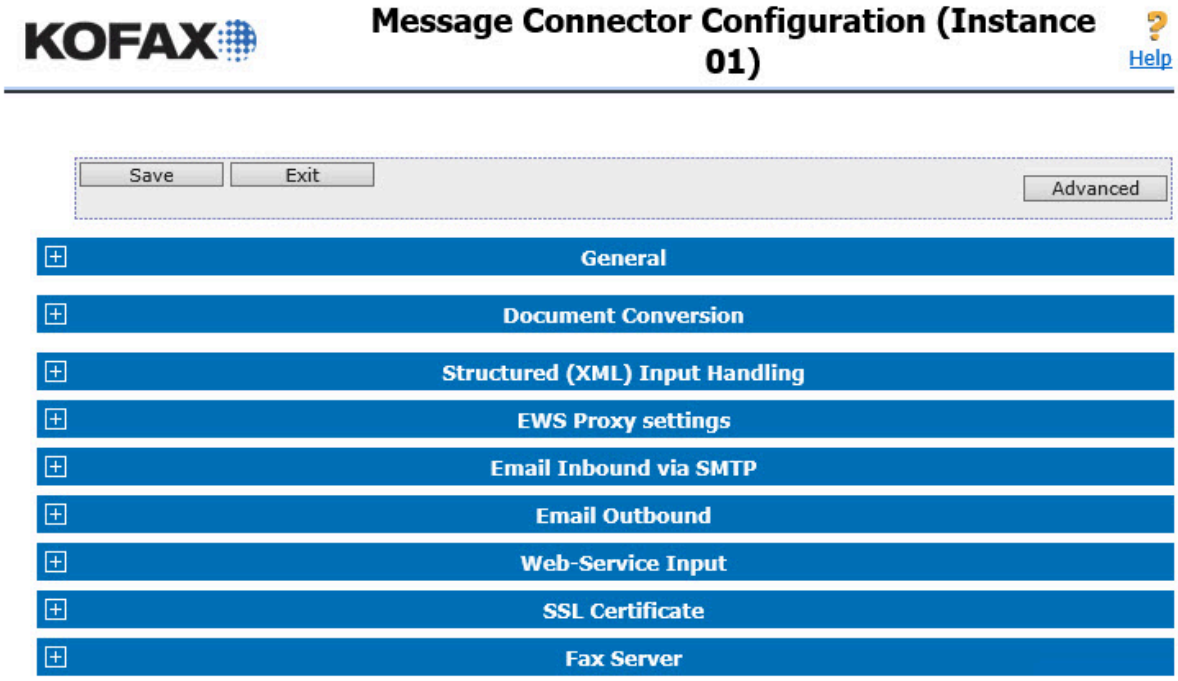
For information about installing and configuring Message Connector and Kofax Capture Plug-In, see the documentation provided with the product from the fulfillment site.

The integration process involves completing the following processes in Kofax Import Connector and Kofax Capture Administration:

- Configure Message Connector
- Set up destinations on page 188
- Configure connections on page 192

Configure Message Connector

1. On the Start menu, select **All Programs**.
2. Select **Kofax** > **KIC-Electronic Documents** > **Message Connector Configuration**.
   If a user access control prompt appears, click Yes to allow the configuration to proceed.
   By default, the window displays a list of basic features.
3. Click **Advanced**.



4. Expand the **General** panel and configure the following options.

Option	Setting
Operator Email	Specify the administrator email address to receive a copy of messages that fail conversion.
Email From	Specify the email address from which the system sends notifications.
Keep Failed	Failed inbound messages are those not imported into Kofax Capture and not forwarded to an operator. If you select the option to keep failed messages, the messages are treated as pending. To keep from running out of disk storage space, process or manually delete these messages. • Disable: For the best result, clear the check box for this option. • Enable: Stores messages on the message connector server. You must manually delete stored messages.
Storage Size	Enter the amount of disk space in MB reserved for storing messages. • Minimum: 10 MB • Maximum: 64,000 MB For SMTP protocol, use the default. Allocate enough space for mail storage. For POP3 with KeepFailed disabled, allocate enough space for active email processing.
Storage File	Enter the file name and location for file storage. The default file location is: `C:\Program Files\Kofax\KIC-ED\MC\Storage.bin`. Monitor the size of this file and ensure that it does not exceed 50% of the available disk space.

Option	Setting
Prefetched Messages	Enter the number of messages that the connector should prefetch from all boxes, folders, and other passive input methods. • Minimum: 1 • Maximum: 100
Own Computer Name	For SMTP and Web Services, enter the name of the computer or domain where you will install the solution.
Load Balancer Support	For SMTP and Web Services input, select the supported load balancer.

5. To convert Microsoft Word plain text (.txt) or html files, expand the **Document Conversion** panel and configure the following options.

Option	Setting
MS Office Documents	Select the software to use for converting Microsoft Word and plain-text (.txt) documents.
MHTML and HTML Documents	Select the software to use for converting MHTML and HTML documents.
MS Office User	If you use MS Office for the conversions, Kofax recommends that you use a dedicated, named user for production mode. To do so, select **This User**.
Name	The Windows user name for MS Office. Verify that the user has the correct privileges to use Kofax Capture as well as MS Office.
Password	The password for the selected Windows user. Set the password to never expire.
Custom Extension List	Enter a list of extensions, separated by spaces, for file types to convert to PDF using a customizable script. Create the script in the Scripts sub-folder with the name "CustomToPdf.bat".

6. Expand the **Email Outbound** panel and configure the following settings, which send notifications to MarkView.

Option	Setting
SMTP Server Mode	Select how to locate the outbound SMTP server.
SMTP Smart Host	Enter the domain name or IP address of the SMTP host for outgoing messages. (Use a fully qualified mail server name.)
TCP Port	Specify the port on the SMTP host for outgoing messages (use 25).
User ID	Enter the User ID for SMTP authentication.
Password	Enter the password associated with User ID for SMTP authentication.
SSL Active	Select the setting for Secure Sockets Layer protocol.

7. Click **Save** and **Exit**.
8. Restart the service to activate the changes.

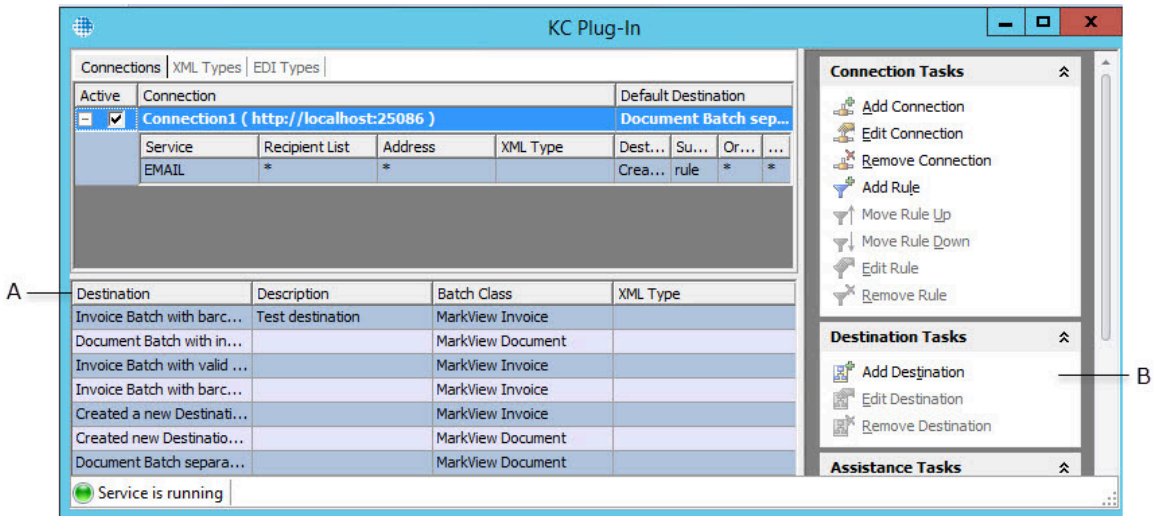
Configure destinations and connections

Configuring the Kofax Capture Plug-In to work with MarkView requires you to set destinations, configure connections, and map import types to destinations.

Set up destinations

For details about configuration settings, see the Kofax Import Connector documentation.

1. On the Start menu, select **All Programs** > **Kofax Capture xx.x** > **Administration** (where xx.x is the current version of Kofax Capture).
   If prompted to log in, do so.
2. Select the **Electronic Documents** tab and click **Configuration**.
3. Proceed as follows:
   - To create a destination: Go to the right-hand pane of the window, locate **Destination Tasks** and click **Add Destination**.
   - To edit a destination: In the **Destinations** list, select a <destination> to edit; in the right-hand pane, locate **Destination Tasks** and click **Edit Destination**.



A—Destinations List

B—Destination Tasks

4. In the **Destination configuration** window, complete the fields on the **Import settings** tab with the following information.

Panel	Settings
Destination information	• Name: Enter a name for the destination. • Description: Enter a description.

Message content options	• Import content:
	  • Attachments: Imports only email attachments
	  • Body and attachments: Imports the body of the email and the attachment
	  • Body only: Imports only the body of the email and no attachments
	• Include original content: Enable to include original message content.
	• Include complete message as EML file: Enable to include original content in EML format.
	• Originals import mode: If you enable "Include original content" or "Include complete message as EML file," select whether to import the content to Kofax Capture or to save the content to a Kofax Capture batch folder.

Import mode	• Convert to: Select the file format to which the Kofax Capture Plug-In should convert files. • Conversion mode: If you select a "Convert to" file format, specify whether to convert the both the message body and attachment (All Content) or to convert only non-image parts of the message. • Image format: 300x300 B/W • Message rendering VRS: None
Batch settings	• Batch size: 1 (Default) • Batch timeout: 300 (Default) • Batch priority: 5 (Default)

5. Select the **Import mappings** tab, and complete the form using the following information.

Option	Setting
Batch class	• MarkView Document: Recommended setting • MarkView Invoice: For importing into Kofax Transformation Modules For environments with multiple instances, select the instance batch class to which to import.
Document class	Select a document class based on your Batch class selection. For example, if you select the MarkView Invoice batch class, select the MarkView Invoice document class. • MarkView Document • MarkView Invoice To configure your system to read a bar code on the cover page of the imported document, select **(Loose Pages - No document will be used.)**.
Create document per attachment	• Enable: Recommended setting • Disable: To combine all incoming email attachments as a single MarkView document
Folder class	Undefined: Recommended setting
Form type	Select the Form type based on your Batch class selection. For example, if you select the MarkView Invoice batch class, select the MarkView Invoice form type. • MarkView Document • MarkView Invoice To configure your system to read a bar code on the cover page of the imported document, select **(Undefined Form Type - No Form Type will be used.)**.

6. At the bottom of window, change the settings for sub tab fields as described next. For fields not described, keep the default settings. For information about using RequireCategorizationInCapture, AlwaysStopForReview, and ReviewQueue, see Set up Kofax Capture and Kofax Transformation Modules for MarkView on page 183.

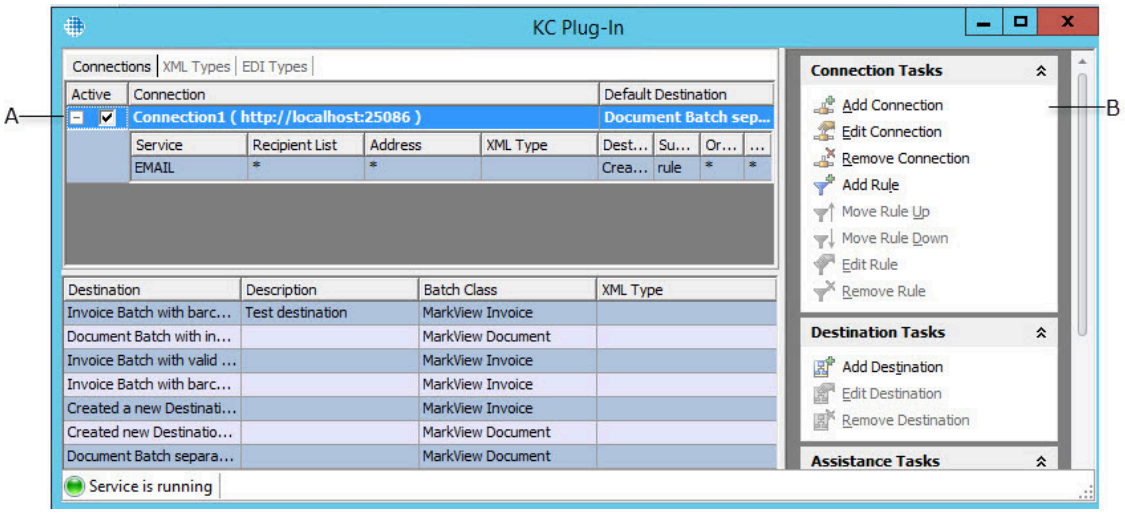
Sub Tab Name	Field or Index Name	Value
Batch Fields	AlwaysStopForReview	Disable (default): 0 (FALSE) Enable: 1 (TRUE)
	BatchName	The name you specify appears as the origin information on MarkView documents. If internal users forward emails that have informative subject lines, set this value to Message Field > KfxMessageSubject.
	Kofax.MarkView. BarCodeSepSearch	^(CP|DT)ID-

Sub Tab Name	Field or Index Name	Value
	MailTo	KfxRecipientTo If you enter a list of addresses, only the first address in the list is used.
	MailCc	Not used.
	MailFrom	KfxOriginatorNumber
	MailFromName	KfxOriginatorName
	MailSubject	KfxMessageSubject
	RequireCategorizationInCapture	• 1 (ON) • 0 (OFF)
	ReviewQueue	Scan (default) QC
Folder Fields	Keep the default settings	
Document Fields If you selected **(Loose-Pages - No document will be used.)** as the **Document Class**, the **Document Fields** are empty.	BarCode	• Set a constant value using a bar code string from the bar code cover sheet. • To route documents to manual review, create a cover sheet for an Uncategorized Document and use that bar code string.
	Comment	Leave blank. This option creates a sticky note on the MarkView document with the comment that you specify here.
	Kofax.Separation.BarCodeValue	The value you set in this field takes precedence over the value set in the BarCode field. • Set a constant value using a bar code string from the bar code cover sheet. • To route documents to manual review, create a cover sheet for an Uncategorized Document and use that bar code string.
	ScanStationID	For location filtering in MarkView, set to a location name, such as TORONTO, HOUSTON.
Advanced Fields	Leave fields empty.	

7. Click **OK**.

Configure connections

1. In the right-hand pane of the Kofax Capture Plug-In window, locate the **Connection Tasks** and proceed as follows:
   - Click **Add Connection**.
   - In the top half of the window, select a connection to edit, go to the Connection Tasks pane, and click **Edit Connection**.



A—Connections List

B—Connection Tasks

2. In the **Connection configuration** window, configure the following options:
   - **Connection name**: Use a generic name
   - **Message Connector URL**: Enter the URL of the computer where Message Connector is running.
     - For a secure connection, use https://<address:port>.
     - For a non-secure connection, use http://<address:port>.
   - **Default destination**: Specify the default destination to associate with import connections that you configure.
3. To validate the connection, click **Test Connection**.

> If validation fails, you might need to perform additional configuration. See the Kofax Import Connector documentation or consult with your Kofax Capture administrator.

4. Under **Import Connectors**, click **Add** and select **Mailbox Import** to set up a mailbox import connector.

   Set up one mailbox per organization-workflow-priority combination.

Option	Setting
Display name	Enter a descriptive, unique <name> for this mailbox.
Host	Enter the POP3 or IMAP <host name> of the inbound mail server.

Option	Setting
Protocol	Select the protocol to use for accessing the mailbox. • IMAP • POP3
SSL	Select the security option to use: • NEVER • ALWAYS • NEGOTIATE
User name	(Required) Enter the User name associated with the mailbox.
Password	(Required) Enter the Password associated with the user name for the mailbox.

For more information about setting up access to mailboxes and other import connectors, see the *Kofax Import Connector Administrator's Guide*.

5. To test the settings, click **Test Mailbox**.
   You should see a successful connection message.
   If the test fails, check with your mail server administrator to verify that you supplied the correct information.
6. Click **OK** to save the import connector settings, and **OK** again to save the Connection settings.
7. Restart the Kofax Capture Plug-In service to activate your configuration changes.

Map mailboxes to destinations

Map each mailbox to a corresponding destination using the following procedure as a guideline. For details, see the Kofax Import Connector documentation.

1. In the Kofax Capture Plug-In window, select a <connection>, go to the **Connection Tasks** pane, and click **Add Rule**.
2. Complete the form using the following settings:

Option	Setting
Service filter	Select **EMAIL**.
Recipient list	Enter the <email address> of those to receive documents from this mailbox. Separate multiple email addresses with commas.
Address	Enter the <email address> from which Message Connector receives the document. Kofax Capture imports documents with this address to the configured destination.
Destination	Select a <destination> in the list. If you do not see any destinations, see Set up destinations on page 188 to set up destinations.

3. Click **OK**.
4. If prompted to restart the service, click **Yes**.

Configure the email subject to override bar codes

In addition to configuring email accounts for specific categorizations, Kofax Capture can read the text version of a MarkView bar code string. To enable this feature, complete the following procedure.

Verify that you have a dedicated email server that can be polled from the Kofax Capture server for the subject line override.

1. Configure the mailbox.
2. Set up a new destination (see Set up destinations on page 188).
3. On the **Destination configuration** window, select the **Import mappings** tab.
4. Under **Document fields**, locate the **BarCode** row or the **Kofax.separation.BarcodeValue** row.
5. In the row to set, click the **Value** column and select **Message Fields > KfxMessageSubject**.
6. (Optional) If you reuse the field for location filtering, add a location to the ScanStationID Value field.

To prevent the need for each user to generate a bar code for each use, an administrator can generate a set of bar codes in production and distribute them along with a chart. For example:

- OU (Organization): ORG1
- Document Type: PO Invoice
- Priority: Normal
- Mail Subject (Bar Code String): DTID-10$CPID-190846\

Use the bar code override

To email copies of invoices into the MarkView workflow when you do not have a dedicated mailbox for the document type-organization-priority combination, send the attachment in an email to the address that you configure using the instructions in Configure the email subject to override bar codes on page 193.

1. Using the chart provided, look up the bar code string based on the Organization (OU), Document Type, and Priority.
2. Copy and paste the bar code string into the email subject line. Verify that you do not add leading or trailing characters to the string.
3. In the body of the email, add information (such as the document type, organization, priority, or notes) to help the administrator with troubleshooting in case the conversion fails.

Chapter 15

Integration with Kofax Analytics for MarkView

This chapter gives you information about settings needed to maintain and optimize Kofax Analytics for MarkView performance if you plan to use this Kofax product. Follow the steps in this chapter after you installed Kofax Analytics for MarkView according to the *Kofax Analytics for MarkView Administrator's Guide*.

About Kofax Analytics for MarkView

Kofax Analytics for MarkView is an extension of Kofax MarkView that produces a graphical business intelligence dashboard based on near real-time data collected during the batch processing workflow. Kofax Analytics for MarkView presents finance processes data in graphical and interactive views.

Kofax Analytics for MarkView is a browser-based product built on Kofax Insight. Kofax Insight is a process intelligence platform that monitors, analyzes and helps optimize your operational business activities to ensure compliance, eliminate risk and provide insight and visualization of all information.

Kofax Analytics for MarkView brings together data from the Oracle E-Business Suite system, MarkView, and Kofax Capture with Kofax Transformation Modules workflows to give you strategic information about your business activities. Kofax Analytics for MarkView provides the insight and metrics required to analyze the effectiveness of business processes.

With Kofax Analytics for MarkView you can:

- Prioritize daily activities
- Take advantage of available discounts
- Check for duplicate invoices and possible compliance violations
- Review invoice summary data
- Take action to meet key performance indicators
- Review invoice full history and status
- Optimize cash resources

Configure access to Kofax Analytics for MarkView

Configure your MarkView menu to access Kofax Analytics for MarkView from MarkView.

1. Log in to MarkView and navigate to **Administration** > **Module Admin**.
2. Select the **Menu Item** tab.
3. Scroll to the bottom of the page and click **Insert**.
4. Complete the form and click **Insert** again to save the changes.
   - **Menu Name**: Main Menu
   - **Menu Sequence**: Next available value for Main Menu items.
   - **Item Type**: URL
   - **Default Item Label**: The name that appears in the interface, such as Kofax Analytics for MarkView.
   - **Item Value**: The URL link to the Kofax Analytics for MarkView home page in the following format:

     `http(s)://<host>:<port>/Insight/View/`

     Where `<host>` is the name of the server where you installed Kofax Insight and `<port>` is the port used by Kofax Insight.
   - **MV Home Aware**: Y

When you add a menu item, the item remains inactive until you assign it to a user group. For more information about assigning menu items to User Groups, see the *Kofax MarkView Administrator's Guide, Volume 1*.

User authorization in Kofax Analytics for MarkView

The Kofax Analytics for MarkView viewer user is the same as the MarkView user.

Verify that a user profile meets the following requirements:

- The user is enabled in MarkView.
- The user is added to the MV Analytics user group.

  You can create a number of groups for Kofax Analytics for MarkView to add different set of organizations.
  When you create theKofax Analytics for MarkView user group, specify the group name as follows:
  "MV Analytics - xxx", where "- xxx" is a unique value.

- The MV Analytics user group is assigned for at least one organization in MarkView.

After a user is added to MarkView, verify that the viewer user follows the procedures in this section to ensure that data appears on the Kofax Analytics for MarkView viewer as expected.

1. To access Kofax Analytics for MarkView, open a web browser and enter the URL such as `http(s)://<host>:<port>/Insight/View`, where `<host>` is the name of the server where you installed Kofax Insight and `<port>` is the port used by Kofax Insight.

   The URL address is defined by the settings used for IIS during Kofax Insight installation.

2. Log in to Kofax Analytics for MarkView using the MarkView user name and password.
3. Verify that you have access to the predefined data for organizations.

   Kofax Analytics for MarkView supports all organizations that a user is authorized in MarkView and Oracle EBS.

User authorization for invoice actions in MarkView

Kofax Analytics for MarkView lets authorized users take actions on invoices. You can Increase Priority, Reassign, or Escalate an invoice.

The MarkView administrator sets the access to Kofax Analytics for MarkView invoice actions in MarkView.

Increase Priority

The Increase Priority action is available with standard MarkView installation. To set the access to the Increase Priority action:

1. Log in to MarkView and navigate to **Administration** > **MarkView Admin**.
2. Select the **Toolsets** tab and click **Add**.
3. Enter the toolset name such as Analytics Toolset and the sequence, and click **Save**.
4. To create new mapping between the new toolset and the existing MarkView tools, select the **Toolsets Tool** tab and click **Add**.
5. Click **Select Tool** and in the List of Values, locate the **Increase Priority** Tool.
6. Add the **Increase Priority** Tool to the appropriate Analytics Toolset and click **Save**.
7. Open User Groups and select the appropriate MV Analytics group or create a new one for users that must be authorized for Increase Priority action.
8. Open details, select the **Document Toolset Auths** tab, and click **Add** to add new document-toolset authorization mapping.
9. In the **Document Type** filed, select **ALL**.
10. In the **Toolset** field, select the toolset that you created for the Increase priority action such as Analytics Toolset and click **Save**.

After you added the **Increase Priority** Tool to the appropriate User Group, the members of this group are authorized to use the Increase Priority action in Kofax Analytics for MarkView.

Reassign

To set the access to the Reassign action:

1. Log in to MarkView and navigate to **Administration** > **MarkView Admin**.
2. Select the **Tools** tab and locate **Reassign Document** Tool in the list.
   - If you have the **Reassign Document** Tool, follow the same process to add the tool to the appropriate user group as for the **Increase Priority** Tool.

     After you added the **Reassign Document** Tool to the appropriate User Group, the members of this group are authorized to use the Reassign action in Kofax Analytics for MarkView.
   - If you do not have the **Reassign Document** Tool, select the **User Groups** tab and create a new MarkView group and add users.

     The user group name must be MV ANALYTICS REASSIGN which is case-insensitive.

Escalate

To set the Escalate Document action:

1. Log in to MarkView and navigate to **Administration** > **MarkView Admin**.
2. Select the **Tools** tab and locate **Escalate Document** Tool in the list.
   - If you have the **Escalate Document** Tool, follow the same process to add the tool to the appropriate user group as for the **Increase Priority** Tool.

     After you added the **Escalate Document** Tool to the appropriate User Group, the members of this group are authorized to use the Escalate action in Kofax Analytics for MarkView.
   - If you do not have the **Escalate Document** Tool, select the **User Groups** tab and create a new MarkView group and add users.

     The user group name must be MV ANALYTICS ESCALATE which is case-insensitive.

If you do not have Reassign Document or Escalate Document Tool installed in MarkView, Action History in MarkView Viewer does not display new items after reassign or escalate action in Kofax Analytics for MarkView.

Enable Kofax MarkView Export Connector notifications

If you want to use Kofax Analytics for MarkView with Kofax Capture and Kofax Transformation Modules, enable the integration after you install Kofax MarkView Export Connector. Perform the following steps for all systems where Kofax MarkView Export Connector is installed.

1. In the Kofax MarkView Export Connector installation directory, locate the Kofax.MarkViewExport.Notifier.dll.config file and open it for editing.
2. To enable Kofax Analytics for MarkView, locate the "EnableKofaxAnalytics" key and set the value to true as follows:

```
<appSettings>
            <add key="EnableKofaxAnalytics" value="true"/>
            ...
        </appSettings>
```

3. Save the .config file and reopen Kofax Capture.

Appendix A

Troubleshoot your installation

This appendix identifies conditions you might encounter and suggests ways to resolve them. For more information, see the Release Notes and the Kofax Knowledge Base.

Specify host names

The installer requires that you enter fully-qualified host names. A fully-qualified name consists of a host and domain name including the top-level domain. For example, if your top-level domain is mydomain.com, to specify the host myhost in the installer, enter:

myhostname.mydomain.com

Do not use localhost in your hostname fields when you run the installers. The applications will not function as expected.

JVM location errors

If you encounter problems related to locating a JVM, take the following steps:

1. Use the `java -version` command to check your environment path for a valid version.
   For the version supported, see the *Kofax MarkView Technical Specifications* document on the Kofax MarkView Product Documentation site.
2. If the version returned is not supported, specify the Java version to determine how your path resolves.

Invalid JDK errors

Errors related to an invalid JDK vary depending on your platform, but the problem is usually caused by the location of the JDK in the path. To resolve the problem, modify your path environment variable so that the JDK version appears before all other JDKs, JREs, and JVMs.

Too many open files

The error "java.io.FileNotFoundException: Too many open files" indicates that open files limit on your system should be increased.

UNIX: increase `ulimit nofile` setting (max number of open files).

Oracle Forms runtime errors

FRM-40654: Record Has Been Updated By Another User. Re-Query To See Change

You may see this error for the Oracle Quick Invoices form in Oracle EBS 12.x if you applied certain Oracle patches. Follow the steps in Step 11: Edit PRE_UPDATE, LOCK_ROW, and UPDATE_ROW procedures for Oracle EBS 12.x on page 93.

FRM-40735: PRE-RECORD trigger raised unhandled exception ORA-06502

```
FRM-40735: PRE-RECORD trigger raised unhandled exception ORA-06502.
-------------------------------------------------------------
ORA-01403: no data found
```

This is the result of a form compilation problem.

In MarkView for Accounts Payable you might see this error from **Invoices** > **Entry** > **Invoices** > **Actions** if you have an invoice listed.

In MarkView for Expense Management, you might see the form compilation error after opening the Working Folder and clicking the Open button, or from an Expense form, after clicking GetNext.

FRM-40819: System variable is not modifiable

You may see this error from Accounts Payable if you try to search by invoice number. This error may result from having compiled the modified Oracle form in Form Builder rather than the compiling the modified Oracle form from the command line as recommended. To fix the problem, recompile the modified form from the command line as described in the appropriate section:

- For the Invoice Workbench form, see Step 9: Compile the Invoice Workbench form on page 89.

MarkView Viewer slow performance

Documents scanned at above 300 dpi degrade the MarkView Viewer performance. Ensure that documents are scanned in at 300 dpi.

Problems with fonts in PDFs

To avoid problems with the appearance of some Annotations, ensure that fonts used by MarkView (New Times Roman and Arial) are installed on the client machines and servers. Linux environments often have issues because they generally have no fonts installed.

Troubleshoot AUSS

To recover from a catastrophic error, you can replace your AUSS data with a historic exported CSV profile file. See MarkView profile export and import on page 127. After that, select the **Force full synchronization** option when running the synchronization.

This does not replace regularly backing up your system.

Export or import fails

If the import or export fails:

- Check the CSV file data for invalid values in source system type, application name, source group, MarkView group name or MarkView role name.
- Check the profile name. Since AUSS identifies imported profiles by name, if you change the profile name when you edit the CSV file, you risk unexpected results when you import the CSV file.
- Check the path and file name to ensure that you have read/write/modify access to the file.

Inconsistency between user rights and the Everyone profile groups and roles

If you have inconsistencies between user rights and the Everyone profile groups and roles, do the following:

1. After you upgrade MarkView, on the AUSS user interface, delete all groups and roles from the Everyone profile, save changes, and recreate roles and groups.
2. Resynchronize users.

Log file

In case of unexpected results, check the usermgmt.log file.

End-dated user authorization in MarkView

When integrated with Oracle Source System and if the WEBCLNT_SEC_AUTH_TYPE preference is set to MV, the end-dated user may still have access to MarkView before the synchronization. The end-dated user can be authorized in MarkView within 24 hours regardless of the synchronization schedule. If the synchronization occurs after 24 hours, the user access is disabled.

You can disable the end-dated user access immediately by setting the **Disable Date** value in **MarkView Admin** > **User Profiles**.

User not synchronized after scheduled synchronization

Two common causes:

- The user profile was created manually. Check the settings. Run the synchronisation using the **Override manually created MarkView users** option with the selected **Force full synchronization** option. See Synchronization.
- The user's source group is not in AUSS. For information about adding source system groups, see Source System.

Indirect responsibilities deleted as a result of Role Hierarchy changes (Oracle EBS only)

If you use Oracle EBS as a Source System and Role Based Access Control (RBAC) is configured in Oracle EBS, incremental synchronization will not track Role Hierarchy changes correctly because Oracle EBS does not track such changes. For example, if a user has Role A and Responsibility B is connected to this role, the user will indirectly have Responsibility B and the respective record in the database. However, if Responsibility B is deleted from Role A in Role Hierarchy, the respective record for the user will not be end-dated but completely removed in Oracle EBS, so incremental synchronization will not be able to track such a change. In this case, use Force full synchronization option, to synchronize all the differences including indirect responsibilities deleted as a result of Role Hierarchy changes.

Test MarkView for Accounts Payable

To test the MarkView for Accounts Payable installation, enable only the standard MarkView functionality. If you receive errors, they are probably generated by Oracle applications or non-standard MarkView functionality.

Turn off custom packages

To ensure that Oracle Payables is running properly, disable custom MarkView packages and non-standard functionality as follows:

1. Open Oracle Applications.
2. On the Help menu, select **Diagnostics** > **Custom Code** > **Off**.

You can now run tests against Oracle Applications. Custom packages remain disabled until you enable them.

Appendix B

Migrate environments

Migrate your MarkView production environment to a non-production environment to test new functionality, train new users, or troubleshoot issues which you might encounter in your production environment. Use a third-party tool to clone the MarkView production database. Then, use the MarkView Migration utility to generate an SQL script to update the environment-specific MarkView URLs and design-time data on the non-production environment.

Also, you can use the MarkView Migration utility to move to a new application server without upgrading MarkView.

To migrate Kofax Analytics for MarkView from a production to non-production environment, additional setup is required. For more information, see the *Kofax Analytics for MarkView Administrator's Guide*.

- **Migrating Data to Existing Non-Production Environments**: If you already have a functioning non-production environment, refresh the database with a more recent copy of the production environment. See Migration Utility: Configure an existing non-production environment.
- **Migrating Data to New Non-Production Environments**: If you need a new non-production environment, see Configure a new non-production environment on page 206.

Migration Utility: Configure an existing non-production environment

Follow these steps before you use the Migration Utility:

1. Copy your production database schema to your non-production database.
2. Copy your production document server to your non-production document server.
3. Log in to a working MarkView environment (for example, your production environment) as an Administrator who is a member of the MODULE ADMINISTRATOR group.
4. Select **Administration** > **Migration Utility**.

Use the Migration Utility

1. Complete the values for your site using the following information.

Section	Field Name	Description
Application Server Post Migration	**Application Server**	• WebLogic • JBoss (use for WildFly and JBoss EAP)

Section	Field Name	Description
	Fully Qualified Hostname	Enter the fully qualified hostname of the target application server.
	HTTP Port	Enter the HTTP port of the target application server.
Configuration to be Updated to Reference Application Server Post Migration	**Preferences**	Select to update the MarkView preference URLs to use the target application server.
	Volume Paths	Select to update the MarkView volume paths to use the new application server.
	Volume Path To Leave Open	If you select **Volume Paths**, select the **Volume Path To Leave Open** in the list. Values include: • Close All • DEVELOPMENT • PRODUCTION • TEST
	Menu Items	Select to update the MarkView menu item URLs to use the new application server.
	Export Server Queue Assignments	Select to update the MarkView export queue assignments to use the new application server.
Data Cleanup Tasks	**Enable SSL (HTTPs) on Application Server**	Select to update the MarkView URLs to use HTTPs. This option also generates the SQL to update the WEBCLNT_HTTP_TYPE to the correct value (http or https) depending on whether SSL is enabled.
	SSL Wallet Location	If you select **Enable SSL (HTTPs) on Application Server**, enter the SSL Wallet Location. (Required for SSL wallets only.)
	SSL Wallet Password	If you select **Enable SSL (HTTPs) on Application Server**, enter the SSL Wallet Password. (Required for SSL wallets only.)
	Clear Pending Export Requests	Select to clear the pending export requests.
	Route New Mail to Complete Mail Queue	Select to route the new mail items to the Complete Mail queue.
	Override Outbound E-mail Destination	Select to update the MarkView Outbound Destination email address override preference, MVT_TEST_EMAIL_ADDRESS, to use a new email address.

Section	Field Name	Description
	E-mail Address	If you select **Override Outbound E-mail Destination**, enter the email address (required). The email address must meet the RFC2822 standards for valid syntax. See http://tools.ietf.org/html/rfc2822#section-3.4.1 for more information about the RFC2822 standards.
E-Mail Import Configuration	The fields in this section are no longer supported.	

2. Select **Generate SQL** to generate the script and direct where to save the script.
3. Execute the script against the MarkView schema on the target database.

Configure a new non-production environment

If you are configuring a new non-production environment, or the current non-production database was overwritten with your production environment, follow these steps to configure your non-production environment.

1. Follow the instructions in Plan your MarkView installation to prepare your new non-production environment.
2. Copy your production database schema to your non-production database.
3. Copy your production document server to your non-production document server.
4. Install the MarkView application server.

   Install the same MarkView version as in your production environment.

   - For point releases, such as MarkView 10.5.0, use the standard installer. Follow the instructions in this guide.
   - For service packs, such as MarkView 10.x.x, only apply the service pack. Do not first install the MarkView point release. For example, if your production system is at MarkView 10.x, only apply service pack 10.x.x to the new non-production environment. This is because your database is already at version 10.x.
   - If applicable, apply any fix pack to the new non-production application server to bring it to the same level as your production environment.

   After the MarkView application server is installed, follow the instructions in Move to a new application server during MarkView upgrade.
5. Refresh the new non-production environment. See Refresh a new non-production environment.

Manually deploy TRS

Use the following procedure to deploy TRS manually. For example:

- You are installing a new Application Server but have an existing Application Server.
- You do not have an Application Server and must deploy TRS manually.
- Your Application Server has crashed.

WebLogic

Create a new WebLogic domain and machine

1. Start the configuration wizard:
   - Windows: `%ORACLE_HOME%\oracle_common\common\bin\config.cmd`
   - UNIX: `$ORACLE_HOME/oracle_common/common/bin/config.sh`
2. Select **Create a new domain** and click **Next**.
3. Select **Create Domain using Product Templates** and **Basic WebLogic Server Domain**, and click **Next**.
4. In the **Administrator Account** window, specify the administrator's credentials and click **Next**.
5. In the **Domain Mode** field, select either the **Production** or **Development** environment.
6. Specify the appropriate **JDK** and click **Next**.
7. In the **Advanced Configuration** window, select the following check boxes:
   - **Administration Server**
   - **Node Manager**
   - **Managed Servers, Clusters, and Coherence** (or **Topology** for WebLogic 12.2)
8. In the **Administration Server** window, specify **Server name** and **Listen Address and Port**. Select **Enable SSL**, if required.
9. In the **Node Manager** window, specify **Domain Location** and **Node Manager credentials**.
10. In the **Managed Servers** window, leave the fields blank and click **Next**.
11. In the **Clusters** window, leave the fields blank unless you are deploying to a cluster and click **Next**.
12. For WebLogic 12.2 only: In the **Server Templates** window, leave the fields blank and click **Next**.
13. In the **Machines** window, click **Add**, enter the following information for the machine, and click **Next**:
    - Name: markview_machine
    - Node manager listen address: <HOSTNAME>
    - Node manager listen port: <NODE_MANAGER_PORT>
14. For WebLogic 12.2 only: In **Assign Servers To Machines**:
    a. In the column on the right, select **Machine**.
    b. In the column on the left, select **Server**.
    c. Use the arrow button to move the Server under the Machine and assign the server to the Machine.
    d. Click **Next**.
15. For WebLogic 12.2 only:
    a. In the **Virtual Targets** window, leave the fields blank and click **Next**.
    b. In the **Partitions** window, leave the fields blank and click **Next**.
16. In the **Configuration Summary** window, verify that all information is correct and click **Create**. When the creation of the domain is complete, click **Next**.

17. In the **End Of Configuration** window, check **Domain Location** and **Admin Server URL**, and click **Finish**.

    For WebLogic 12.2, verify that **Start Admin Server** is not selected.
18. Start Node Manager:
    - Windows: `<markview_domain>\bin\startNodeManager.cmd`
    - UNIX: `<markview_domain>/bin/startNodeManager.sh`
19. Start the domain:
    - Windows: `<markview_domain>\bin\startWebLogic.cmd`
    - UNIX: `<markview_domain>/bin/startWebLogic.sh`

Configure SSL for WebLogic 12c

Skip this section if you do not use Secure Sockets Layer (SSL) to provide secure web communications for the WebLogic application server.

To configure SSL for WebLogic, perform the instructions from the following section:

Configure SSL for WebLogic 12c (for SSL only) including the steps from Set up Node Manager (for SSL only).

Disable WebLogic basic authentication

1. Log in to the WebLogic host as the WebLogic owner.
2. Open the domain configuration file, which is located in the directory specified when you created the domain, for example:

   `/<WL_home>/../user_projects/domains/<markview domain>/config/config.xml`
3. Add the following XML code immediately before the close tag for the security configuration:

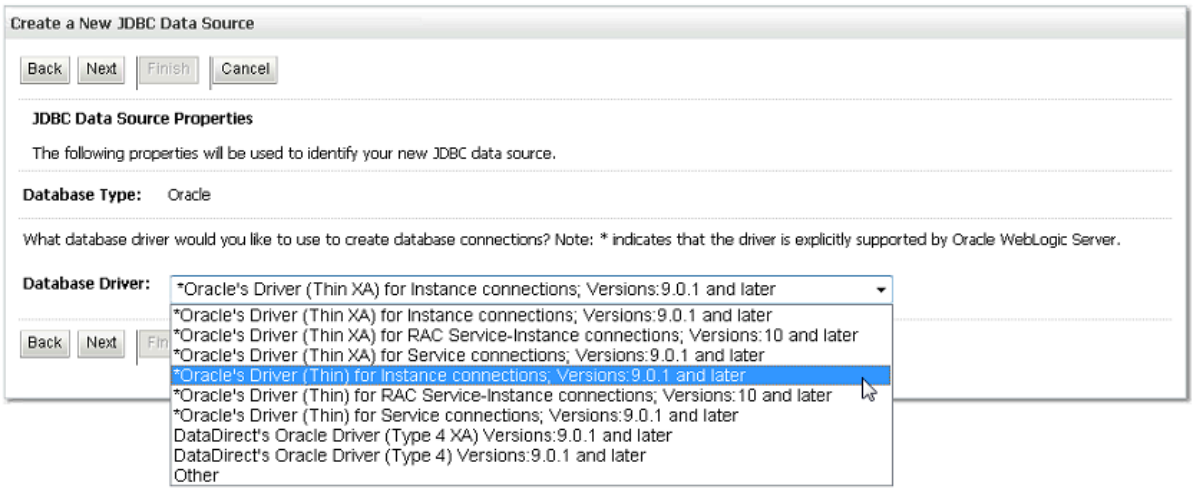
   ```
   <enforce-valid-basic-auth-credentials>false
   </enforce-valid-basic-auth-credentials>
   ```
4. Restart the server.

Create a new WebLogic server for the MarkView instance

The MarkView instance requires a unique WebLogic server.

1. Log in to the WebLogic Server Administration Console.
2. Go to **Environment** > **Servers**.
3. Click **New**.
4. Name the new server **markview_server**.
5. Enter the server **Listen Port** and click **Finish**.
6. Expand **markview** > **Environment** and click **Machines**.
7. Click the markview_server you just created.
8. Select the **Servers** tab.
9. Click **Add**.
10. Select **Select an existing server and associate it with this machine**.
11. Select **markview_server** and click **Finish**.
12. Expand **Services** > **Data Source**, and click **JDBC**.

13. Click **New**.
14. Select **Generic Data Source**.
15. Enter the following information and click **Next**:
    - **Name**: MarkViewDS
    - **JNDI Name**: jdbc/MarkViewDS
    - **Database Type**: Oracle
    - **Database Driver**: Oracle's Driver (Thin) for Instance connections (Select the non-XA database-driver.)



16. Keep the default **Transaction Options** and click **Next**.
17. Supply the information for the MarkView database instance and click **Next**.
18. Click **Test Configuration** and click **Next**.
19. Select **markview_server** and click **Finish**.
20. Expand **Environment** and click **Servers**.
21. Click the **Control** tab.
22. Select **markview_server** and click **Start**.

Configure SSL for markview_server

Skip this section if you do not use Secure Sockets Layer (SSL) to provide secure web communications for the WebLogic application server.

To configure SSL for markview_server, perform the instructions from the following section:

Configure SSL for WebLogic 12c (for SSL only).

Exclude conflicting libraries (WebLogic 12.2 only)

1. Locate the file:

   `<WL_HOME>/modules/com.oracle.weblogic.security.opensaml2.jar`

   The `WL_HOME` environment variable points to the directory where you installed the WebLogic server.

2. Change the file name, or back up and remove the file.
3. If you need to apply a patch on the WebLogic server after the preceding procedure, perform the following steps:
   a. Restore the file `<WL_HOME>/modules/com.oracle.weblogic.security.opensaml2.jar`.
   b. Apply the WebLogic patch.
   c. Change the file name, or back up and remove the file.

Manually deploy the mvastrs service

1. Copy the mvastrs-ear.ear file from the distribution directory:
   `<distribution_directory>/modules/installer-dist-(VER)/mvastrs-ear.ear`
   to the following location:
   `<installation_directory>/applications/mvastrs-ear.ear`
   Where `<installation_directory>` is the MarkView installation directory.
   This is the same directory that contains the target_registry_service.properties file. See Create the target_registry_service.properties file for WebLogic.
2. Log in to the WebLogic Server Administration Console.
3. Go to **Deployments**.
4. Click **Install**.
5. Update the path to point at `<home_directory>/markview/applications/mvastrs-ear.ear` where `<home_directory>` is the user home directory.
6. Click **Next**.
7. Select **Install this deployment as an application** and click **Next**.
8. Select **markview_server** and click **Next**.
9. Change the name of the application from mvastrs-ear to mvastrs.
10. Keep the remaining default options on the **Optional Settings** window and click **Finish**.
11. When the application finishes uploading, click **Save**.

Create the target_registry_service.properties file for WebLogic

1. Create a file called target_registry_service.properties in the MarkView installation directory.
2. Skip this step if you are not configuring SSL. In the target_registry_service.properties file, add the following line to the top of the file.
   `RESOURCE.mvtrs_url=http://<WL_Server>:<HTTP PORT>/mvastrs/markview`
   Where:
   - `<WL_Server>` is the name of your WebLogic server.
   - `<HTTP PORT>` is your HTTP port number.
3. For SSL configuration only: In the target_registry_service.properties file, add the following line to the top of the file.
   `RESOURCE.mvtrs_url=https://<WL_Server>:<HTTPS PORT>/mvastrs/markview`
   Where:
   - `<WL_Server>` is the name of your WebLogic server.
   - `<HTTPS PORT>` is your HTTPS port number.

Run the MarkView installer

1. Ensure all active sessions on the WebLogic console are logged out.
2. Run the MarkView Partial Installation to install the remaining application server components.

WildFly or JBoss EAP in standalone mode

Before you proceed, do the following:

1. Open `standalone.xml` for editing and make sure the file contains the following string:
   `<subsystem xmlns="urn:jboss:domain:messaging:2.0">`
2. If `standalone.xml` does not contain the `<subsystem xmlns="urn:jboss:domain:messaging:2.0">` string, back up `standalone.xml` in `JBOSS_HOME/standalone/configuration`.
3. Locate and rename `standalone-full.xml` to `standalone.xml`.

Install the Oracle JDBC driver (standalone mode)

1. In `$JBOSS_HOME/modules`, create the following folder:
   `oracle/jdbc/main`
2. Copy the ojdbc6-11.2.0.3.jar oracle jdbc driver from `installer/distr` to `$JBOSS_HOME/modules/oracle/jdbc/main`.
3. Rename ojdbc6-11.2.0.3.jar to ojdbc6.jar.
4. Copy module.xml from `installer/distr` to `$JBOSS_HOME/modules/oracle/jdbc/main`.
   Alternatively, in `$JBOSS_HOME/modules/oracle/jdbc/main`, create the module.xml file with the following content:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?><module
 xmlns="urn:jboss:module:1.1" name="oracle.jdbc">
<resources>
<resource-root path="ojdbc6.jar"/>
</resources>
<dependencies>
<module name="javax.api"/>
<module name="javax.transaction.api"/>
<system export="true">
<paths>
<path name="com/sun/rowset"/>
<path name="com/sun/rowset/internal"/>
<path name="com/sun/rowset/providers"/>
</paths>
</system>
</dependencies>
</module>
```

5. Open `$JBOSS_HOME/standalone/configuration/standalone.xml` and add the following strings:

```
<drivers>
...
<driver name="OracleJDBCDriver" module="oracle.jdbc">
<driver-class>oracle.jdbc.OracleDriver</driver-class>
</driver>
</drivers>
```

Create a new WildFly or JBoss EAP server for the MarkView instance (standalone mode)

Configure the port

1. Log in to the WildFly or JBoss EAP Administration Console.
2. Select the **Configuration** tab.
3. On the **General Configuration** menu, select **Socket Binding**.
4. In the **standard-sockets** group, select **View**.
5. Select **http**.
6. In the **Selection** table, click **Edit**.
7. In the **Port** field, enter the appropriate value, such as ${jboss.http.port:26000} .
8. Click **Save**.

Create the datasource

1. Log in to the WildFly or JBoss EAP Administration Console.
2. On the **Subsystems** menu, navigate to **Connector** > **Datasources**.
3. On the **JDBS Database** pane, click **Add**.
4. In the **Create Datasource** window, enter the following values and click **Next**:
   - **Name**: MarkViewDS
   - **JNDI Name**: java:/jdbc/MarkViewDS
5. Select **OracleJDBCDriver** and click **Next**.
6. Specify your connection settings as follows:
   a. In the **Connection URL** field, enter the connection string value, such as:
      `jdbc:oracle:thin:@r4ebsr12.kofax.com:1522:vis01`
   b. In the **Username** field, enter your MarkView user name.
   c. In the **Password** field, enter your MarkView password.
7. Click **Test Connection** and check your connection settings.
8. Click **Done**.
9. On the **JDBS Datasources** panel, select **MarkViewDS** line and click **Enable**.
   In the **Enable datasource** window, click **Confirm**.

Manually deploy the mvastrs service (standalone mode)

1. Copy mvastrs-ear.ear from the distribution directory:
   `<distribution_directory>/modules/installer-dist-(VER)/mvastrs-ear.ear`
   to the following location:
   `<installation_directory>/applications/mvastrs-ear.ear`
   Where `<installation_directory>` is the MarkView installation directory.
   This is the same directory that contains the target_registry_service.properties file. See Create the target_registry_service.properties file for WildFly or JBoss EAP (standalone mode).
2. Log in to the WildFly or JBoss EAP Administration Console.
3. On the **Deployments** tab, click **Add**.

4. In the **Create Deployment** window, click **Browse** and select the **mvastrs-ear.ear** file.
5. Change the name of the application from mvastrs-ear to mvastrs.
6. Select the **Enable** check box.
7. Click **Save**.

Configure SSL for WildFly or JBoss EAP (standalone mode)

Skip this section if you do not use Secure Sockets Layer (SSL) to provide secure web communications for the WildFly or JBoss EAP application server.

To configure SSL in standalone mode, follow the steps in Standalone mode.

Create the target_registry_service.properties file for WildFly or JBoss EAP (standalone mode)

1. Create a file called target_registry_service.properties in the MarkView installation directory.
2. Skip this step if you are not configuring SSL. In the target_registry_service.properties file, add the following line to the top of the file.

   `RESOURCE.mvtrs_url=http://<JBoss_Server>:<HTTP PORT>/mvastrs/markview`

   Where:
   - `<JBoss_Server>` is the name of your WildFly or JBoss EAP server.
   - `<HTTP PORT>` is your HTTP port number.
3. For SSL configuration only: In the target_registry_service.properties file, add the following line to the top of the file.

   `RESOURCE.mvtrs_url=https://<JBoss_Server>:<HTTPS PORT>/mvastrs/markview`

   Where:
   - `<JBoss_Server>` is the name of your WildFly or JBoss EAP server.
   - `<HTTPS PORT>` is your HTTPS port number.

Run the MarkView installer (standalone mode)

1. Ensure all active sessions on the WildFly or JBoss EAP console are logged out.
2. Run the MarkView Partial Installation to install the remaining application server components.

WildFly or JBoss EAP in domain mode

Install the Oracle JDBC driver (domain mode)

1. In `$JBOSS_HOME/modules`, create the following folder:

   `oracle/jdbc/main`
2. Copy the ojdbc6-11.2.0.3.jar oracle jdbc driver from `installer/distr` to `$JBOSS_HOME/modules/oracle/jdbc/main`.
3. Rename ojdbc6-11.2.0.3.jar to ojdbc6.jar.
4. Copy module.xml from `installer/distr` to `$JBOSS_HOME/modules/oracle/jdbc/main`.

   Alternatively, in `$JBOSS_HOME/modules/oracle/jdbc/main`, create the module.xml file with the following content:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?><module
 xmlns="urn:jboss:module:1.1" name="oracle.jdbc">
```

```
<resources>
<resource-root path="ojdbc6.jar"/>
</resources>
<dependencies>
<module name="javax.api"/>
<module name="javax.transaction.api"/>
<system export="true">
<paths>
<path name="com/sun/rowset"/>
<path name="com/sun/rowset/internal"/>
<path name="com/sun/rowset/providers"/>
</paths>
</system>
</dependencies>
</module>
```

5. In `$JBOSS_HOME/domain/configuration/domain.xml`:
   a. Locate `<profile name="full-ha">`.
   b. Locate the next `<subsystem xmlns="urn:jboss:domain:datasources:2.0">` line that follows `<profile name="full-ha">` and add the following lines after the `<drivers>` tag:

```
<driver name="OracleJDBCDriver"
module="oracle.jdbc">
<driver-class>oracle.jdbc.OracleDriver</driver-class>
</driver>
```

Create a new WildFly or JBoss EAP server for the MarkView instance (domain mode)

Create a new domain

1. Log in to the WildFly or JBoss EAP Administration Console.
2. Select the **Runtime** tab.
3. On the **Browser By** menu, select **Server Groups** and click **Add Server Group**.
4. In the **Add Server Group** window, enter the following information and click **Add**:
   - **Name**: <domain_name>
   - **Profile**: full-ha
   - **Socket Binding Group**: full-ha-sockets

Create a new server

1. In the WildFly or JBoss EAP Administration Console, select the **Runtime** tab.
2. On the **Browser By** menu, select **Server Groups**.
3. On the **Server Group** menu, select the newly created server group and click **Add Server**.
4. In the **Add Server** window, enter the following information and click **Add**:
   - **Name**: <domain_name>_server, where <domain_name> is the server group name. Add the _server postfix to your server name.
   - **Host**: master
   - **Auto Start**: On
   - **Group**: <domain_name>
   - **Socket Binding Port Offset**: 0

5. On the **Runtime** tab, select **Topology** and click **Refresh**.
   Start the created server by clicking its name.

Configure the port

1. In the WildFly or JBoss EAP Administration Console, select the **Configuration** tab.
2. On the **Profile** menu, select **full-ha** and in the **full-ha-sockets** field, click **View**.
3. Change the http port value from 8080 to 26000 and click **Save**.

Create the datasource

1. In `$JBOSS_HOME/bin`, open the jboss-cli.sh command file.
2. Run the `connect rhebsr12.kofax.com:9090` command, where `rhebsr12.kofax.com` is the host name and `9090` is the administration port.
3. To create the datasource, run the command such as:

```
data-source --profile=full-ha --name=MarkViewDS add
      --jndi-name=java:/jdbc/MarkViewDS --driver-name=OracleJDBCDriver
      --connection-url=jdbc:oracle:thin:@rhebsr12.kofax.com:1522:vis01
      --user-name=markview --password=markview --enabled=true --use-ccm=true
      --validate-on-match=false
```

   Where `rhebsr12.kofax.com` is the host name of Oracle RDBMS, `1522` is the MarkView schema port, and `vis01` is the MarkView instance schema.

Manually deploy the mvastrs service (domain mode)

1. Copy mvastrs-ear.ear from the distribution directory:
   `<distribution_directory>/modules/installer-dist-(VER)/mvastrs-ear.ear`
   to the following location:
   `<installation_directory>/applications/mvastrs-ear.ear`
   Where `<installation_directory>` is the MarkView installation directory.
   This is the same directory that contains the target_registry_service.properties file. See Create the target_registry_service.properties file for WildFly or JBoss EAP (standalone mode).
2. Log in to the WildFly or JBoss EAP Administration Console.
3. On the **Deployments** tab, click **Add**.
4. In the **Create Deployment** window, click **Browse** and select the **mvastrs-ear.ear** file.
5. Change the name of the application from mvastrs-ear to mvastrs.
6. On the **Name** menu, select the **mvastrs** module and click **Assign**.
7. Select and enable **mvgroup** and click **Save**.

Configure SSL for WildFly or JBoss EAP (domain mode)

Skip this section if you do not use Secure Sockets Layer (SSL) to provide secure web communications for the WildFly or JBoss EAP application server.

To configure SSL in domain mode, follow the steps in Domain mode.

Create the target_registry_service.properties file for WildFly or JBoss EAP (domain mode)

1. Create a file called target_registry_service.properties in the MarkView installation directory.

2. Skip this step if you are not configuring SSL. In the target_registry_service.properties file, add the following line to the top of the file.

   `RESOURCE.mvtrs_url=http://<JBoss_Server>:<HTTP PORT>/mvastrs/markview`

   Where:

   - `<JBoss_Server>` is the name of your WildFly or JBoss EAP server.
   - `<HTTP PORT>` is your HTTP port number.
3. For SSL configuration only: In the target_registry_service.properties file, add the following line to the top of the file.

   `RESOURCE.mvtrs_url=https://<JBoss_Server>:<HTTPS PORT>/mvastrs/markview`

   Where:

   - `<JBoss_Server>` is the name of your WildFly or JBoss EAP server.
   - `<HTTPS PORT>` is your HTTPS port number.

Run the MarkView installer (domain mode)

1. Ensure all active sessions on the WildFly or JBoss EAP console are logged out.
2. Run the MarkView Partial Installation to install the remaining application server components.

Refresh a new non-production environment

1. Log in to a working MarkView environment (for example, your production environment) as an Administrator who is a member of the MODULE ADMINISTRATOR group.
2. Select **Administration** > **Migration Utility**.
3. Complete the values for your site using the following information.

Section	Field Name	Description
Application Server Post Migration	**Application Server**	• WebLogic • JBoss (use for WildFly and JBoss EAP)
	Fully Qualified Hostname	Enter the fully qualified hostname of the target application server.
	HTTP Port	Enter the HTTP port of the target application server.
Configuration to be Updated to Reference Application Server Post Migration	**Preferences**	Select to update the MarkView preference URLs to use the target application server.
	Volume Paths	Select to update the MarkView volume paths to use the new application server.
	Volume Path To Leave Open	If you select **Volume Paths**, select the **Volume Path To Leave Open** in the list. Values include: • Close All • DEVELOPMENT • PRODUCTION • TEST

Section	Field Name	Description
	Menu Items	Select to update the MarkView menu item URLs to use the new application server.
	Export Server Queue Assignments	Select to update the MarkView export queue assignments to use the new application server.
Data Cleanup Tasks	**Enable SSL (HTTPs) on Application Server**	Select to update the MarkView URLs to use HTTPs. This option also generates the SQL to update the WEBCLNT_HTTP_TYPE to the correct value (http or https) depending on whether SSL is enabled.
	SSL Wallet Location	If you select **Enable SSL (HTTPs) on Application Server**, enter the SSL Wallet Location. (Required for SSL wallets only.)
	SSL Wallet Password	If you select **Enable SSL (HTTPs) on Application Server**, enter the SSL Wallet Password. (Required for SSL wallets only.)
	Clear Pending Export Requests	Select to clear the pending export requests.
	Route New Mail to Complete Mail Queue	Select to route the new mail items to the Complete Mail queue.
	Override Outbound E-mail Destination	Select to update the MarkView Outbound Destination email address override preference, MVT_TEST_EMAIL_ADDRESS, to use a new email address.
	E-mail Address	If you select **Override Outbound E-mail Destination**, enter the email address (required). The email address must meet the RFC2822 standards for valid syntax. See http://tools.ietf.org/html/rfc2822#section-3.4.1 for more information about the RFC2822 standards.
E-Mail Import Configuration	The fields in this section are no longer supported.	

4. Select **Generate SQL** to generate the script and direct where to save the script.
5. Execute the script against the MarkView schema on the target database.

Appendix C

Customization migration tools

To migrate the MarkView customization data, use a third-party utility to create a production environment image in the non-production environment. After the third-party utility performs the migration, the MarkView configuration data export-import tools extract and merge all MarkView customization data into the database. They are located in the tools directory:

Tool	Description
export-config	Assigns the following to the CONFIG module: • Volumes and volume paths • URL preferences • URL-type menu items • Export queue assignments • Connector configurations
import-config	Closes all open volumes and merges the data extracted by the CONFIG module into the database.
export-module	Extracts all the data assigned to the module to a file that the import-module can read
import-module	Merges the data from the import-module into the database

The configuration data export-import tools preserve the unique non-production environment settings. The process includes:

- Running the export-config tool in the non-production environment.
- Running a third-party tool to create a production environment image in the non-production environment.
- Running the import-config tool in the non-production environment.

Use Kofax Capture (KC) Database Utility Application (DBUtil) to migrate the Kofax Capture database and integrate with the Windows file system. Do not use third-party database tools to migrate the Kofax Capture database. See the DBUtil online help for additional information.

Migrate customizations

1. Log in to the application server host operating system as the application server owner and navigate to the tools directory `<distribution_directory>\tools`, where <distribution_directory> is the location where you downloaded and decompressed the installation files.

2. UNIX:

```
config.sh <dbHost> <dbPort> <dbSID> <mvuser> <mvpasswd> <configFile>
```

Windows:

```
config.bat <dbHost> <dbPort> <dbSID> <mvuser> <mvpasswd> <configFile>
```

Where:

- <dbhost> is the database server host.
- <dbport> is the MarkView main application server port (default 7777).
- <dbSID> is the database SID name.
- <mvuser> is the MarkView schema user name.
- <mvpasswd> is the password for the MarkView schema user.
- <configFile> is the name of your configuration file.

The message "Configuration is successful" appears when the import is completed. The message also lists the location of a log file with more information about the export.

3. Run the import-config tool to import the data.

Appendix D

Uninstall Capture and Output modules

Uninstall each Capture and Output module separately.

1. Log in as the local administrator for the operating system for the Windows Capture and Output server.
2. Navigate to the`<distribution_directory>` and run the installer of a module you want to uninstall.
3. Click **Remove**. Follow the instructions on the screen.
4. Click **Finish**. The module is now uninstalled. You do not have to restart the computer.

Appendix E

Third-party license agreement

BEA Public License Version 2.1

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