

Kofax Capture

Administrator's Guide

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The logo for KOFAX, consisting of the word "KOFAX" in a bold, blue, sans-serif font.

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Preface

This guide contains essential information about configuring Kofax Capture and Kofax Capture Network Server (KCN Server).

This guide assumes that you have a thorough understanding of Windows standards, applications, and interfaces. It also assumes that, if you are installing KCN Server, you have a thorough understanding of the Internet, Web servers and your Web server software, your network configuration, and Kofax Capture.

This guide is for system administrators and developers who are configuring Kofax Capture or KCN Server, or who need a description of the configuration features and procedures.

Related Documentation

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

Kofax Capture Installation Guide

The *Kofax Capture Installation Guide* contains essential information about requirements and installation procedures related to Kofax Capture and Kofax Capture Network Server (KCN Server).

Kofax Capture Developer's Guide

The *Kofax Capture Developer's Guide* provides guidance and instructions for customizing Kofax Capture. Several examples and code segments are provided to demonstrate how to create custom panels, Ribbon tabs, workflow agents, modules, and scripts to enhance Kofax Capture processing.

Help for Kofax Capture

Kofax Capture online Help provides online assistance for system administrators and operators.

Kofax Capture API References

The *Kofax Capture API Reference* (APIRef.chm) is an online guide that provides the details of each API library needed to customize Kofax Capture. The *Kofax Capture Export Type Library API Reference* (APIRefExport.chm) gives details needed to customize an export connector. Both *API References* are intended to be used alongside the *Kofax Capture Developer's Guide* as a primary resource for customizing Kofax Capture.

You can access both *API References* in the following folder, which is available on your Kofax Capture installation media:

Documentation\Help\APIRef

Kofax Capture Release Notes

Late-breaking product information is available from release notes. You should read the release notes carefully, as they contain information that may not be included in other Kofax Capture documentation.

Kofax Capture Technical Specifications

Contains information on supported operating systems and other system requirements.

Training

Kofax offers both classroom and computer-based training that will help you make the most of your Kofax Capture solution. Visit the Kofax website at www.kofax.com for complete details about the available training options and schedules.

Getting Help with Kofax Products

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

To access the Kofax Knowledge Base, go to the [Kofax website](#) and select **Support** on the home page.

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

The Kofax Knowledge Base 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.
Scroll through the Kofax Knowledge Base home page to locate a product family. Then click a product family name to view a list of related articles. Please note that some product families require a valid Kofax Portal login to view related articles.
- Access to the Kofax Customer Portal (for eligible customers).
Click the **Customer Support** link at the top of the page, and then click **Log in to the Customer Portal**.
- Access to the Kofax Partner Portal (for eligible partners).
Click the **Partner Support** link at the top of the page, and then click **Log in to the Partner Portal**.
- Access to Kofax support commitments, lifecycle policies, electronic fulfillment details, and self-service tools.
Scroll to the **General Support** section, click **Support Details**, and then select the appropriate tab.

Chapter 1

Overview

Kofax Capture is designed to support both document capture and data capture in a single application. Both structured and non-structured documents can be scanned in a single batch. The system automatically recognizes and processes each document in the batch based on characteristics that you define. The definition process is simple, quick, and provides an extraordinary amount of control over how your documents are processed.

Kofax Capture Network Server (KCN Server) extends the capabilities of Kofax Capture by allowing inexpensive Kofax Capture remote workstations to assist in the capture and processing of documents and data. With Internet (or intranet) capabilities, Kofax Capture workstations can be connected to a central site to assist in the document and data capture process.

This guide provides information about configuring and managing your Kofax Capture and KCN Server installations.

Processing Queues - An Overview

In Kofax Capture, a queue is a processing step for a batch of documents. For example, a Scan module is available for scanning or importing documents and a Validation queue is available for validating documents.

As batches flow through your Kofax Capture system, they are routed from queue to queue in a "workflow." The queues that are used to process a batch, and the order that processing occurs, are specified as part of the batch class definition.

Kofax Capture supports the following queues, which are listed in the order they are typically used:

- Scan
- Quality Control
- Recognition Server
- Validation
- Verification
- OCR Full Text
- PDF Generator
- Export

Although not technically considered a processing queue, Kofax Capture also supports the Administration module, from which you can create batch classes; and Batch Manager, from which you can monitor and process the batches in your system.

Note Two other processing queues, XML Import Connector and Email Import Connector, are available but now are deprecated. As a result, they will be removed in a future product release.

Use the batch class definition to specify which queues are used to process batches.

Batch Editing

You can modify batches after scanning or importing images and perform tasks such as moving pages or folders, inserting pages or folders, and creating documents or folders. Kofax Capture supports batch editing in the Scan, Quality Control, Validation, and Verification modules.

Note Batch editing for Validation or Verification is possible only if the appropriate batch class properties are configured for those queues in the Administration module.

Edit your batches in the Batch Contents panel. This panel is selected by default and displays the contents of a batch using a tree structure similar to that used by many file management applications, such as Windows Explorer.

You can easily edit batches by moving (dragging) thumbnails or icons, or by assigning properties, such as "Rejected."

When moving a page, its thumbnail appears directly under the cursor. If you drag multiple pages, the first thumbnail is shown under the cursor along with multiple edges, as if multiple thumbnails are being dragged behind it.

Batch Editing Operations

All batch editing operations, as listed here, work in either the icon or thumbnail views:

- Moving a page to a document or within a document (you cannot move loose pages into a folder)
- Moving a page outside a document (making a loose page)
- Deleting a page
- Inserting a page (Scan and Quality Control modules only)
- Replacing a page (Scan and Quality Control modules only)
- Moving a document into or out of a folder
- Moving documents within a folder
- Deleting a document
- Creating a document
- Splitting a document
- Merging documents
- Rotating and saving a page or document
- Rejecting a page or document
- Un-rejecting a page or document
- Marking a page as reviewed (Quality Control module only)
- Marking a document as verified (Quality Control module only)
- Moving a folder into or out of another folder

- Moving folders within a folder
- Adding a new folder
- Deleting a folder
- Changing a folder class
- Creating folders automatically

Using the thumbnail and icon views, you can also do the following:

- View page properties
- View document properties
- View batch properties

Retain Zoom Feature

Retain Zoom is available only in the Validation and Verification modules. Use this feature to retain pan and zoom settings for the image viewer during the following operations:

- Switching pages
- Switching documents
- Opening batches
- Closing batches

Once you select Retain Zoom, your selection is retained. It is not possible to retain independent settings for the zoom options.

Select Retain Zoom on the View tab, in the Zone group, under Pan Mode. The display behavior conforms to the following rules:

- Magnify Zone, Anchor Zones, and Pan to Zone are automatic settings; Manual Zoom turns off all automatic settings.
- Any automatic zoom function takes precedence over Retain Zoom or Manual Zoom. If Retain Zoom and one of the automatic functions are selected at the same time, Retain Zoom has no apparent effect unless you change pages. When changing pages, Retain Zoom prevents the viewer from resetting to a full page view.
- If none of the automatic zooming features is selected, Retain Zoom takes precedence over Manual Zoom.
- If only Manual Zoom is selected, zoom settings return to the full page view when you switch fields or pages.

Using Kofax Capture and Kofax Capture Network Server Across Regions

With Kofax Capture or Kofax Capture Network Server, you can share batch classes and batch processing among sites that use different language versions of Kofax Capture or have different regional settings. Regional settings such as date format or decimal separator (which are set up in Windows Control Panel for every computer) are automatically converted when a batch class is imported. Other items within the batch class, such as profile names, are translated to the language of Kofax Capture on the imported computer.

All client workstations in a Kofax Capture client/server installation must use the same language version and the same regional settings.

This section provides information on regional settings and format options, what is (and is not) translated, and how you can use the Display Label feature to create batch field and index field names.

Regional Settings Conversion

All occurrences of numeric, date, and time values in the following items are converted to the regional format settings of the computer that imports the batch class or the remote site that downloads the batch class.

- Kofax Capture profiles (Recognition, Image Cleanup, etc.)
- Kofax Capture known values (also called "suggested values") for batch fields and index fields
- Default values for batch fields and index fields
- Results returned by image cleanup profiles

For the Kofax Capture Database and Text export connectors, all numeric, date, and time data derived from Kofax Values is converted.

The following regional examples from Windows Control Panel compare common numeric, date, and time formats for the United States and Germany.

Setting	United States/Sample	Germany/Sample
Decimal separator	"." (period) 1000.23	"," (comma) 1000,23
Date format	M/d/yyyy 8/16/2018	dd.MM.yyyy 16.08.2018
Time format	H:mm:ss tt 2:10:35 PM	HH:mm:ss 14:10:35

Language Translation

When a batch class is imported, Kofax Values and default profile names are translated to the language of Kofax Capture on the destination computer. This translation occurs regardless of the Kofax Capture language originally used to create or export the batch class.

Kofax Values

The actual text of Kofax Values contained within the brackets (either default or manually entered) is translated as used for endorsing strings or annotations, batch field defaults, index field defaults, or as an index value for export connector setup.

When a batch is exported, results returned by the Kofax Values are not translated.

Kofax Default Profiles (Kofax Capture Only)

The names of the following types of default Kofax profiles (prefixed by the name "Kofax") are translated.

- Recognition profiles

- Image cleanup profiles
- Color image cleanup profiles
- Separation and form identification profiles

Items Not Converted/Translated

This section lists items that are not converted or translated and installation configurations or situations in which no translation or conversion can occur. Unless noted, the items below apply to both Kofax Capture at the central site and Kofax Capture Network Server remote sites.

- Import/export of batch classes among computers that use different code pages
- Batch classes created in versions of Kofax Capture prior to 6.1 (when the product was known as Ascent Capture)
- Dictionary values that are numeric or related to date or time
- Recognition profile language and character set selections
- Export text constants, customizations, and string fields that contain numeric, date, or time entries
- Batch names derived from time/date, because they are classified as strings, which are not converted or translated
- Kofax Capture module names
- Results returned by Kofax Values
- String data entered in the Kofax Capture programming interfaces, which applies to:
 - Export connectors
 - Import scripts
 - Kofax Capture Module Type Library
 - Custom modules
 - Validation and recognition scripts

Display Labels (Kofax Capture Only)

For each batch field or index field, you can enter a corresponding Display Label value. The value in the Display Label (instead of the actual batch field or index field name) appears where field names are seen, such as in the Scan, Validation, and Verification modules, and in batch properties in Batch Manager.

For example, you may have an index field named `cust_name`, but you could create a display label "Customer Name" that is more easily understood by users processing the batch. Or, if you are creating a batch class for use in another region, you could enter the labels in the language of the region where the batch class will be imported.

The Display Label column is available in the following windows:

- Create Batch Class
- Batch Class Properties
- Create Document Class
- Document Class Properties

If a display label is left blank, the batch field or index field name appears.

Tip You may want to limit the length of display labels. Although the Index/Batch Field Name cannot exceed 32 characters, the display label may contain up to 254 characters. A label with more than one line of text wraps to several lines, which may be difficult for users to read.

Upload Batches

Complete batches at the remote site are "ready" for the Kofax Capture Network Server module in Batch Manager at the remote site. When uploading begins, the batch moves to the "In Progress" state. When the batch has been successfully inserted into the Kofax Capture workflow at the central site, the batch is deleted from the remote site.

Ready batches can be uploaded by any of the following methods:

- Automatically at the next scheduled automatic polling time
- Manually with the Synchronize Now button in the RSA
- Manually with the Process Batch button in Batch Manager (if the status of the batch indicates that the batch is "Ready" for the KCN Server module)

Batches have an "In Progress" status in the Kofax Capture Network Server module during the upload process. As each batch is uploaded and inserted into the Kofax Capture workflow at the central site, the status is updated in Batch Manager at the remote site.

If the remote site uploads a batch with a name that already exists at the central site, the uploaded batch is renamed. When the batch is renamed, the base name is appended with a tilde symbol (~) and a number, such as ~0001. An entry about the renamed file and the new name is added to the Kofax Capture Network Server log file (ACIS_YYMM.txt), but not in the remote site log file.

Note You should not stop or restart the Web server while remote sites are uploading batches.

Upload Batches With Automatic Synchronization

You can configure which site controls the polling settings and schedule. Based on the polling settings, new or modified batch classes are downloaded, and completed batches are uploaded based on the currently assigned remote site profile.

- To automatically upload batches, set polling times.
- Centrally controlled polling times are set in remote site profiles defined with the Kofax Capture Network Server Remote Site Profiles window available from the Site Profiles window in the Administration module. Once the remote site profiles are defined and downloaded to the remote site, the settings take effect.
- Remotely controlled polling times are set in the RSA Polling Settings window available from Batch Manager at the remote sites. Once the settings are defined and saved at a remote site, they take effect for the remote site.

Creating Remote Site Profiles

Create remote site profiles to define how you want certain batch processing activities between the central site and remote sites to proceed. In particular, you can configure the following:

- Where to run each Kofax Capture module

- Which batch classes are accessible to specific remote sites
- Which licenses to allocate to each remote site
- Which site (central or remote) controls the polling settings, and what polling settings to use

Each remote site can be assigned a different remote site profile, or two or more remote sites can be assigned the same remote site profile. If you change a profile, all remote sites that share the same profile receive the updated profile the next time that they synchronize.

Setting up remote site profiles involves performing the following major steps at the central site.

Step 1: Select an Existing Remote Site Profile

Before setting the attributes of the remote site profile, select a profile to use as a model for the new remote site profile.

1. At the central site, start the Administration module.
2. On the **Tools** tab, in the **Distributed Capture** group, click the arrow under **Remote**, and then click **Site Profiles**.
The **KCN Server Remote Site Profiles** window appears.
3. Select a remote site profile.

Step 2: Configure a Remote Site Profile

To configure a remote site profile, select an existing profile, and then modify the information on the appropriate tabs of the Kofax Capture Network Server Remote Site Profiles window, as needed. After you finish selecting or entering the information, save the remote site profile with a new name.

Setting Up Batch Routing

When you set up batch routing for a remote site profile, specify which modules to run at the central site and which to run at the remote site.

Because using the Quality Control module as a standard processing module or only when an exception occurs, consider the following:

- Exception batches are automatically routed to the Quality Control module at the site where the exception occurs, regardless of where the Quality Control module was set up to run.
- Batches without exceptions are routed to the site where the Quality Control module has been set up to run, if the Quality Control module is defined as part of the batch class definition.

Tip To include the Quality Control module in your workflow, specify that batches be processed through the Quality Control module at your remote sites. This forces the batches through the Quality Control module before they are uploaded to the central site. Problems are fixed more easily if batches are accessible to the remote site user.

Before assigning batch classes with custom modules to remote site profiles, you must:

- Register the custom module at your central site and at remote sites. Then, copy the custom module's executable to `<Kofax Capture installation folder>\Bin` at the appropriate remote sites.
- Add the custom module to a batch class at the central site and publish the batch class.

- In the remote site profile for the specific remote sites, add the custom module to the list of modules set to run at remote sites.
- Assign the batch class with the custom module to the appropriate remote site profiles.

To set up batch routing:

1. At the central site, start the Administration module.
2. On the **Tools** tab, in the **Distributed Capture** group, click the arrow under **Remote**, and then click **Site Profiles**.
3. In the remote site profile for the specific remote sites, add the custom module to the list of modules to run at remote sites.
4. Assign the batch class with the custom module to the appropriate remote site profiles.
The **KCN Server Remote Site Profiles** window appears.
5. Select a profile from the list of remote site profiles.
6. Click the **Batch Routing** tab.
The **Batch Routing** tab appears.
7. Select a module from the list.
8. In the **Assigned Site** column, select the location for that module. Repeat steps 5-7 as needed.
9. Edit the **Rescan Location** to specify where documents are rescanned if a problem occurs.

Batches for which Partial Batch Export is selected in the associated batch class are processed at the remote and central sites as follows:

- At the remote site: Batches are routed from Scan through all modules set to run at the remote site. Then, for any batch that contains errors, the rejected documents and pages are routed to the Quality Control module for repair at the remote site. Once repaired, the documents and pages are processed through the batch class workflow at the remote site, starting with the first module after Scan. When all documents and pages are successfully processed for all modules set to run at the remote site, the batch is marked "Ready" (for the Kofax Capture Network Server module) and only then is the batch able to be uploaded to the central site.
- At the central site: Batches are routed from the first module set to run at the central site through the final module, Export.

In the Export module, all error-free documents and pages are exported to their predefined destinations, and any rejected documents and pages are routed to Quality Control for repair at the central site.

Once repaired, the documents and pages are processed through the batch class workflow, starting with the first module after Scan at the central site. The batches are never routed back to the remote site.

Database Validation

If database validation is selected for a batch class assigned to a specific remote site, the appropriate database software and files must be available to the Validation module at the remote site. An error message appears if the required files and database software cannot be found.

1. Click the **Assigned Batch Classes** tab.
The Assigned Batch Classes tab appears.

2. Select one of the following:
 - **All batch classes:** Causes all batch classes to be assigned to the selected remote site profile. When selected, you cannot select from the displayed list of batch classes.
 - **Selected batch classes:** Makes the list of batch classes available to you. You can then select the batch classes to assign to the remote site profile.

Note Unpublished batch classes cannot be used by remote sites.

3. If you selected "**Selected batch classes**," do one of the following:
 - Select one or more batch classes from the **Available** list, and then click **Add**.
 - Double-click a batch class on the **Available** list.
 - Click **Add All**.
4. To override the batch routing module sequence specified on the **Batch Routing** tab for the selected batch class, do the following:
 - a. Click **Override Batch Routing**.
The **Override Batch Routing for Batch Class** window appears.
 - b. Select **Starting with this module**.
 - c. Select a module from the list.

Only modules assigned to the workflow for the batch class are available in the module list. When the batch is ready to be processed by the selected module, the batch is uploaded to the central site and processing is performed by the selected module at the central site.

The text "Overridden" and the selected module name appear under **Batch Routing** in the **Assigned** list.

Note You cannot select the Scan module as the starting module for processing the batch class at the central site.

5. Repeat steps 3 and 4 for as many remote site profiles as necessary.

Removing Batch Classes from the Assigned List

1. Click the **Assigned Batch Classes** tab.
The **Assigned Batch Classes** tab appears.
2. Do one of the following:
 - Select a batch class from the **Assigned** list, and then click **Remove**. The selected batch class is moved back to the **Available** list.
 - Double-click a batch class in the **Assigned** list.
 - Click **Remove All**.

Setting Up Licensing

The Licensing tab on the Remote Site Profiles window is used to configure workstation licensing for remote sites. Remote sites only have access to the licensed modules within their profiles.

Note Additional licenses may be needed if you are adding remote sites to your Kofax Capture Network Server installation.

1. Click the **Station Licensing** tab.
The **Station Licensing** tab appears.
2. Select the type of license from the **Available** list.
3. Click **Add**.
The **Assigned** list is incremented by one license multiplied by the number of remote sites assigned to that remote site profile. The **Available** list is decremented by that same value. Alternatively, you can double-click a license to move it from one list to another.
4. If necessary, click **Refresh** to update the display.

Removing Licensing

1. Click the **Station Licensing** tab.
The **Station Licensing** tab appears.
2. Select the license from the **Assigned** list.
3. Click **Remove**.
The **Assigned** list is decremented by one license multiplied by the number of remote sites assigned that remote site profile. The **Available** list is incremented by that same value. Alternatively, you can double-click a license to move it from one list to another.
4. If necessary, click **Refresh** to update the display.

Setting Up Polling

Polling refers to the process of checking for batches and user statistics (if User Tracking is selected) to be uploaded to the central site, and batch classes and configuration settings to be downloaded to the remote sites.

Note During polling, the Kofax Capture Network Server may also download the settings for the patch code reserved for batch separator sheets.

The Polling tab on the Remote Site Profiles window is used to set up control of polling and the polling schedule for a specific remote site profile.

When you set up polling, select which site (central or remote) will set up and control the polling schedule. You also set up the polling schedule, if you selected central control of polling.

You can elect to have the polling schedule controlled by the central site (the default) or individually by the remote sites.

If you select the central site, the polling settings affect all the remote sites that share the profile containing the polling settings. The remote sites are prohibited from setting their own polling times. The next time a remote site polls the central site, the settings are downloaded to the remote site.

If you select remote site control of polling, you can specify the polling settings individually for each remote site that shares the remote site profile.

1. Click the **Polling** tab.
The **Polling** tab appears.

2. Select the site (central or remote) to control polling.
If you select "**Central control of polling**," continue with this procedure.
If you select "**Remote site control of polling**," the other settings on the **Polling** tab are unavailable.
3. Select one of the following settings in the **Polling Settings** area to specify how often polling should occur:
 - **Never poll**: Turns off automatic polling. However, if the start date and time are in the future, polling occurs once at that time, and then never again. If the start date and time are in the past, polling does not occur even once.
 - **Poll every**: Turns on automatic polling at defined intervals for remote sites. When selected, you must also select a numeric value from 1-99 and a unit of polling frequency.
4. Select a start date.
5. Select a start time.
6. Select one of the following settings to use if the connection fails between the remote site and the central site.
 - **Never retry**: Prevents remote sites from attempting to reconnect to the central site. However, the remote sites do attempt to reconnect at the next scheduled polling time.
 - **Retry every**: Remote site automatically attempts to reconnect to the central site. When selected, you must specify how often and for how long the connection should be retried. Select a numeric value in the range of 1-99, and a unit of time for each.
7. Specify how often the status of uploaded batches should be checked. Select a numeric value in the range 1-99, and a unit of time.

Save the Remote Site Profile

Click **Save** or **Save As**.

When editing an existing profile, you are prompted to confirm overwriting the existing profile. If you are creating a new profile, the Save As window appears.

Note You can overwrite or edit any profile except the "(None)" profile. Any changes to a profile affect all remote sites sharing that profile.

Editing Remote Site Profiles

You can edit remote site profiles as needed. Modifications affect any remote site with that profile and take effect the next time the remote site synchronization occurs.

1. At the central site, start the Administration module.
2. On the **Tools** tab, in the **Distributed Capture** group, click the arrow under **Remote**, and then click **Site Profiles**.
The **Kofax Capture Network Server Remote Site Profiles** window appears.
3. Select an existing profile.
4. Make your changes to the profile after selecting the appropriate tabs.
5. Click **Save**.
6. Click **Close**.

Assigning a Remote Site Profile to a Remote Site

By assigning a remote site profile to a remote site, you determine which modules and batch classes the site is allowed to use. Each remote site can be assigned only one profile.

1. Start the Administration module.
2. On the **Tools** tab, in the **Distributed Capture** group, click the arrow under **Remote**, and then click **Site Manager**.
The **KCN Server Site Manager** window appears.
3. On the site list, select the name of a remote site.
4. On the profile list, select a remote site profile.
5. To edit a remote site profile before assigning it, click **Edit**.
The **KCN Server Remote Site Profiles** window appears.
6. Edit the profile, and save it.

Note Changing the attributes of a profile affects all sites it is assigned to. To specify a default remote site profile for a new site, select the option on the "**New remote site behavior**" list.

You are returned to the **Remote Site Manager** window.

7. To save the changes, click **Close**.

Deleting Remote Site Profiles

You can delete a profile from the list of remote site profiles available for assignment.

Note You cannot delete any remote site profiles assigned to (or in use by) remote sites. You must first remove the assignment through the Kofax Capture Network Server Remote Site Manager window. You cannot delete the "(None)" or the "(Default)" remote site profiles.

1. At the central site, start the Administration module.
2. On the **Tools** tab, in the **Distributed Capture** group, click the arrow under **Remote**, and then click **Site Profiles**.
The **Kofax Capture Network Server Remote Site Profiles** window appears.
3. Select an existing profile.
4. Click **Delete**.
5. Click **Close**.

Creating a List of Central Sites

You can create a list of central sites used to configure batch upload behavior for multiple central site configurations.

1. At the central site, start the Administration module.
2. On the **Tools** tab, in the **Distributed Capture** group, click the arrow under **Central**, and then click **Site Manager**.
3. On the **Central Site Manager** window, click **New**.

4. On the **Central Site** window, enter the URL of the central site you want to add.
The list is sorted automatically by site name.
5. Click **OK**.
The URL is verified.
6. Continue to add the central sites to your configuration.
7. Click **OK**.

Editing a Central Site

You can edit the URL of a central site in the Central Site Manager window.

1. At the central site, start the Administration module.
2. On the **Tools** tab, in the **Distributed Capture** group, click the arrow under **Central**, and then click **Site Manager**.
3. On the **Central Site Manager** window, select a central site.
4. Make any necessary changes.
5. Click **OK**.

Deleting a Central Site

You can delete a central site from the Central Site Manager window.

1. At the central site, start the Administration module.
2. On the **Tools** tab, in the **Distributed Capture** group, click the arrow under **Central**, and then click **Site Manager**.
3. On the **Central Site Manager** window, select a central site.
4. Click **Delete**.

Batch Export Error Recovery

Use the Error Recovery check box on the Export Properties window to configure preferences for batch error recovery.

Note By default, the error recovery check box is not selected.

If Selected

If the Error Recovery check box is selected, all batch processing is terminated whenever there is an error. In addition:

- All documents in the batch are marked as un-exported and they are re-exported after Quality Control processing.
- The entire batch is rejected and sent to Quality Control.

Note When documents are re-exported after leaving Quality Control, some back-end systems may require special handling to successfully process the same document again.

The preceding behavior occurs with any error, fatal or not.

If Not Selected

If the Error Recovery check box is not selected, the following occurs if a fatal error occurs:

- All processing for the batch is terminated.
- The entire batch is rejected and sent to Quality Control.

For non-fatal errors:

- The document causing the error is rejected and ignored for the rest of the batch processing. No attempt is made to forward the batch to other assigned export connectors.
- Processing continues for the remaining documents in the batch.
- When all documents are complete (or have experienced an error), the batch is sent to Quality Control.

Problem Recovery

If you have network or other communications problems, Kofax Capture behaves as explained in this section.

If a Kofax Capture module ends abnormally, the system automatically releases its licenses within 30 minutes. You cannot adjust this time period.

If the network connection with the Kofax Capture Service is lost, the system automatically releases licenses within 30 minutes. Until the network connection is restored, it is not possible to run modules that require a license.

Note If a client workstation is restarted abnormally, the system behaves the same as described here.

If a server fails and then Kofax Capture is reinstalled, the system acts as if it were a new installation. When your volume-based licensing is restored after reactivation, it reflects the most current usage within 24 hours of the initial failure.

If an error occurs within the Kofax Capture Service, it may cause it to become temporarily unavailable. If this happens, you are not able to start any new Kofax Capture modules until the Kofax Capture Service is successfully restarted. After the service is restarted, the system proceeds as if no modules were currently connected and no licenses were allocated. There is no need to reactivate your license.

As Kofax Capture applications run, they acquire station and use volume licenses. A Kofax Capture application may fail unexpectedly, be terminated by the administrator, or the client workstation may be turned off.

In such cases, the station licenses used by that workstation are still allocated for up to 30 minutes. The Kofax Capture Service releases these licenses by the 30 minute deadline.

A similar situation occurs if a Kofax Capture application is disconnected from the network for more than 30 minutes. If the connection is restored and the application is still running, its license is automatically reacquired. If the license is no longer available, an error occurs.

If the KCN Server service is also configured on this computer (it may be a manually embedded process within the Kofax Capture service), it also impacts remote site functionality. We recommend that the Kofax license service be a dedicated process that is not shared with the KCN Server service. See the *Installation Guide* for more information about the KCN Server service.

Standalone Systems

Once restarted, the Kofax Capture Service considers no modules to be running.

If a standalone workstation is fatally lost and Kofax Capture is reinstalled later, the system acts as a new installation. In such cases, you must reactivate with the most recently obtained activation code. If your activation code is more than 30 days old, you need to obtain a new code by performing an automatic or manual activation.

Any volume-based licensing is restored to a usage state at least as current as 24 hours before the loss of the Kofax Capture Service.

Error Log File

Errors that occurs in any Kofax Capture module are logged in an error file, `Err_yymm.txt`, which resides in `<Kofax Capture installation folder>\Logs`. In the file name, `yy` is the last two digits of the year and `mm` is a two-digit number representing the month in which the information is logged.

In Kofax Capture, the format of the error log is such that key information is easy to locate. In addition to "standard" log entries, the log also includes technical information to assist support personnel in troubleshooting.

Each error logged to the error log file includes the following information:

- Date and time
- Error code
- Internal package ID
- Specific status1
- Specific status2
- Specific status3
- Module path
- Module name
- Station ID
- Module version
- Source module
- Line
- Error message
- Return value
- Call stack output

To redirect the log file, create or change the `LogFilePath` value in the registry in the following key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Kofax Image Products\Ascent Capture\3.0
```

If you specify an invalid or non-existent path, the default path is used.

Note Do not edit the registry unless you are qualified to do so. You can easily render the computer inoperable if you inadvertently corrupt the registry.

Deleted Batches Log File

The deleted batches log file, `Log_yymm.txt`, resides in `<Kofax Capture installation folder>\Logs` and gives information about batches deleted from the following modules: Scan, Validation or Verification (in batch editing mode), Quality Control, or Batch Manager.

In the file name, *yy* is the last two digits of the year and *mm* is a two-digit number representing the month in which the information is logged. For any given month and year, the log file is created as soon as a batch is deleted. Then, information about all batches deleted in the same year and month is appended to the log file.

The following sample shows the information that is logged to `Log_yymm.txt`.

```
"01","batch name",  
"batch description"  
"02","batch creation station ID",  
"batch creation date",  
"batch creation time"  
"03","expected number of documents in batch",  
"expected number of pages in batch",  
"pages per document",  
"document separation", (Described below)  
"save document separators", (Described below)  
"actual documents in batch",  
"actual pages in batch"  
"04","batch class name",  
"batch class description"  
"05","queue start date",  
"queue start time",  
"queue end date",  
"queue end time",  
"queue process name",  
"queue termination state", (Described below)  
"station ID",  
"queue termination error code", (Described below)  
"error text",  
"keystroke count - manual index fields",  
"keystroke count - corrections to OCR index fields",  
"keystroke count - corrections to ICR index fields",  
"keystroke count - corrections to bar code fields",  
"keystroke count - corrections to OMR index fields",  
"error state"
```

Document separation states:

- 0: Separator sheets used
- 1: Separator sheets used

Save document separator states:

- 2: Standalone separator sheet checked
- 3: Standalone separator sheet not checked

Queue termination states:

- 2: Batch ready
- 4: Batch in progress
- 8: Batch suspended
- 32: Queue put batch in error state
- 64: Queue completed processing batch
- 128: Batch status assigned as "reserved"

Error states:

- 0: No errors
- 1: Contains errors

Keystroke counts include most keystrokes, with the following exceptions: Control, Shift, Alt, and any key combination that is a shortcut for a menu or other standard Windows operation.

The "contains errors" value is used to indicate a batch that is forwarded, even though it contains rejected documents or pages. This occurs when the Partial Batch Export feature is selected.

Due to page size constraints, the sample log entries are shown on multiple lines. In the actual log file, each deleted batch entry is logged as a single line.

```
"01","Batch Test","Deleted batches log information."
"02","John Devan","2013-02-16","17:20:51"
"03","0","0","0","1","1","3","6"
"04","Tax Formalistic 2003 tax forms."
"05","2013-02-16","17:20:51","2013-02-16","17:23:04","Scan",
"64","John Devan","0","Devan","0","","","0","0","0","0","0"
"05","2013-02-16","17:24:13","2013-02-16","17:32:12","Validation",
"64","Bob Jones","0","Jones","0","","","0","0","0","0","0","1"
"05","2013-02-16","17:32:14","2013-02-16","17:33:07","Export",
"64","Sue Brown","0","Brown","0","","","0","0","0","0","0","0"
```

Kofax Capture Enterprise

Kofax Capture Enterprise contains additional features designed to extend Kofax Capture capabilities for enterprise-level installations.

Any Kofax Capture installation can be upgraded to Kofax Capture Enterprise.

Note Some Kofax Capture Enterprise features were available in prior versions of Kofax Capture.

High Availability Support

A high availability system is capable of performing tasks with virtually no downtime. Any complex system has many components, any of which can fail or degrade at any moment. A highly available system continues to function even if one or more of its components fail.

The High Availability support feature consists of a number of independent components that, when deployed in a highly available computer system, result in robust, fault-tolerant operations. Although fault-tolerant systems are primarily intended for enterprise-scale organizations, even the smallest company may benefit from some of these components.

High Availability includes support for SQL Server Enterprise, Oracle, and IBM DB2.

Multiple Instance Support

Use the Multiple Instance Support feature to install multiple instances of any Kofax Capture Service. This improves the capabilities of multi-CPU computers, so they can take full advantage of their potential processing throughput. For example, a Recognition Server station running on a dual-CPU computer can have up to eight instances of the service installed, increasing the number of batches that the workstation can process.

Terminal Services and Citrix Support

You can use Terminal Services and Citrix server technology to run instances of Kofax Capture modules remotely. By using a server to host the modules to be controlled at remote stations, enterprise-level users can consolidate IT management and prevent the need to install software on client workstations.

WebSphere Support

Kofax Capture Enterprise users have the option of installing and deploying KCN Server Server components on IBM WebSphere version 6.0 or 7.0. WebSphere can be implemented either on Solaris or Windows operating systems.

Backup Licensing Option

Backup license keys (used with High Availability Support) are available. Contact your sales representative for more information about this alternate licensing option.

Disaster Recovery Support

With Disaster Recovery, you can add alternate central sites to an enterprise configuration, specify batch upload behavior, back up and restore batches and batch classes, export and import administrative data, and more. This feature ensures business continuity when equipment fails or disaster strikes.

Chapter 2

Administration

System administrators use the Administration module to set up batches and maintain the Kofax Capture installation. From this module, an administrator can do the following:

- Define the types of documents to be processed and how they are indexed.
- Decide the batch processing workflow, including the order in which documents are routed to each module.
- Set up each module for processing.
- Define processing profiles, such as document separation, form identification, image cleanup, and recognition.
- Scan sample pages for automatic recognition and indexing.

Note Optical / Intelligent Character Recognition accuracy is affected particularly by, but not limited to, image quality and image cleanup configuration. Character recognition accuracy of 100 percent is not guaranteed.

Batch Contents Panel Thumbnails

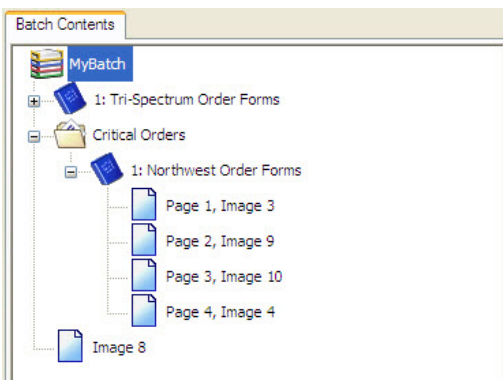
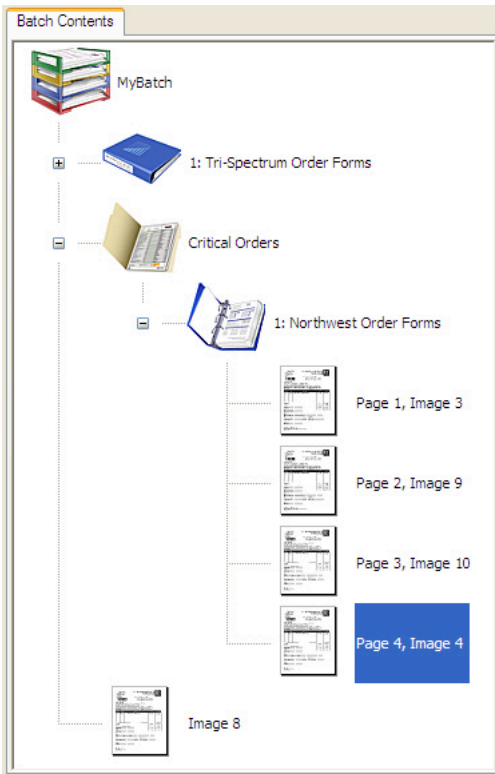
The Batch Contents panel is set to the thumbnail view by default. You can change to the icon view at any time by selecting the View tab on the Options window.

The thumbnail view has the following characteristics:

- Adjustable display size ranges from 40 x 40 to 200 x 200 pixels.
- Plus and minus signs suppressed at the root level.
- Nodes automatically expand when you drag items.
- Supports batch editing.
- Context menu access via right-click

Unless otherwise noted, the thumbnail and icon views behave identically.

Batch Contents Panel with Thumbnails



Batch Contents Panel with Icons

Thumbnails for pages are miniature representations of the actual scanned images. Thumbnails for documents and other non-page elements appear as small graphic binders or eDocument symbols.

The blue document binder symbol is opened or closed depending on the state of its branch.

The thumbnails in the tree view are fully interactive. You can jump from page to page or document to document by clicking a thumbnail. You can also drag items to new locations and delete them from the batch. If your system responds too slowly to these activities, try switching to the icon view.

Note You can also view the non-interactive Batch Thumbnails panel.

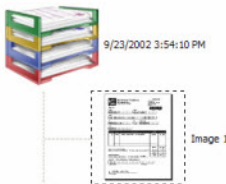
Thumbnail Size

Thumbnail display settings are controlled from the View tab in the Options window. The default size for thumbnails is 60 x 60 pixels.

You can set thumbnail sizes from 40 x 40 pixels to 200 x 200 pixels. Thumbnail sizes must be square, although the image represented by the thumbnail may not be. For example, the image in the thumbnail may be 60 pixels high and 40 pixels wide for a scanned form. The thumbnail still occupies 60 x 60 pixels, but the left and right portions are empty.

The larger the thumbnail, the easier it is to recognize the contents of a page. However, more resources are required to process and store larger thumbnails.

The following figure] shows a standard 8.5" by 11" page displayed with a 100 x 100 pixel thumbnail size (represented by a normally invisible dashed line).



Standard 8.5 by 11 Inch Page with a 100 by 100 Pixel Thumbnail

The display size setting is persistent during the current session and saved for each user between sessions.


Thumbnail Caching









You can set the number of thumbnails to store in memory to any value from 100 to 9999. The default value is 100. Caching a higher number of thumbnails speeds up batch editing, but may tax the resources on some systems.

Thumbnail Symbols

This table shows the common symbols used in the thumbnail view. Note that individual document pages are not just symbols, but instead are representations of the actual scanned image files.

Thumbnail View Symbols

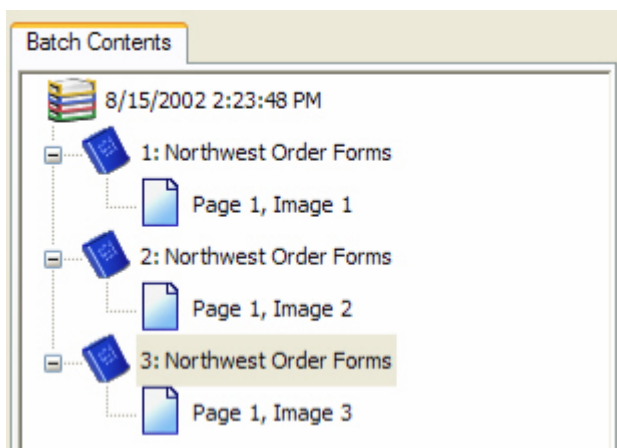
	Stack of document trays indicates the root of a batch.
---	--

	Closed binder shows that a document branch is collapsed.
	Open binder shows that a document branch is opened.
	Closed folder shows that a folder branch is collapsed.
	Open folder shows that a folder branch is opened.
	Blue check mark indicates verified documents or reviewed pages. The check mark is overlaid on the thumbnail.
	Red X indicates items that have been rejected. The red X is overlaid on the thumbnail.
	Symbol used as the background graphic for eDocuments. Normally you see this with an icon on top. For example, if your eDocument is a Microsoft Word file, you see the current icon for Word on top of this image. If the thumbnail size is set to fewer than 50 pixels, this background graphic for eDocuments is suppressed, leaving only the icon.
	Symbol used to represent empty backside pages when scanning duplex with a simplex scanner. These temporary pages are subsequently removed when the backside images become available.

Icon View

Icon views behave identically to thumbnail views, but use a different type of graphical representation for items in the tree. For example, the page icons do not reflect the actual content of the page.

If you turn off the option to display thumbnails, the Batch Contents panel switches to the icon view.



Batch Contents Panel with Icons

The icon view has the following characteristics:

- All icons are fixed at 24 x 24 pixels.

- The plus and minus signs are suppressed at the root level.
- Nodes automatically expand when you drag items.
- Icons fully support batch editing.

Special Status Marks

Three special marks are available to indicate the status of a page or document: reviewed, verified, or rejected.

Reviewed Mark

The ability to mark a page as reviewed is a feature of the Quality Control module. Reviewed items are indicated by a blue check mark over the thumbnail. The icon view is similar.

Verified Mark

The ability to mark a document as verified is a feature of the Quality Control module. Reviewed items are indicated by a blue check mark over the document binder symbol. Verified documents use the same blue check mark as reviewed pages.







Rejected Mark

The ability to mark a page as rejected is a feature of the Quality Control, Scan, Validation, and Verification modules. You can mark the page you have rejected, or see pages that are automatically rejected by Kofax Capture. Rejected items are indicated by a red X over the thumbnail.

Zone Types

A zone is an area on an image to be processed in a particular way. For example, you might want to capture data from the same location on all your forms. You can define a zone around that area on a sample page, and then specify the type of processing you want Kofax Capture to perform on that area.

Kofax Capture supports the zones types listed in the table, and you can have a total of 254 zones on a page. Note that each type of zone is displayed with different border characteristics.

Type of Zone	Display Characteristic	Example
Index zone (manual)	Solid blue line	
Index zone (automatic recognition)	Dashed green line	
SmartGroup	Dashed magenta line	
Registration zone	Solid black line	
Separator zone	Dash-dot red line	
Form identification zone	Dashed red line	

Tip "Confident" and "non-confident" zones display with different border colors in the Validation and Verification modules.

Index Zones

Index zones contain data for index fields. Kofax Capture can automatically capture the data using an automatic recognition technique such as Kofax Advanced OCR, bar code recognition, or others. You can also have validation operators read information from the image and manually enter the data for the field. You can define up to 1024 index zones per page.

- **Manual index zones:** If the data that the validation operator uses to fill the index field is at a fixed location on the form, you can draw an index zone around this location. At validation time, the validation or verification operator is shown this area of the form, making the data easier to find and read.
- **Automatic index zones:** If an automatic recognition method (for example, OCR, ICR, bar code recognition, or others) can be used to capture the data for an index field, you can draw an index zone around the location of the data and then specify a recognition method for the area. At data capture time, the zone is submitted to the appropriate recognition engine for processing. The data is captured and returned to the index field. When specifying recognition or cleanup properties, you can use QuickZones to adjust settings to achieve the best results.

You can draw more than one zone for an index field to use two recognition methods to capture the data. The data captured from the zone with the most confident results is used. That value is displayed for your validation operators. The zones can appear at different locations on the form, or one on top of another.

Use the Create Index Zone window to create an index zone or edit its properties.

Note You can group index zones without using scripts. See [SmartGroups](#) for details.

Limits for Zones

The following lists limits for zone size and position.

Sizes

- OMR zones
 - 26x26 inches
- ICR Zones
 - 26x26 inches
- OCR zones
 - 26x26 inches for images up to 200 dpi
 - 17x17 inches at 300 dpi
 - 13x13 inches at 400 dpi
 - 8x8 inches at 600 dpi
 - 3x3 inches at 1200 dpi
- Character length
 - All zones must have 254 characters, or fewer.

Index Fields

An index field is a keyword associated with a document and used:

- As a way of retrieving a document after it has been exported to permanent storage. For example, if a customer asks to review an order form, it would be convenient to retrieve the form by entering a known keyword for the form (such as the vendor name, the vendor ID, the PO number, etc.).
- As a way of retrieving data from an image. For example, you might want to read certain pieces of information from an image and store the values in a database.
- To define index fields and associate them with a document class using the Create Document Class window.

Use the Document Class Properties window to edit index fields.

Index Field Considerations

When selecting your index fields, consider the following:

- How many index fields are necessary? If you have only one index field and it is entered incorrectly, you'll never be able to retrieve the document. However, if you have many index fields, you'll spend too much time validating each document.
- Can you automate the validation process with some kind of recognition method (OCR, ICR, bar code recognition, or other)? For example, if critical data is encoded in bar codes on your forms, bar code recognition is a good way to capture that data.

Index Field and Batch Field Attributes

The following table lists attributes you can associate with batch fields and index fields.

Field Attributes

Field Name	Comments
Name	You must assign a name to your batch and/or index fields. When you create a batch or index field, Kofax Capture assigns a default name to the field, although you can assign a different name. Use meaningful names.
Field Type	You must associate a field type with your batch and/or index fields.
Default	You can specify a default value for your batch and/or index fields. You can enter a value, or select a Kofax Value. The default value must conform to the data type specified for the field type. For example, if the field type is a VARCHAR with a maximum length of 25 characters, the default value must contain no more than 25 alphanumeric characters. In addition, the maximum length for CHAR and VARCHAR data types is 25,000 characters. However, the maximum number of characters for a default value is 254. This is true even if the number of characters for the CHAR or VARCHAR field type is greater than 254. See Data Types .
Required	Use this attribute to specify whether the batch or index field is required.
Verify (index fields only)	Use this attribute to specify that the index field must be verified in the Verification module.

Field Name	Comments
Hidden	Use this attribute to hide the value of the batch or index field. This might be useful for fields that have a default value associated with them or when values are generated by a field macro. You cannot set both "Required" and "Hidden" to True. If you set one to True, and then attempt to set the other to True, the first one is reset to False.
Sticky (index fields only)	Use this attribute to carry a value from one document to the next.
Total (index fields only)	Use this attribute to use the index field in a batch totaling process.

Table Fields

Kofax Capture supports tabular data structures (two-dimensional data) in the form of table fields. Table fields may be useful if you want a single field to store multiple names, part numbers, or other similar items.

Table fields are "enhanced" index fields capable of supporting multiple values. Table fields can be used as the associated field for an index zone, index group zones, or for page-level bar codes.

Without using a customization, all rows of the table field have the same zone coordinates. Operations that are valid for single value index fields are also valid for table fields. A table field represents a column in a Kofax Capture table.

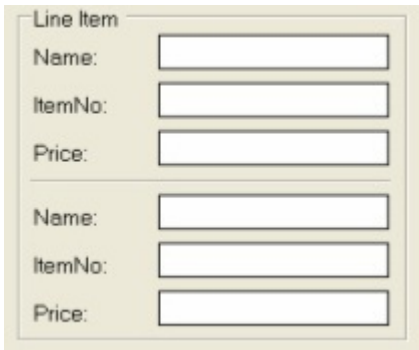
If your table has only a single column, that table field may also be referred to as a "multi-value field." This is an abbreviated way of identifying tabular data in a single column.

Do not confuse Kofax Capture table fields with the automatic recognition of tabular data in forms. The Recognition Server module does not provide true tabular recognition. If you create an index field around a table in your form, the recognition results for the entire zone are collapsed into the first row of the table field, regardless of how many rows are in the table on the form.

Validating/Verifying Table Fields

The Validation and Verification modules display table fields in the index fields panel using a special format.

Table fields are contained within frames. The display label of the table is used as the title for the frame, and it is visible in the upper-left portion of the frame. For each row, all the index fields for that row are displayed in the order defined for the document class. Each row in the table is delimited by a separator line.



The image shows a window titled "Line Item" containing a table with two rows and three columns. The columns are labeled "Name", "ItemNo", and "Price". Each cell in the table is an empty text input field. The table is divided into two sections by a horizontal line.

Tables in the Index Field Panel

In the preceding figure, Line Item is a three-column table (Name, ItemNo, and Price) with two rows. All tables have one row by default. Use the Field menu to add additional rows.

The Field menu for this panel contains the items Insert Row Above, Insert Row Below, and Delete Row for adding rows above or below the current row, and for deleting the current row.

Page Level Bar Codes

Table fields can be associated with the bar codes found on a page. As with index zones, results are written to the first row of the table field only.

Field Types

As with single value index fields, field types used by one or more table fields may not be deleted.

Batch Class Import

Importing batch classes is largely unaffected by table fields. However, when importing batch classes generated with versions of Kofax Capture prior to 7.0, special rules are applied if that batch class has a field type called (TABLE).

Because (TABLE) is reserved for table fields, if an imported batch class contains (TABLE) as a field type, the field type is imported and renamed (regardless of the Transfer Mode setting). In this case, the following line displays in the Import Progress control of the Import/Export entertainment window:

```
Warning: Field type (TABLE) renamed: <new name>.
```

Note The algorithm for determining the new name is similar to that of renamed items during batch class import. The base of the new name is (TABLE), with a suffix that guarantees uniqueness.

Database Validation

Use the Table Settings tab on the Database Validation Properties window to specify a table field as the index field to validate. This feature is used to look up information in a database to provide values for index fields. The following rules summarize the behavior of a database validation using tables.

The specific table row value validated depends on the trigger setting for the database validation on the Options tab on the Database Validation Properties window in the Administration module. If the trigger

is "Document preprocess" or "Document post-process," the first row of the table field is validated. If the trigger is "Field preprocess" or "Field post-process," the current row of the table field is validated.

When a table field is auto-filled from the database validation results, the behavior is modified slightly.

- If the trigger is "Document preprocess" or "Document post-process," the first row of the table field is automatically filled.
- If the trigger is "Field preprocess" or "Field post-process" and the table field is from the same table as the index field being validated, the current row is automatically filled.
- If the trigger is "Field preprocess" or "Field post-process" and the table field is not from the same table as the index field being validated, the first row of the table field is auto-filled.

Example

Suppose your form has the following table.

Quantity	Item #	Description	Unit Price	Amount
2	5208	Stemware Protector	19.95	39.90
1	5217	Stemware Alignment Brace	257.89	257.89
36	5236	Stemware EM Coil Collet Bolts	1.28	46.08

Table in a Form

You might start by adding a table definition in the Document Class Properties window. The following example also includes display labels.

Some columns will have a drop-down list of choices. You can use your mouse to make a selection from the list.

The tables are made up of rows and columns

You can click on a columns header to sort the table by the values in that column

Document Class Properties

General | OCR | PDF

Name: Catalog Orders

Description: Order forms from all catalogs

Index Fields:

Name	Display Label	Field Type	Default	Required	Verify	Hidden	Sticky	Total
Customer Name		Alphanumeric		True	False	False	False	False
Source Number		Alphanumeric		True	False	False	False	False
Ship To First Name		Alphanumeric...		True	False	False	False	False
Ship To Last Name		Alphanumeric...		True	False	False	False	False
Check/MO		Boolean_1	0	False	False	True	False	False
PO		Boolean_1	0	False	False	True	False	False
Visa		Boolean_1	0	False	False	True	False	False
Master Card		Boolean_1	0	False	False	True	False	False
Amer Express		Boolean_1	0	False	False	True	False	False
PO Number		Parts List	0	False	False	False	False	False
Parts List		(TABLE)						
Part Number		Alphanumeric...		False	False	False	False	False
Status		Alphanumeric...		False	False	False	False	False
Credit Card Number		Alphanumeric...		False	False	False	False	False
Mailers		Alphanumeric...		False	False	False	False	False

Some columns will allow you to enter a value.

These buttons allow you to add or remove table rows.

Click New Field Type to open the Create Field Type dialog box.

Click New Index Field to add a row to the table.

Click Delete Index Field to delete a row from the table.

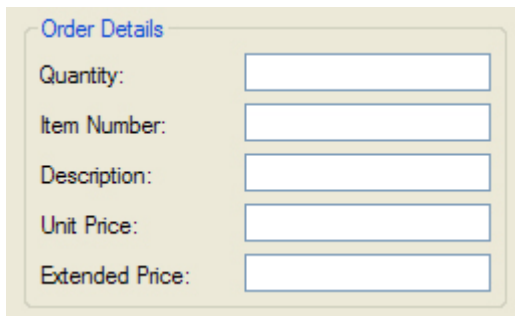
Table Definition in the Document Class Properties Window

Once your table structure is in place, you can draw 5 manual index zones around the table contents, as shown below:

Quantity	Item #	Description	Unit Price	Amount
2	5208	Stemware Protector	19.95	39.90
1	5217	Stemware Alignment Brace	257.89	257.89
36	5236	Stemware EM Coil Collet Bolts	1.28	46.08

Index Zones in a Table

When you process a batch, the table data appears in the index field panel in the Validation module.



Quantity:	<input type="text"/>
Item Number:	<input type="text"/>
Description:	<input type="text"/>
Unit Price:	<input type="text"/>
Extended Price:	<input type="text"/>

Tables in the Index Field Panel

The validation operator can enter the data from the table by manually adding or deleting rows as necessary.

Width Alignment

Width alignment forces the width of an image to be aligned on a specific boundary. This is useful when your images are rotated 90 degrees (the length becomes the new width), and the application requires image widths to be even multiples of 8 or 16.

Pad Width to Byte Boundary

Pads image width up to the next multiple of 8.

Pad Width to Word Boundary

Pads image width up to the next multiple of 16.

The default is no width alignment.

Batch Totaling

Batch totaling is a quality assurance technique in which the sum of certain index fields is compared to the expected value.

You specify that an index field is to be used in a batch totaling process when you define index fields for a document class. During production, the scan operator is prompted for an expected batch total by the Scan module. Typically, the operator manually computes the value from data on the documents in the batch, enters the expected batch total, and then processes the batch. Then, at the Validation module and Verification module (if specified), Kofax Capture computes the sum of the selected index fields.

The computed sum is compared to the expected value entered by the scan operator. If the values match, the batch is accepted. If the values do not match, a batch total error is reported.

An index field set up for batch totaling applies only to its specific document class. If you have an identical index field in several document classes, and you want to total all of them, you must set each index field individually in all the document classes that use it.

OMR Settings

When drawing a zone around an area for OMR processing, you should include only the OMR shape (usually a square, rectangle, or circle) with little white space outside the shape.

When setting up the zone, keep the following in mind.

- If you draw a large zone box around an OMR item, the percentage of black pixels is relatively small. Consequently, if a user makes a small check mark, it may not significantly change the percentage of black pixels. If this small change does not put the percentage over the threshold, then the OMR engine detects it as "unmarked." Therefore, the smaller the zone box around the OMR item, the easier it is to detect a mark.
- There are always slight differences in registration (paper position) as documents are fed through a scanner. If your zone box is very close in size to the OMR item, then the paper may shift so that part (or all) of the item is no longer in the zone, leading to detection errors. Therefore, the smaller the zone box around the OMR item, the greater the chance of registration problems.
- For best results, make the zone boxes as small as you can. If registration errors turn out to be a problem, gradually increase the size of the box until the errors are minimized.

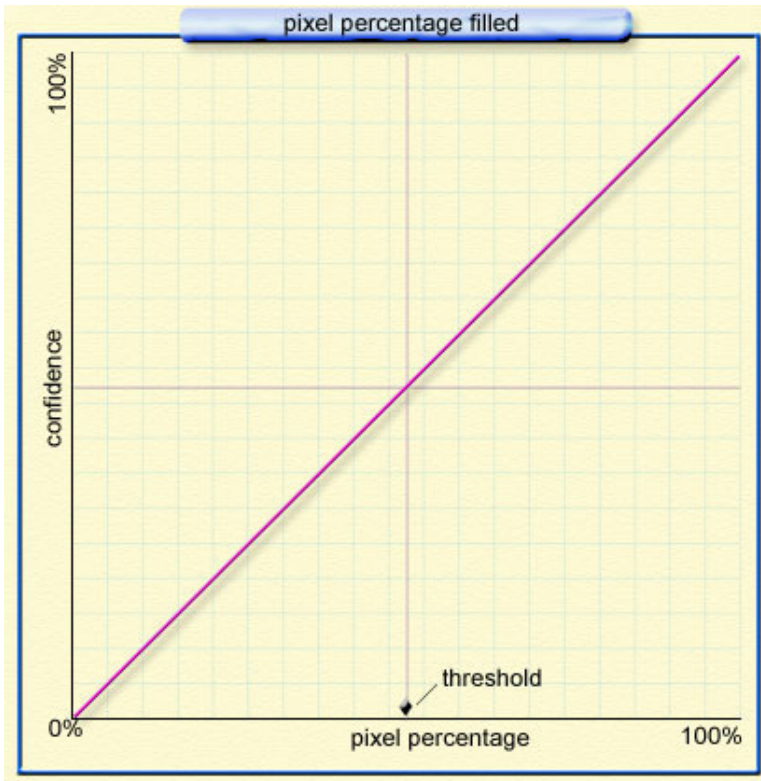
Make sure that zone boxes around similar OMR items are all the same size. This ensures consistent results.

The following confidence settings are available for the OMR engine.

Pixel Percentage Threshold

This is the default setting. The confidence is calculated as the percentage of black pixels in the OMR zone. For example, a confidence of 32% means that 32% of the pixels in the OMR zone were black. The higher the number, the more likely the box has been checked.

The following graph shows the relationship between pixel percentage and confidence for the "pixel percentage filled" method of determining confidence. In this case, the threshold is set to 50%, but it could be set anywhere between 0% and 100%.

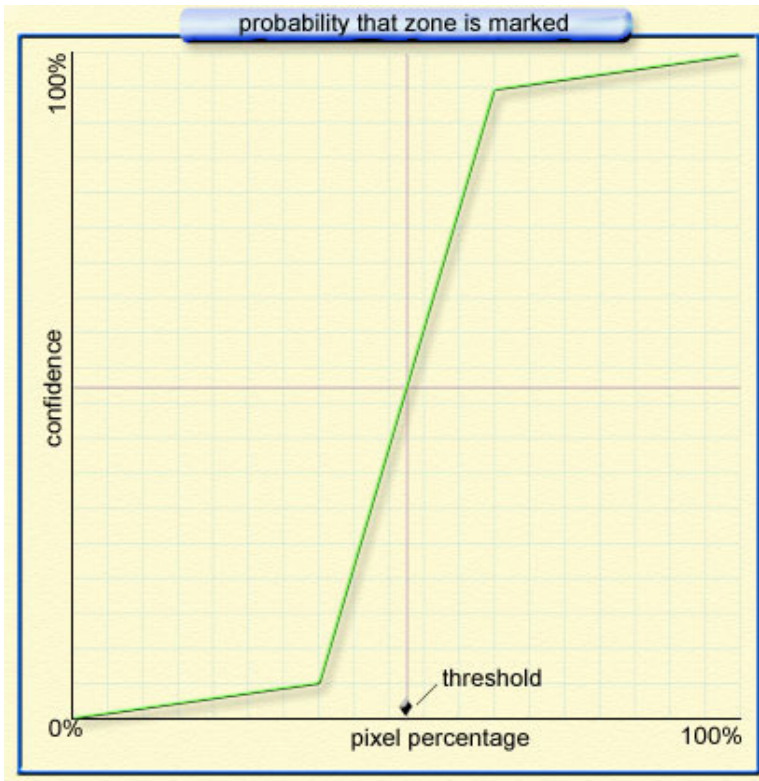


Pixel Percentage Threshold

Probability that zone is marked

The confidence is calculated based on the probability that the zone has been marked. Typical confidences for marked zones fall in the 80%-90% range and unmarked zones in the 0-20% range. This method is well-suited for zones used in groups when "Pick best" is checked in the Index Group Zone Properties window.

The following graph shows the relationship between pixel percentage and confidence for the "probability that zone is marked" method of determining confidence. In this case, the threshold is set to 50%, but it could be set anywhere between 0% and 100%. Moving the threshold displaces the center of the curve left or right, but the basic shape remains unchanged.

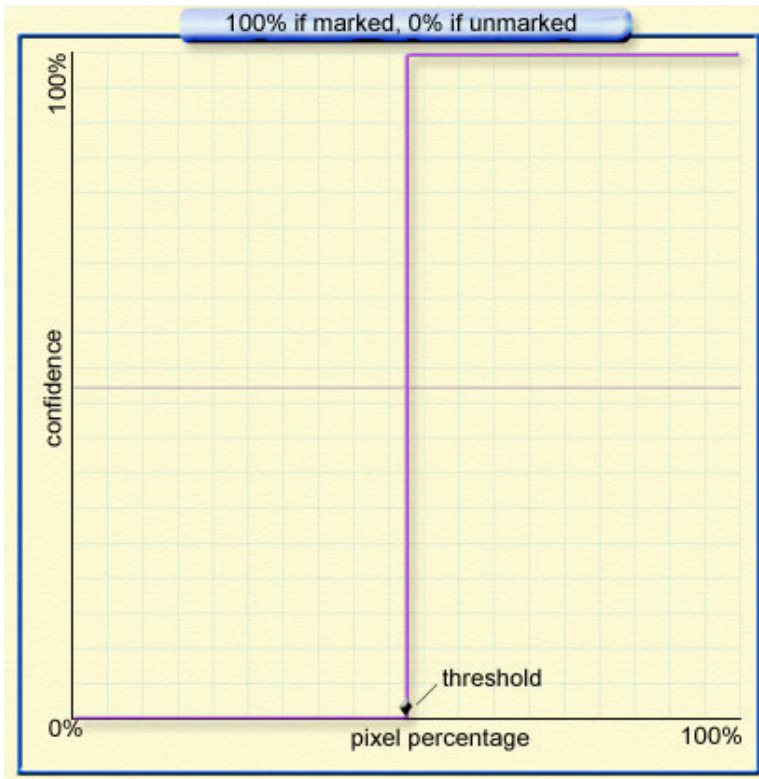


Probability Marked Threshold

100% if Marked, 0% if Not

This is similar to the preceding option. The confidence is set to either 100% or 0% (no intermediate values) depending on whether the zone is marked or not.

The following graph shows the relationship between pixel percentage and confidence for the "100% if marked, 0% if not" method of determining confidence. In this case, the threshold is set to 50%, but it could be set anywhere between 0% and 100%.



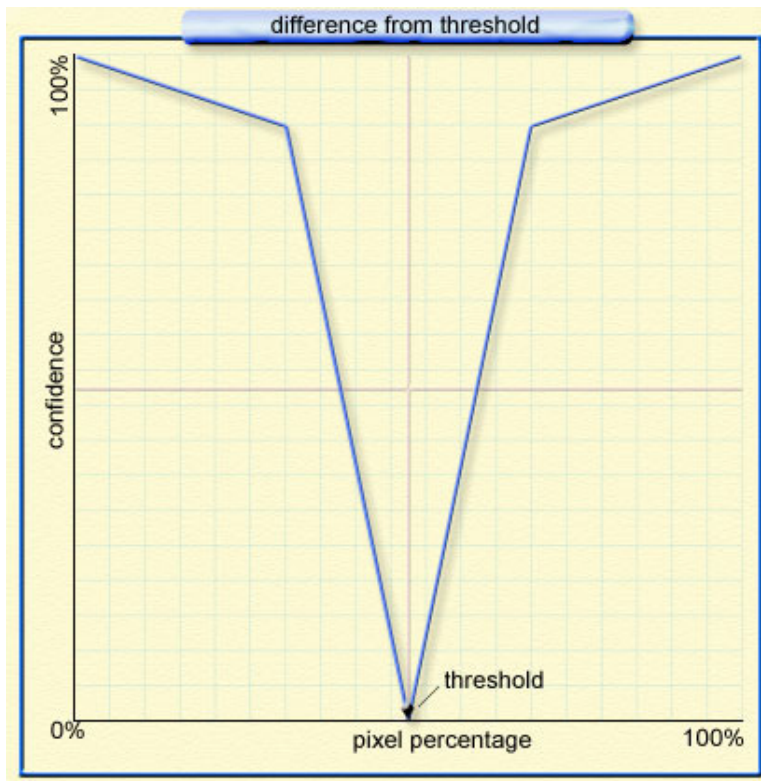
Confidence Set to 100% or 0% Threshold

Difference from Threshold

The confidence is calculated on how far the pixel percentage is from the threshold point. Consequently, a completely blank zone and a completely filled zone would both have a confidence of 100%. On the other hand, if the threshold is set to 30% and the number of black pixels is 29% or 31%, the confidence level would be very low, since a small error in scanning could flip the results. This method indicates how certain the OMR engine is of its results, not the pixel percentage.

This setting is a good choice for "yes/no" check boxes that are not part of a group. In general, using this setting in a group does not produce useful results and is not recommended. In groups, you may need the recognition engine to pick the best result. Since this method can yield 100% confidence for both a blank and a checked item, your "pick best" results cannot be predicted.

The following graph shows the relationship between pixel percentage and confidence for the "difference from threshold" method of determining confidence. In this case, the threshold is set to 50%, but it could be set anywhere between 0% and 100%. Moving the threshold displaces the center of the curve left or right, but the basic shape remains unchanged.



Difference from Threshold

For best results, verify your settings with image files representative of the images you plan to process.

User Dictionaries

The recognition engines included with Kofax Capture can make use of dictionary files to improve the accuracy of your index field data.

Only a single dictionary can be used with a document class. The dictionary can support a single language. If you have selected multiple languages, only the first language in the list of the selected languages uses the dictionary. User-defined dictionaries are not supported if you select Chinese, Japanese, or Korean as the primary language. All the following rules for dictionaries apply, regardless of the language.

Full Text Dictionary

This dictionary is used by the PDF Generator module and by OCR Full Text recognition. You can create an ASCII text file to be used as a dictionary with any ASCII text editor, and note that each word must be on a separate line in the ASCII text file.

The Full Text dictionary should contain terminology specific to the document class, although output from the recognition engine may contain words not found in the dictionary.

The dictionary file must be in a folder accessible to the recognition engines or modules that use it. This may be either on the local workstation, via a mapped drive, or a UNC path.

Zonal Dictionary

Zonal dictionaries are the same as Full Text dictionaries. However, with a zonal dictionary, each field type can have only one dictionary, but a dictionary can be used by one or more field types. For example, you could have seven field types and five dictionaries, with one dictionary shared by three field types.

OCR Dictionaries

You can specify a dictionary to be used for OCR processing. If specified, the dictionary is used by the Kofax Capture OCR recognition engines at data capture time and could be useful for checking unrecognized words.

There are several types of dictionaries you can use.

You can specify an OCR dictionary at the field type level and/or the document class level:

- If specified at the field type level, the dictionary is used for zonal OCR processing. The dictionary should contain terminology specific to the field type. The field type level dictionary must be accessible to the Recognition Server module.
- If specified at the document class level, the dictionary is used by the PDF Generator or the OCR Full Text modules. It should contain terminology specific to the document class. The document class level dictionary must be accessible to the modules that use it.

Using a dictionary does not guarantee that the output from the recognition engine will match an entry in the dictionary. The dictionary is used as an aid to help the engine make the best possible decision it can, but does not control the engine's final output.

Note For multiple languages, only words not found in the dictionary are flagged. If the selected language does not have a dictionary, the word is not flagged.

You specify a field type level dictionary from the Create Field Type window or Field Type Properties window.

You specify a document class level dictionary from the Create Document Class window or Document Class Properties window.

Zone Display at Validation Time

Zones for which data is automatically captured (for example, with OCR, ICR, or other recognition technologies) are displayed for your validation operators as either "confident" or "non-confident" zones. A "confident" zone is one that is marked as having a high probability of accuracy. A "non-confident" zone is one that is marked as having a low probability of accuracy.

By default, confident zones are displayed at validation time with green borders, while non-confident zones are displayed with red borders. (You can specify a different color scheme from the Validation module.) While all zones should be carefully validated, your validation operators should pay special attention to "non-confident" zones.

Once you visit a zone (place the cursor in the index field) and then leave it, the zone displays as "confident" (green), even if you do not change the contents.

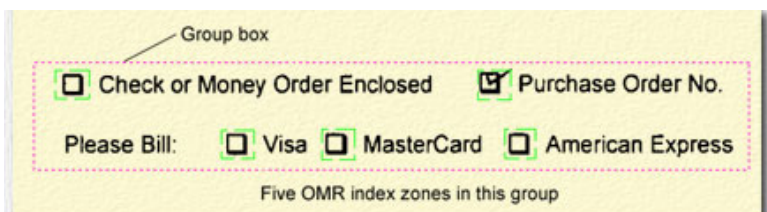
Zone display behaves a little differently when the zone is part of a group. In that case, by default, the display zooms to the group rather than the specific zone. This setting can be changed in the Index Group Zone Properties window so that the display zooms to the most confident member of the group.

Note If you select the Retain Zoom feature, the zooming behavior may change.

SmartGroups

Many documents include related items. For example, you might find fields for first and last name, three areas for a social security number, or a phone number with a separate field for the area code.

In the following example, the form has space for the user to select from several payment methods. All the OMR index zones within the magenta box make up a single group.



SmartGroups

Use the "SmartGroups" feature to take advantage of the relationship among items by creating a group that includes one or more index zones. This capability eliminates the need to set up a special-purpose script.

"Groups" and the groupings are called "index group zones."

Note Manual index zones cannot be used in groups.

With SmartGroups, you can:

- Automatically combine data from separate fields into a single field, such as Full Name = First Name + Last Name
- Automatically use a bar code, or revert to text data if necessary
- Control how many fields can be filled in for the group (a specific number or a range)
- Combine separate month, day, and year fields into a single date

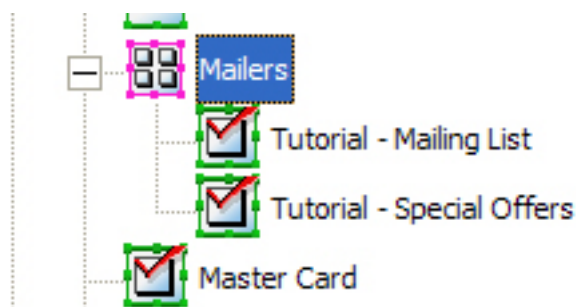
As you work with SmartGroups, keep the following points in mind:

- On paper, your items may be physically grouped together. This is natural and convenient for users of the form. Kofax Capture, however, creates logical (instead of physical) groups. The elements that comprise a group can be anywhere on the form.
- To create an index group zone, you must draw a rectangle on your sample page and then assign an Associated field to the rectangle. The rectangle then becomes the index group zone.
- Index zones are grouped based on the Associated field, not on the location, size, or contents of the rectangle. All index zones with the same Associated field are in the same group. For example, to

include five items in a payment method group with "payment method" as the name of the Associated field, you must use "payment method" for all five index zones.

Note You can create index zones with the same Associated field without grouping them. In this case, the index zone with the highest confidence is used as the result.

- The rectangle does not have to surround the group's index zones, but it should. By default, the image viewer (in the Validation and Verification modules) zooms to show the entire group based on the size and location of the rectangle. If index zones exist in the group but outside the rectangle, they may not show up in the zoomed view. (You can elect to have the view zoom to the zone with the highest confidence instead of the entire group, and you can also retain your zoom settings.)
- The Create Index Group Zone window - General tab has a list for selecting the Associated field for the group. The list is automatically populated with a list of fields taken from index zones on the form. SmartGroups searches for an available zone that is graphically within the rectangle you drew for the group, and selects it as the most likely Associated field. If multiple zones are available within the rectangle, SmartGroups selects the index field that comes first alphabetically. If no index zones exist in the rectangle, the list contains all the fields on that page in alphabetical order.
- When creating a group, it is better to draw the individual index zones first, and then draw the rectangle for the index group zone around them. (The Administration module does not allow you to draw one rectangle inside an already existing rectangle.) However, if you are modifying an existing index zone and the group rectangle is in the way, you can temporarily move it aside while working on the index zones. When you are done with the index zones, move the group box back into position and adjust its size if required.
- The confidence level for a group is calculated from the confidence levels for all the members of the group. The precise method for this varies with your settings. In some cases, particularly when concatenating all the results from a group, the display may not show the most confident zone (even if the Display Most Confident Zone option is set).
- You can specify how the number of expected values returned by a group. A group can return from 0 to 254 values. Normally, when more than one selection is allowed, you would select to have the results concatenated in the Associated field.



SmartGroup Tree Structure

Note If you are grouping OMR index zones, the "Return value for unmarked zone" field must be blank (null) for all the OMR index zones in the group. If this field is not blank, the number of results may not be correctly reported.

- You can view the group structure in the Batch Class tree or the Document Class tree. You see the index group zone icon followed by the name of the group (taken from the Associated field). Indented under this are all the index zones in the group. Note that, contrary to ungrouped index zones, each index zone in a group is identified by the name of the recognition profile it uses (not the name of the Associated field).

Note You can use the same recognition profile for more than one member of the group. In that case, the index zones appear in the tree with the same name. This may make it difficult to associate a zone in the tree view with its location on the sample page. You can easily resolve this by selecting the zone in the tree, and looking on the sample page for the corresponding zone.

Creating SmartGroups

Use the SmartGroups feature to group related index zones on a form. See [SmartGroups](#) for more information.

Create a group zone by drawing a rectangle on the screen, setting its parameters, and adding index zones to the group.

The following procedure assumes that you have already set up the fields and field types for your document class. See [Field Types](#) and [Creating a Field Type](#) for more information.

Create index zones on the sample pages you import for form types.

1. Select a sample page to display it.
2. On the **Insert** tab, in the **Zones** group, click the arrow under **Index**, and then click **New Index Group Zone**.

Your cursor changes from a pointer to a cross hair.

3. Draw a rectangle on your sample page.

The rectangle should contain all the index zones that belong to the group. You can adjust the size and position of this rectangle later (See [Adding Members to a SmartGroup](#) for details.)

Note The group box acts as a visual aid by drawing your eye to the contents of the group. It also controls the image viewer's zoom level in the Validation and Verification modules. Finally, it affects the automatic selection of the **Associated** field in the list in the **Create Index Group Zone** window - **Group** tab.

After the rectangle has been drawn, the **Create Index Group Zone** window appears.

4. From the **Associated Field** list, select the index field to associate with the group.
If the rectangle you just drew contains only group members (index zones with the same Associated field), the default value in the list is the correct Associated field for your group.
5. Select either **Display group zone** or **Display most confident zone**.
This controls the way the group is displayed in the Validation and Verification modules.
6. Fill in the minimum and maximum number of non-empty return values you will accept.
This can be a number from 0 to 254. It cannot exceed the value in the **Maximum** field or the **Minimum** field. To specify an exact number of return values (for example 3) set the minimum and maximum values to the same number.
7. Select **Pick best** or **Concatenate**. If you select **Concatenate**, then specify a delimiter.
If you select **Pick best**, only the value with the highest confidence is returned.

8. Click **OK** to save your SmartGroup and add it to the tree view.

The group shows up next to a group icon and has the name of the Associated field.

At this point, you have created a new SmartGroup but not explicitly added any members. However, any existing index zones with the same Associated field as the group automatically join the SmartGroup. See [Adding Members to a SmartGroup](#) for details.

Adding Members to a SmartGroup

If you create the SmartGroup first, and then create a number of index zones with the same Associated field as the SmartGroup, those index zones automatically join the group. On the other hand, if you create the individual zones first, and then create a SmartGroup with the same Associated field as the index zones, the index zones also automatically join the SmartGroup. In other words, an index zone belongs to a group when it has the same Associated field as the group.

To remove an index zone from a SmartGroup, just associate that index zone with a different field.

Each index zone within the group can have its own recognition profile. You can also use the same recognition profile for more than one zone in a group, but if you do, those zones have the same name when visible in the batch or document class tree views. Normally an index zone is represented in the tree views by the name of its Associated field. When an index zone belongs to a SmartGroup; however, it is represented in the tree views by the name of its recognition profile. In such cases, the SmartGroup takes the name of the Associated field.

To clarify this, consider a group for payment method where the choices are the following:

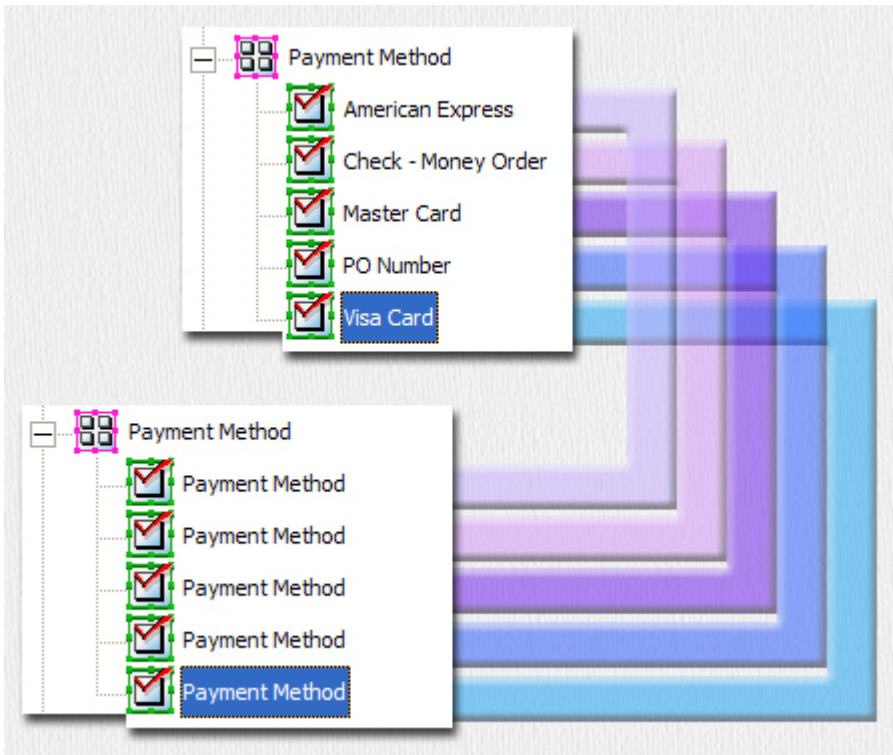
- American Express
- Check - Money Order
- MasterCard
- PO Number
- Visa

The name of the group (its Associated field) could be Payment Method, and the names of the recognition profiles could be the same as each choice (American Express, Visa, etc.).

The following graphic shows two versions of the same SmartGroup. In the group on the top each index zone has a different recognition profile; in that group it is easy to determine the purpose of each index zone. In the group on the bottom, all index zones have the same recognition profile. In this group, it is difficult to know the purpose of each index zone. In either case, the SmartGroup functions in exactly the same way.

While the group on the top is easier to read, the group on the bottom has fewer recognition profiles to manage. If you later need to make adjustments to the recognition profiles, you only have to do it once for the group on the bottom. You need to make adjustments to five profiles for the group on the top.

You can select the approach that best meets your needs.



Two Ways to Categorize a SmartGroup

For all OMR index zones in a group, you must be sure the "Return value for unmarked zone" field is blank. This field appears on the Recognition Profiles window, where it is the default setting, or the Index Zone Properties window, where it overrides the default. The initial value for this field is 0, so you must explicitly delete the contents to make it blank. If this field is not blank, the group may not behave as expected when counting return values. Even an apparently empty entry counts as a return value if it contains invisible characters such as spaces. Only "null" entries are recognized as not having a return value.

Adding Index Zones to a SmartGroup

The following procedure assumes that you have already created a SmartGroup, but not created the index zones.

1. Select a sample page to display it.
2. On the **Insert** tab, in the **Zones** group, click the arrow under **Index**, and then click **New Index Zone**. Your pointer changes to a cross hair.
3. On the sample page, draw a rectangle around the area to use as an index zone. The **Create Index Zone** window appears. You can temporarily move the SmartGroup rectangle out of the way while drawing index zones.
4. On the **Associated field** list, select the field already associated with the SmartGroup.
5. Make sure that **"Use automatic recognition"** is selected (this is the default setting). You cannot have a manual index zone in a group.
6. Select a recognition profile from the list.

7. You can create a unique recognition profile for each index zone in the group, as shown on the top in the preceding illustration.
 - a. Click **Edit**.
The **Recognition Profiles** window appears.
 - b. Make appropriate adjustments to the settings.
 - c. Use the **Test** button to check your settings.
 - d. In the case of an OMR index zone, make sure that the "Return value for unmarked zone" is blank (delete all characters in the field).
 - e. Click **Save As** and give your profile a descriptive name that works for your group.
 - f. Click **Close** to exit the **Recognition Profiles** window.
8. Click **OK** to save the index zone and place it in the tree. Note that it is indented under the group and identified by the name of the recognition profile it uses.
9. Click **OK**.
10. Repeat the preceding steps for each index zone you want to include in the group.

Creating a SmartGroup and Adding Index Zones

The following procedure assumes that you have already created the index zones (all with the same Associated field), but not created the SmartGroup.

1. Select a sample page to display it.
2. On the **Insert** tab, in the **Zones** group, click the arrow under **Index**, and then click **New Index Group Zone**.
Your pointer changes to a cross hair.
3. Draw a rectangle around index zones on the sample page.
The **Create Index Group Zone** window appears.
4. In the **Associated field** list, confirm that the correct **Associated field** is selected as the default. If not, select the correct **Associated field** from the list.
5. Select a **Validation Display**.
6. Select the minimum and maximum **Number of Values** in **Result Set**.
7. Select the type of **Result Set**.
8. Click the **Test** button to check your settings.
9. Click **OK** to save the SmartGroup and place it in the tree.

Setting the Number of Expected Values in a SmartGroup

A SmartGroup may have 0 to 254 values in the result set. When grouping related items together using SmartGroups, you can specify how many values you expect in the result set by specifying a range or an exact number.

If the actual number of results is outside the expected range, the SmartGroup returns a blank value with zero confidence. Consequently, the SmartGroup is outlined (in red by default) in the Validation (or Verification) module, and requires manual indexing.

Example 1

Assume that a social security number is broken into three separate areas on a paper form. You require all three values to get a valid social security number. Follow these steps to set the number of expected values in a SmartGroup to an exact number.

1. Create the SmartGroup and set the **Associated field** and **Validation Display** options.
2. Set the minimum **Number of Values in Result Set** to 3.
3. Set the maximum **Number of Values in Result Set** to 3.

Note Setting the minimum and maximum values to the same number specifies that exactly that number of results are expected (in this case, 3).

4. Select other options as appropriate.
5. Click **Test** to check your settings.
6. Click **OK** to save the SmartGroup and place it in the tree.

Example 2

Assume that a survey is asking passengers to pick their favorite three hotel chains from a list of ten. Participants can select from zero to three hotel chains. Follow these steps to set the number of expected values in a SmartGroup to a range.

1. Create the SmartGroup and set the **Associated field** and **Validation Display** options.
2. Set the minimum **Number of Values in Result Set** to 0.
3. Set the maximum **Number of Values in Result Set** to 3.

Note Setting the minimum to zero allows for no results at all.

4. Select other options as appropriate.
5. Click **Test** to check your settings.
6. Select **OK** to save the SmartGroup and place it in the tree.

Tip If your form has an area that should be left blank by the person filling it in (for example a "For Office Use Only" section), you can set both the minimum and maximum values to 0. The Validation or Verification module will highlight the group if any fields in that area are marked.

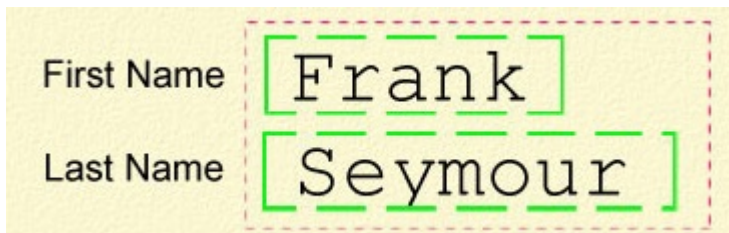
Using SmartGroups to Automatically Combine Zones

Use SmartGroups to automatically combine zones. For example, you can take a First Name zone and a Last Name zone and combine them to create a value for a Full Name field. Or you might combine three zones (month, day and year) into a single date (mm/dd/yyyy).

The following example demonstrates this technique by combining a First and Last name.

Consider the case where a form has an area called First Name and a second area called Last Name. You have drawn index zones around the two areas and set the appropriate recognition and image cleanup profiles. Both index zones are associated with an index field called Full Name.

You intend to create a SmartGroup around these two areas, where the group is also associated with the Full Name index field. When done, the SmartGroup looks something like this on the sample page.



The following procedure assumes that you have already created the First Name and Last Name zones, and that they are associated with the Full Name index field.

1. On the **Insert** tab, in the **Zones** group, click the arrow under Index, and then click **New Index Group Zone**.
Your cursor changes from a pointer to a cross hair.
2. Draw a rectangle around the First Name and Last Name index zones as shown in the preceding example.
The **Create Index Group Zone** window appears.
3. In the **Associated field** list, confirm that **Full Name** is selected as the default. If not, select it from the list.
4. If necessary, select **Display group zone** in the **Validation Display** area (this is the default).
5. Set the minimum **Number of Values in Result Set** to 2.
6. Set the maximum **Number of Values in Result Set** to 2.

Note Setting the minimum and maximum values to the same number specifies the exact number of results expected. In this case, two results are expected: the first name and the last name. If a different number of values is returned, the group may require manual indexing in the Validation or Verification module.

7. Select **Concatenate** in the **Result Set** area.
The two values are combined into a single result.
8. In the **Delimiter** field, type a space to insert a single blank space between the two values. Without the delimiter, the result would be FrankSeymour instead of Frank Seymour.
9. Use the **Test** button to check your settings.
10. Select **OK** to save the SmartGroup.

Copying an Index Group Zone

Use Copy to duplicate an existing index group zone. The copy method is useful for adding an index group zone similar to an existing one to a sample page. All member index zones are also copied. You can modify the copy of the index group zone as necessary to make it unique.

Note Copy and paste is not available for member index zones.

When you copy an index group zone, certain items associated with the index group zone are copied, and others are linked.

1. Select the index group zone to copy. You select an index group zone on the **Batch class tree view** tab, the **Document class tree view** tab, or the sample page.

2. On the **Home** tab, in the **Clipboard** group, click **Copy**.
3. On the **Batch class** or **Document class tree view** tab, select a sample page node. On the **Home** tab, in the **Clipboard** group, click **Paste**.

When you paste from the sample page image, the copied index group zone is placed on the sample page at the location of the mouse click, where the mouse click is the top left of the index group zone rectangle. It is also be added to the list of index zones in the index zone tree.

A copy of the index group zone is created with a unique name, such as Name1, Name2, and Name3. If you perform a copy and paste on a previously copied index group zone such as Name2, then the new index group zone is created with a unique name such as Name21, Name22, and Name23.

4. Edit the copied index group zone on the **Index Group Zone Properties** window.

Deleting a SmartGroup

You delete SmartGroups from the sample page on which you created the group.

1. With a sample page displayed, select the zone to delete.
The selected zone appears with sizing handles.
2. Right-click the zone to delete.
A context menu appears.
3. Click **Delete**.

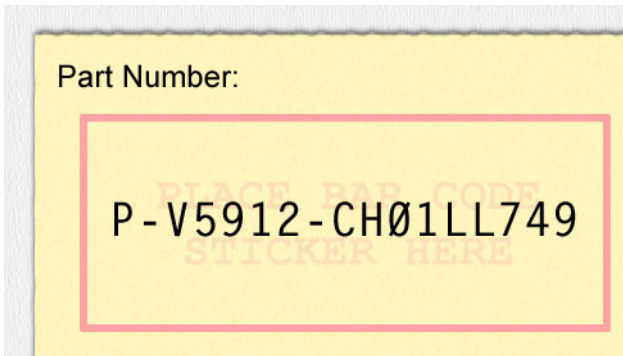
After deleting a SmartGroup, the following occurs:

- The magenta box disappears from the sample page.
- The individual OMR zones that comprised the group move up one level since their parent has been eliminated.
- The names of the individual OMR zones that comprised the group change from the recognition profile name to the associated field name (as with all the other OMR zones that were not in the group).
- Because of this name change, all the ex-group members now have the same name (since they were given the same associated field in order to group them).
- Kofax Capture still returns the check box with the highest confidence rating; however, all the other group features are lost. For example, multiple results cannot be concatenated.

Selecting Bar Code or Text Automatically

Use SmartGroups to automatically use a machine-printed (or handwritten) value if the bar code is unreadable.

Some documents may have a typed value instead of a bar code sticker. The following example shows a case where the bar code sticker was unavailable and the operator typed the part number.



Using Text to Specify a Part Number

Normally, bar code data is captured with greater accuracy than textual information. However, you can set up a SmartGroup to use the bar code when it is available, but revert to the text value when the bar code is missing. To do so, you would configure the SmartGroup to return the value with the highest confidence. In the preceding example, the text would, by definition, have a higher confidence level than the bar code (since it is missing).

The next document in the batch might have a bar code sticker that can be read with 100% confidence. In that case, the value from the bar code is returned by the SmartGroup.

The following procedure is based on the preceding example and assumes that you have already created the index zones for the bar code and the text, and that they have the same associated field.

1. On the **Insert** tab, in the **Zones** group, click the arrow under **Index**, and then click **New Index Group Zone**.
The cursor changes from a pointer to a cross hair.
2. Draw a rectangle around the two index zones.
The **Create Index Group Zone** window appears.
3. In the **Associated field** list, confirm that the correct associated field is selected as the default. If not, select the correct associated field.
4. Select either "**Display group zone**" or "**Display most confident zone**" in the **Validation Display** area.
5. Set the minimum **Number of Values in Result Set** to 1.
6. Set the maximum **Number of Values in Result Set** to 1.

Note Setting the minimum and maximum values specifies the range of expected results, which in this case is exactly one.

7. Select **Pick Best** in the **Result Set** area. This causes the SmartGroup to return the index field that has the highest confidence level.
8. Click **Test** to check your settings.
9. Select **OK** to save the SmartGroup.

Separator Zones

Batches are made up of stacks of paper documents. The documents can be single page documents, multipage documents, or a combination of both. If your batch contains multipage documents, the images must be separated into documents after the batch is scanned or imported.

You can use a separator zone to separate your images into documents. This might be useful if the first page of all the forms in a batch contains fixed data at a fixed location. If the fixed data is a type that can be read automatically (for example, using OCR, bar code recognition, patch code recognition, or other types of recognition), you can use a separator zone as a document separator. The page with the separator zone is considered the first page of the document.

By using the a shape recognition profile with a separator zone, you can separate your batch into documents using geometric shapes instead of other elements, such as OCR text or patch codes.

When defining a separator zone, you must specify:

- A recognition profile that specifies the recognition method (such as zonal OCR, shape recognition, bar code recognition, or others) and image cleanup settings for the zone.
- A confidence threshold (not allowed by all profiles) which indicates the minimum acceptable confidence returned from the recognition method. For successful recognition, the returned confidence from the zone must be greater than or equal to the specified threshold.
- Optional search text (not allowed by all profiles). If you enter search text, it must exactly match the data to be captured from the separator zone. For example, if you draw a separator zone around the data "invoice," the search text must be specified as "invoice" (you cannot abbreviate the search text as "inv"). The search text must be recognized within the confidence threshold. If an exact match is required, the confidence threshold should be set to 100.

During processing, Kofax Capture captures the data (using the specified automatic recognition method). If the results are returned, the page containing the separator zone is considered the first page of a new document in the batch.

Separator zones are only used if "Use separator zone" is selected as the method for separating documents on the Custom Separation and Form Identification window.

Creating a Separator Zone

When creating separator zones, you must work with the Batch class tree view tab selected. You cannot create a separator zone with the Document class tree view tab selected.

In addition, the method of document separation for the batch must be "Use Separator Zone." Select this option from the Custom Separation and Form Identification windows.

When single document processing is selected and only one document type exists in the batch class, separator zone separation converts each separated document into an individual batch, and then automatically closes the batch before separating the next document.

Creating an OCR Recognition Separator Zone

Once a zone is drawn on the sample page, you can resize the zone.

Separator zones are batch-specific, so you cannot draw a separator zone on a sample page displayed from the Document class tree view. You must display the sample page from the Batch class tree view.

1. Select a sample page to display it.
2. On the **Insert** tab, in the **Zones** group, click **Separator**.
(If the sample document contains multiple pages, you must create your separator zone on the first page.)
3. Draw a rectangle around the area of your sample page to use as a separator zone.
The **Create Separator Zone** window appears.
4. Select a recognition profile from the list. If none of the options in the list is appropriate, click **Edit** and define a custom OCR recognition profile.
5. Enter the text that must be captured from the zone to cause Kofax Capture to consider the page the first page of a document. The search text must exactly match the data to be captured from the zone. For example, if you draw a separator zone around the data "invoice", the search text must be specified as "invoice" (you cannot abbreviate the search text as "inv").
6. Use the slider to specify a confidence threshold for the recognition profile. Kofax Capture does not consider the page to be the first page of a document unless the confidence returned is greater than or equal to the specified confidence threshold.
7. Click **Test** to use the QuickZones feature to apply your settings to this zone, and check the results.
8. Click **OK**.

Creating a Shape Recognition Separator Zone

Once your zone is drawn on the sample page, you can resize the zone.

Separator zones are batch-specific, so you cannot draw a separator zone on a sample page displayed from the Document class tree view. You must display the sample page from the Batch Class tree view.

The Test button is not available if you display the sample page from the Document class tree view tab. To use QuickZones to verify recognition and cleanup settings, you must display the sample page from the Batch class tree view tab.

1. Select a sample page to display it.
2. On the **Insert** tab, in the **Zones** group, click **Separator**.
(If your sample document contains multiple pages, you must create your separator zone on the first page.)
3. Draw a rectangle around the geometric shape to use as a separator zone on the sample page.
The **Create Separator Zone** window appears.
4. Select the **Kofax Shape Zonal** recognition profile from the list.
5. Select a shape from the **Search shape** list. Kofax Capture does not consider the page to be the first page of a document unless the specified shape is discovered.








Note You cannot specify a confidence threshold for bar code, patch code, or a shape zone. If the selected recognition profile uses any of these methods, the confidence slider is grayed and the expected confidence is 100 percent. If the bar code, patch code, or shape is found, the zone will "pass."

6. Click **Test** to use the QuickZones feature to apply your settings to this zone and check the results.
7. Click **OK**.

Drawing Zones

You create zones by first selecting a zone type and then drawing an area to represent the zone on the sample page. The following table lists the types of zones supported by Kofax Capture.

Kofax Capture Zones

Zone Type	Description	Toolbar Icon
Index zone (manual)	At validation time, the validation or verification operator is shown this area of the form, which makes the data easier to find and read.	
Index zone (automatic)	If an automatic recognition method (for example, OCR, ICR, bar code recognition, or others) can be used to capture the data for an index field, you can draw an index zone around the location of the data and then specify a recognition method for the area. At data capture time, the data is captured and returned to the index field.	
OCR Registration zone	A text registration zone can be used to augment or replace page-level registration. Page-level registration works extremely well in most cases. However, if your images are different from the sample pages, you may get better results by using a registration zone.	
Shape registration zone	A shape registration zone can be used to augment or replace page-level registration. Page-level registration works extremely well in most cases. However, if your images are different from the sample pages and standard registration zones are not appropriate, you may get better results by using a shape registration zone instead. Whenever possible, use a shape registration zone instead of an OCR registration zone.	
Separator zone	A separator zone is an area on an image containing data to be used to separate documents in a batch. The data must be constant on the first page of every document. Separator zones are only used if "Use separator zone" is selected as the method for separating documents on the Custom Separation and Form Identification window.	
Form identification zone	A form identification zone can be used to assist the Kofax Capture page-level form identification feature. It is typically used to help the form identification engine distinguish among forms that are very similar. For example, a form identification zone could be useful for identifying different revisions of the same form. You can specify more than one form identification zone for a form type. For multipage form types, the zone must be on the first page.	
Group zone	Many documents consist of related items. For example, you might find fields for first and last name. With group zones, you can take advantage of the logical relationship among items by creating a group with one or more index zones in it. This capability eliminates the need to use a special script. With groups, you can combine data from separate fields, control how many fields can be filled in for the group, or find conflicts when more than one choice has (inappropriately) been made.	

You create index zones on your sample pages. To display a sample page, do one of the following:

- From the Document class tree view tab, double-click the document class associated with the form type. Select a form type, and select the sample page. The sample page appears.
- From the Batch class tree view tab, double-click the document class associated with the form type. Select a form type, and select the sample page. The sample page appears.

When creating zones on your sample page, use the following guidelines.

In General

- If all index data is separated from other information on your sample page by at least .25", draw your index zones to include a moderate amount of white space (about .25") around the index data. The white space around the data allows for horizontal or vertical offsets that might be introduced by a scanner.
- If at least some of the index data is close together (that is, not separated from other information on your sample page by at least .25"), draw your index zones with only a small amount of white space. This prevents unwanted data from appearing in a zone, which could reduce the accuracy of character recognition. Because a small amount of white space does not allow for horizontal or vertical offsets that might be introduced by a scanner, a registration zone may be required.

For OCR Zones

- In general, characters and numbers must reside completely within the zone boundaries to be read.
- Characters or numbers that do not reside completely within the boundaries are not reflected in the captured data.

For shape zones, Kofax Capture examines the content of the zone and attempts to find a corresponding shape. If a shape is found, its ID number is placed in the associated field. The results are available in the Validation and Verification modules. They can also be used in your custom recognition scripts or custom modules. If you assign a shape recognition profile to an index zone, you cannot specify a specific search shape. All shapes are examined and the closest match is used. Your ability to use this capability is potentially unlimited.

For Bar Code Recognition

- Include at least a 0.5" boundary around the bar code when drawing your zone. If this is not possible, ensure that a minimum 0.5" margin exists on the left side of the bar code.
- Make sure you include the entire bar code within the zone.

For OCR Registration Zones

- If possible, include at least .25" of white space around the registration data to allow for horizontal or vertical offsets that might be introduced by a scanner. The registration process measures and corrects any scan offset by shifting the index zones into place.
- Make sure the border of the zone does not touch other text or elements on the image.
- When manually resetting a registration point, select it carefully. Position the cursor at the lower-left corner of an imaginary box around the first character of the text in the OCR registration zone. If the first character has a descender (for example, a lowercase "y"), use the baseline of the character, not the bottom of the character, when selecting the registration point.
- Test whether a registration point is properly defined: Create a test batch by importing the sample image file used to define your OCR index zones. If the registration point is properly defined, your OCR index

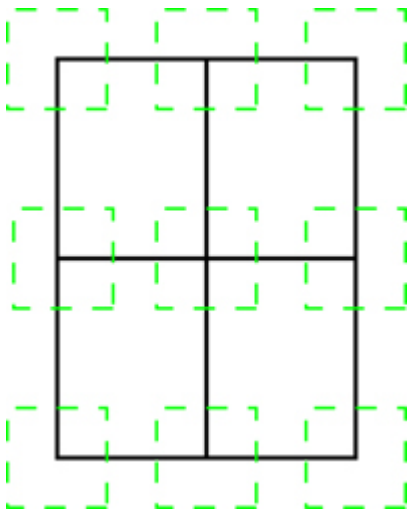
zones contain the expected data. If the registration point is not properly defined, your OCR index zones are shifted and contain unexpected data.

- For best results, keep the search text as short as possible.

For Shape Registration Zones

Include only the portion of the shape you are trying to match. If your zone includes excess components, the recognition engine will probably return ID number 100 (general shape), thereby leading to incorrect registration.

The following illustration displays the portions of a shape to include in the zone. When searching for a particular shape, enclose only that portion of the graphic within the zone boundary.



Line Intersections that Kofax Capture Recognizes

For OMR Zones

Each OMR object (for example, a check box) must be zoned separately. You cannot draw one OMR zone around multiple OMR items. (You can draw another type of zone around multiple OMR zones. Then, you can use scripts or SmartGroups to process the results from the zones.)

All OMR zones should be consistent in size. If the OMR shapes are different sizes, create different groups of OMR zones. Make the zones for each group consistent within that group. Use a different recognition profile for each group of OMR zones.

To allow for potential registration offsets, the zones should include the OMR shape and as much white space around the shape as prudent to ensure that all of the zone is included.

Do not create zones whose boundaries touch or get near any other text or unrelated OMR shapes on the page.

For square or rectangular shapes, you can use an aggressive line removal scheme to remove the shapes without destroying the inner marks. Once the shapes are removed, you can use the despeckle feature

to clean up extraneous noise. Then, set your pixel threshold to a low value (for example, 0 or 1). During processing, "empty" zones return 0s (the shape is not filled in) or 1s (the shape is filled in).

The confidence level is a number returned by a Kofax Capture recognition engine to indicate the level of certainty in the reported results. The exact method used to calculate the confidence varies with the type of index zone and the options you set for it. In general, the higher the number, the greater the confidence.

The confidence returned from an OMR zone is really the percentage of black pixels found in the zone. Therefore, you can use the confidence returned from a zone to determine the most appropriate threshold.

Double Zoning

You can draw multiple zones for the same field. The zones can be in different locations, or even one on top of the other. Then, you can capture the data from each zone with a different set of recognition settings. For example, you can use Kofax Advanced OCR with aggressive image cleanup for one zone and Kofax Advanced OCR with no image cleanup for another zone. The zone data captured with the highest confidence level is returned for the field. Your validation and verification operators can see the zone that returned the highest confidence.

Note Using multiple zones could adversely affect performance.

Tips for Drawing Zones

When defining zones on your sample page, follow these guidelines:

- If all index data is separated from other information on your sample page by at least .25", draw your index zones to include a moderate amount of white space (about .25") all around the index data. The white space around the data allows for horizontal or vertical offsets that might be introduced by a scanner.
- If at least some index data is close together (that is, not separated from other information on your sample page by at least .25"), draw your index zones with only a small amount of white space. This prevents unwanted data from displaying in a zone, which could reduce the accuracy of character recognition. But, because a small amount of white space does not allow for horizontal or vertical offsets that might be introduced by a scanner, an OCR registration zone may be required.

For OCR Zones

- In general, characters and numbers must reside completely within the zone boundaries to be read.
- Characters or numbers that do not reside completely within the boundaries are not reflected in the captured data.

For Bar Code Recognition

- Include at least a .5" boundary around the bar code when drawing your zone.
- Make sure you include the entire bar code within the zone.

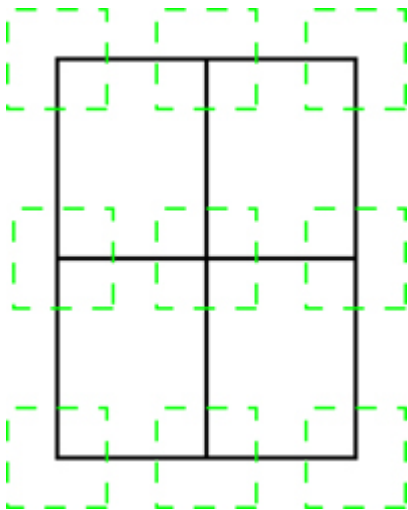
Make sure you include the entire bar code within the zone

- If possible, include at least .25" of white space around the registration data to allow for horizontal or vertical offsets that might be introduced by a scanner. The registration process measures and corrects any scan offset by shifting the index zones into place.
- Make sure the border of the zone does not touch other text or elements on the image.

- When manually resetting a registration point, select it carefully. Position the cursor at the lower-left corner of an imaginary box around the first character of the text in the OCR registration zone. If the first character has a descender (for example, a lowercase "y"), use the baseline of the character, not the bottom of the character, when selecting the registration point.
- Test whether a registration point is properly defined: Create a test batch by importing the sample image file used to define your OCR index zones. If the registration point is properly defined, your OCR index zones contain the expected data. If the registration point is not properly defined, your OCR index zones are shifted and contain unexpected data.
- For best results, keep the search text as short as possible.

For Shape Registration Zones

- Include only that portion of the shape that you are trying to match. If your zone includes excess components, the recognition engine will probably return code 100 (general shape). For example, if you are searching for a cross shape, center the zone only on the cross portion of the graphic.



- For best results, keep the [shape limitations](#) in mind.

For OMR Zones

- Each OMR shape must be zoned separately. You cannot draw one OMR zone around multiple OMR shapes. (Note that you can draw another type of zone around multiple OMR zones. Then you can use scripts or [SmartGroups](#) to process the results from the zones.)
- All your OMR zones should be consistent in size. If the OMR shapes are different sizes, create different groups of OMR zones. Make the zones for each group consistent within that group. Use a different recognition profile for each group of OMR zones.
- To allow for potential registration offsets, the zones should include the OMR shape and as much white space around the shape as prudent.
- Do not create zones whose boundaries touch or get near any other text or unrelated OMR shapes on the page.
- For square or rectangular shapes, you can use an aggressive line removal scheme to remove the shapes without destroying the inner marks. Once the shapes are removed, use the despeckle feature to clean up extraneous noise. Then, set your pixel threshold to a low value (for example, 0 or 1). During processing, "empty" zones return 0s (the shape was not filled in) or 1s (the shape was filled in).

- The confidence returned from an OMR zone is really the percentage of black pixels found in the zone. Therefore, you can use the confidence returned from a zone to determine the most appropriate threshold.

Double Zoning

You can draw multiple zones for the same field. The zones can be in different locations, or even one on top of the other. Then, you can capture the data from each zone with a different set of recognition settings. For example, you can use Kofax Advanced OCR with aggressive image cleanup for one zone and Kofax Advanced OCR without image cleanup for another zone. The zone data captured with the highest confidence level is returned for the field. Your validation and verification operators can see the zone that returned the highest confidence.

Note Using multiple zones could adversely affect performance.

Creating an Index Zone

In addition to the standard index zones described here, Kofax Capture also supports the following special types of index zones:

- Group Zones (SmartGroups)
- OCR Registration Zones
- Shape Registration Zones
- Separator Zones
- Form ID Zones

Create index zones on the sample pages you scan for form types. To display a sample page, do one of the following:

- From the Document class tree view tab, double-click the document class associated with the form. Select a form type, and select the sample page. The sample page appears.
- From the Batch class tree view tab, double-click on the document class with which the form type is associated. Select a form type, and select the sample page. The sample page appears.

1. Select a sample page.
2. On the **Insert** tab, in the **Zone** group, click the appropriate button for the type of zone you want. Your cursor changes to a cross hair.
3. Draw a rectangle around the area on your sample page that you want to use as the zone. A window appears.
4. Set options as appropriate for your zone.
5. Click **Test** to apply your settings to this zone and check the results.

The **Test** button is not available if you display the sample page from the **Document class tree view** tab. To use QuickZones to verify your recognition and cleanup settings, you must display the sample page from the **Batch class tree view** tab.

6. Select **OK**.

Tip Once your zone is drawn on the sample page, you can resize the zone.

Copying an Index Zone

Use Copy to duplicate an existing index zone. When copying and pasting an index zone, a new index field is also created. The copy method is useful for adding an index zone that is similar to an existing one. You can modify the copy of the index zone as necessary to make it unique.

When copying an index zone, certain items associated with the index zone are copied, and others are linked. The following table shows the items that are copied and linked.

Copied Items	Linked Items
Index zone	None
Index field	None
OMR settings	None
Table index field	None
Custom storage string	None

If you paste a table index field on the same sample page, a copy of the index field is created in the same table. Otherwise, the index field is pasted as a new index field that is not in a table.

1. Select the index zone you to copy. You select an index zone from the **Batch class tree view** tab, the **Document class tree view** tab, or the sample page.
2. On the **Home** tab, in the **Clipboard** group, click **Copy**.
3. To paste the copied index zone, do one of the following:
 - From the **Batch class tree view** tab or the **Document class tree view** tab, select a sample page node. On the **Home** tab, in the **Clipboard** group, click the **arrow** under **Paste**, and then click **Paste**.
When you paste from the sample page node, the copied index zone is placed on the sample page offset from the original index zone's top left location. It is also added to the list of index zones in the index zone tree. If you paste a zone multiple times, the copied zone placement uses the same offset as the last zone pasted.
 - From the **Batch class tree view** tab or the **Document class tree view** tab, right-click the sample page image. On the context menu, click **Paste**.

If you perform a copy and paste on a previously copied index zone such as Name2, the new index zone is created with a unique name such as Name21, Name22, and Name23.

The **Export Setup** window does not appear when an index zone is created using copy and paste. Instead, the **Export Setup** window appears upon publishing the associated batch class.

A copy of the index zone and corresponding index field is created with a unique name.

4. Edit the copied index zone from the **Index Zone Properties** window.

Editing an Index Zone

You edit index zones with the Index Zone Properties window.

1. Click an index zone on a sample page.
2. On the **Home** tab, in the **Editing** group, click **Properties**.
3. From the **Index Zone Properties** window, edit the properties.
4. Click **Apply** to save the changes without closing the window.

5. Click **Test** to apply your settings to this zone and check the results.
The **Test** button is unavailable if you display the sample page from the **Document class tree view** tab. You must display the sample page from the **Batch class tree view** tab to use QuickZones to verify recognition and cleanup settings.
6. Click **OK** to save the changes and close the window.
 - Once you select the zone, you can resize it.
 - You can select a zone to edit on the sample page or from the **Definitions tree** view. Just expand the tree under the sample page and select a zone.

Creating a Shape Registration Zone

Use this procedure if you want the page registration zone to use shape recognition.

1. Select a sample page to display it.
2. On the **Insert** tab, in the **Zones** group, click the arrow under **Registration**, and then click **Create Shape Registration Zone**.
Your cursor changes from a pointer to a cross hair.
3. Draw a rectangle around the area of your sample page to use as a shape registration zone.
The **Create Registration Zone** window appears.
4. Select a shape recognition profile from the list. If none of the options in the list is appropriate, click **Edit** and define a custom shape recognition profile.
5. The appropriate shape is automatically selected in the **Search shape** list.
6. Click **Test** to apply your settings to this zone and check the results.
The **Test** button is unavailable if you display the sample page from the **Document class tree view** tab.
7. Click **OK**.
The new shape registration zone appears on the sample page. The registration point for the zone appears as a bold cross hair, with the intersection of the cross hair denoting the registration point location, which varies according to the pixel density of the shape.

Once your zone is drawn on the sample page, you can resize the zone. You can create more than one shape registration zone.

Creating an OCR Registration Zone

You create OCR registration zones on the sample pages scanned for your form types. To display a sample page:

- From the **Document class tree view** tab, double-click the document class associated with the form type. Select a form type, and select the sample page.
- From the **Batch class tree view** tab, double-click the document class associated with the form type. Select a form type, and select the sample page.
- To create one or more OCR registration zones.
 1. Select a sample page to display it.

2. On the **Insert** tab, in the **Zones** group, click the arrow under **Registration**, and then click **New Registration Zone**. (If the sample document contains multiple pages, you must create the zone on the first page.)
Your cursor changes from a pointer to a cross hair.
3. Draw a rectangle around the area of your sample page to use as a page registration zone.
The **Create Registration Zone** window appears.
4. Select an OCR recognition profile from the list. If none of the options in the list is appropriate, click **Edit** and define a custom OCR recognition profile.
5. Kofax Capture suggests the search text; you can also edit the text. The search text must exactly match the data to be captured from the zone and cannot be longer than 4 characters.
For registration to work, at least half the characters on your form must match the specified search text. If no search text is specified, the pixel contents must be similar.
Kofax Capture selects the location of the registration point. If a suitable registration point cannot be found, a default location is assigned to the center of the zone. In this case, the search text is left blank.
6. Click **Test** to apply your settings to this zone and check the results.
The **Test** button is not available if you display the sample page from the **Document class tree view** tab. You must display the sample page from the **Batch class tree view** tab to use QuickZones to test your zone and recognition and cleanup settings.
7. Click **OK**. The new OCR registration zone appears on the sample page.
The registration point for the zone is displayed as a bold cross hair, with the intersection of the cross hair denoting the registration point location.
8. If you changed the search text, you may need to reset the registration point. See [Resetting the Registration Point](#).

Editing an OCR Registration Zone

Edit OCR registration zone properties on the Registration Zone Properties window. You can resize an OCR registration zone by selecting it from the sample page and moving the sizing handles.

1. With the sample page displayed, right-click an OCR registration zone and click **Properties** on the context menu.
2. On the **Registration Zone Properties** window, edit the properties.
3. Click **Apply** to save the changes without closing the window.
4. Use the **Test** button to check your changes.
You must display the sample page from the **Batch class tree view** tab to use QuickZones to verify recognition and cleanup settings.
5. Click **OK** to save the changes and close the window.

Resetting the Registration Point

If you modify the search text or manually select a shape for a registration zone, you may need to reset the registration point for the zone. You can select the automatic reset option to move the registration point, or you can reset it manually. When you select the automatic reset option, Kofax Capture automatically determines the position for the registration point.

Resetting the Registration Point Automatically

1. Do one of the following:
 - In the tree view, select the registration zone to update.
 - With the sample page displayed in the image viewer, select a registration zone.
2. Right-click and select **Reset Registration Point**.

For OCR registration zones, if the search text listed in the **Registration Zone Properties** window does not display within the zone boundaries, the registration point cannot be adjusted with the automatic reset option.

Kofax Capture moves the registration point for the zone to the lower-left corner of the first character in the search text, or to the appropriate place in your shape.

Resetting the Registration Point Manually

Do not manually reset the registration point for shape zones.

1. With the sample page displayed in the image viewer, select a registration zone.
2. On the **Insert** tab, in the **Zone** group, click the arrow under **Registration**, and then click **Reset Registration Point**.
3. Click the new location for the registration point. The registration point is repositioned to the new location. Normally, you place the registration point at a location where black and white pixels intersect.

You cannot reset the registration point by "dragging" it from one location to another. Do not manually reset the registration point for shape registration zones.

Deleting a Zone

You delete zones on the sample page where you created the zone.

1. With a sample page displayed, select the zone to delete.

The selected zone appears with sizing handles.
2. Right-click the zone to delete.

A context menu appears.
3. Select **Delete**.

Testing Zones

Use the QuickZones feature to quickly adjust your zone level recognition and cleanup profile settings.

QuickZones greatly reduces the time and effort required to set up or edit automatic index zones (as well as page level bar codes) by eliminating the need to publish and process batches to see the results. Instead, you can make changes to any recognition or image cleanup settings, click a single button, and see the results within moments.

When creating or editing index zones and page-level bar codes, many settings have an effect on how accurately Kofax Capture recognizes machine-printed characters, hand-printed characters, bar codes, and other marks. The right settings are critical to getting the most out of your scanned documents, yet it can be time-consuming to figure them out. Often it is a matter of trial and error.

Using QuickZones, you can apply recognition profile and image cleanup settings to the current zone or SmartGroup and check the results in the Zone Test window. You can then make adjustments to the recognition and cleanup settings until you are satisfied. Consequently, your scanned data is more accurate, and data validation proceeds more quickly.

You can use QuickZones when your sample page is displayed from the Batch class tree view tab. Although you can create and edit zones when the Document class tree view tab is selected, you cannot use QuickZones there.

You can also access the Zone Test window from the Batch class tree view by selecting an index zone or SmartGroup and right-clicking to display a context menu. Click **Zone Test** on the context menu to display the window.

As you are working with zones or SmartGroups, notice that the windows have a Test button. Click **Test** to check your settings with the Zone Test window, where you can visually compare the original contents of the zone or group with the processed results. You can also use the window to try settings for the current zone on other document samples you may already have scanned.

If you are not satisfied with your processed results, close the window, adjust the settings, and test again.

QuickZones applies your recognition profile and image cleanup settings to the currently selected zone or SmartGroup. If you test a different zone or group, you may get different results even though the settings are the same. For greatest overall accuracy, you should test your settings on all the zones that use them, and with a variety of sample pages.

Testing is an interactive process. You can adjust the various settings and test them as often as necessary to get the best possible results. While most testing is done while setting up your zones for the first time, you can return to the Administration module and run further tests any time.

Using QuickZones

Use QuickZones to verify your recognition and cleanup settings while creating or editing zones or SmartGroups. You do not need to publish or process batches to use QuickZones.

To use QuickZones, you must have at least one image (the sample page) scanned and stored. You can also run the test on any number of additional examples that have already been scanned and saved.

QuickZones is not available unless your sample page is displayed on the Batch class tree view tab.

There are several ways to access QuickZones.

QuickZones applies your recognition profile and image cleanup settings to the currently selected zone. If you test a different zone, you may get different results, even though the settings are the same. For greatest overall accuracy, you should test your settings on all the zones that use them, and with a variety of sample pages.

Tip Testing is an interactive process. You can adjust the various settings and test them as often as necessary to get the best possible results. While most testing is done while setting up your zones the first time, you can return to the Administration module and run further tests any time.

Using QuickZones on the Ribbon

1. Click the **Batch** tab on the **Definitions** panel.
The **Batch class tree view** appears. Expand the tree if necessary.
2. Create a zone or SmartGroup.
3. Highlight the zone or group to test.
4. On the **Home** tab, in the **Form Type** group, click **Zone Test**.
The **Zone Test** window appears. Results for the currently selected image file are shown by default.
5. Add one or more sample image files to the Images list:
 - a. Click **Add** to open the Import window.
 - b. Navigate to the appropriate folder and select all the image files to add.
 - c. Click **Add** to move the selected files to the "Files to import" list.
 - d. When the list is complete, click **Open** to import the files.
6. Select a different image file to use for another test.
7. Click **Test** to apply your settings to this zone or group and check the results.

Using QuickZones from the Context Menu

1. Click the **Batch** tab on the **Definitions** panel.
2. Create a zone or SmartGroup.
The **Batch class tree view** appears. Expand the tree if necessary.
3. Highlight the zone or group to test.
4. Right-click to display the context menu. You can right-click the name in the **Batch class tree**, or anywhere on the sample page.
5. Select **Zone Test** to display the **Zone Test** window. Results for the currently selected image file are shown by default.
6. Add one or more sample image files to the Images list:
 - a. Click **Add** to open the Import window.
 - b. Navigate to the appropriate folder and select all the image files to add.
 - c. Click **Add** to move the selected files to the "**Files to import**" list.
 - d. When the list is complete, click **Open** to import the files.
7. Select a different image file to use for another test.
8. Click **Test** to apply your settings to this zone or group and check the results.

Using QuickZones from the Zone or Group Properties Window

1. Click the **Batch** tab on the **Definitions** panel.
The **Batch class tree view** appears. Expand the tree if necessary.
2. If necessary, create a zone or SmartGroup.
3. Highlight the zone or group to test.
4. Right-click to display the context menu. You can right-click the name in the **Batch class tree**, or anywhere on the sample page.

5. Select **Properties** to open either the **Index Zone Properties** window or the **Index Group Zone Properties** window, depending on what you have selected in the tree view.
6. Make adjustments to the properties.
7. Click **Test** to display the **Zone Test** window. Results for the currently selected image file are shown by default.
8. Add one or more sample image files to the Images list:
 - a. Click **Add** to open the **Import** window.
 - b. Navigate to the appropriate folder and select all the image files to add.
 - c. Click **Add** to move the selected files to the "**Files to import**" list.
 - d. When the list is complete, click **Open** to import the files.
9. Select a different image file to use for another test.
10. Click **Test** to apply your settings to this zone or group and check the results.

Using QuickZones from the Recognition Profiles window

This procedure does not apply to SmartGroups.

1. Click the **Batch** tab on the **Definitions** panel.

The **Batch class tree view** appears. Expand the tree if necessary.
2. Create a zone.
3. Highlight the zone to test.
4. Right-click to display the context menu. You can right-click the zone name in the **Batch class tree**, or anywhere on the sample page.
5. Select **Properties** to open the **Index Zone Properties** window.
6. Click **Edit** to display the **Recognition Profiles** window.
7. Make adjustments to the recognition profile.
8. Click **Test** to display the **Zone Test** window. Results for the currently selected image file are shown by default.
9. Add one or more sample image files to the Images list by doing the following:
 - a. Click **Add** to open the Import window.
 - b. Navigate to the appropriate folder and select all the image files to add.
 - c. Click **Add** to move the selected files to the "**Files to import**" list.
 - d. When the list is complete, click **Open** to import the files.
10. Select a different image file to use for another test.
11. Click **Test** to apply your settings to this zone and check the results.

Using QuickZones from the Image Cleanup Profiles Window

This procedure does not apply to SmartGroups.

1. Click the **Batch** tab on the **Definitions** panel.

The **Batch class tree view** appears. Expand the tree if necessary.
2. Create a zone.
3. Highlight the zone to test.

4. Right-click to display the context menu. You can right-click the zone name in the **Batch class tree**, or anywhere on the sample page.
5. Select **Properties** to open the **Index Zone Properties** window.
6. Click **Edit** to display the **Recognition Profiles** window.
7. Click **Edit** to open the **Image Cleanup Profiles** window.
8. Make adjustments to the image cleanup profile.
9. Click **Test** to display the **Zone Test** window. Results for the currently selected image file are shown by default.
10. Add one or more sample image files to the Images list by doing the following:
 - a. Click **Add** to open the Import window.
 - b. Navigate to the appropriate folder and select all the image files to add.
 - c. Click **Add** to move the selected files to the "**Files to import**" list.
 - d. When the list is complete, click **Open** to import the files.
11. Select a different image file to use for another test.
12. Click **Test** to apply your settings to this zone and check the results.

Image Cleanup

Cleaning up images makes them easier to read, and improves the following:

- OCR/ICR accuracy
- OMR accuracy
- Bar code recognition
- Patch code recognition

Kofax Capture allows you to clean up your images in two ways:

- Permanent image cleanup occurs at the page level. It can be used to improve the overall quality of your images. The images are saved in their cleaned up state, resulting in permanent modifications to the images.
- Temporary image cleanup occurs at the zone level. It can be used to improve the accuracy of the automatic recognition engines being used to process the zone. (For example, you might remove horizontal lines from a zone before using the OCR engine to capture data from the zone.) When the automatic recognition is complete, the temporary image cleanup is discarded. When editing or creating zones, you can use QuickZones to verify that the cleanup settings yield the best results. QuickZones cannot be used with permanent image cleanup.

You perform image cleanup by associating an image cleanup profile with process settings. The profile specifies an image cleanup filter, along with all the related settings. For example, you can specify an image cleanup profile on the Create Form Type window - Image tab or Form Type Properties window - Image tab. Then, whenever forms of that form type are processed, the image cleanup settings are applied.

You can also associate an image cleanup profile with a recognition profile. Then, whenever that recognition profile is used, the image cleanup settings are in effect. For example, you can associate an image cleanup profile with a zonal OCR recognition profile. Whenever that recognition profile is used to

process a zone, the specified image cleanup settings are used to enhance the data capture from that zone.

Note Color images use a separate image cleanup profile that is optimized for color files. See [Color Documents](#) for more information.

Image Cleanup for Zones

During processing, zones are clipped from the source image. Any image cleanup specified for the zone is applied after clipping. This is especially significant for image cleanup features such as line removal. Consider vertical line removal: By default, the minimum height of a vertical line to remove is 200 pixels. The line might be longer than that on the image. When the zone is clipped, the total zone height might only be 150 pixels. If the minimum height is left at the default value, the line would not be removed from the zone.

Check your image cleanup settings on test images before you process your batches. You can adjust your settings to achieve the necessary results.

Note that all forms are different, and settings that work well for one set of forms may not work as well on another. Guidelines for using the image cleanup features are listed here.

- Vertical line removal could be useful for all zones that contain vertical lines. For OCR zones, vertical lines are sometimes ignored by the recognition engine, but not in all cases. Make sure the line settings define the size of the line within the zone.
- Horizontal line removal is especially useful for ICR zones that contain horizontal lines. It could also be useful (when used in conjunction with vertical line removal) for removing check boxes for OMR zones. Make sure the line settings define the size of the line within the zone.
- Despeckle could be useful for eliminating extraneous noise within a zone. Make sure the speckle settings remove only the noise and not data.
- Deskew should not be used for zonal image cleanup.
- Deshade could be useful for removing shaded areas within a zone. Make sure the settings only remove the shading and not data.
- Destreak should not be used for zonal image cleanup. This powerful feature can be very destructive.
- Edge enhancement filters (such as Character Smoothing, Thinning, and others) may be helpful but should be used with caution. As a rule of thumb, do not select the edge enhancement filters unless you see good results while testing them.
- Black border removal/cropping should not be used for zonal image cleanup.

Tips for Using Edge Enhancement Filters

For best results, follow these guidelines when selecting edge enhancement filters:

- Character Smoothing always has a positive effect on an image. You can use this filter in combination with any other image filter.
- The combination of deshading, despeckling, removing lines, and using the Smooth and Clean image filter produces better results than using only the Smooth and Clean image filter. However, the Smooth and Clean filter should not be used as an alternative to deshading, despeckling, and removing lines from an image.

- Thin should only be applied to images that contain elements that are ballooned or blended together. Applying this filter to an image that does not contain such elements may cause the loss of important data.
- Light Thicken should only be applied to images that have been deshaded and despeckled. (Using this filter may exaggerate background noise.) Light Thicken is less aggressive than the Thicken filter.
- Thicken should only be applied to images that have been deshaded and despeckled. (Using this filter may exaggerate background noise.) Thicken should only be applied to images that contain thin or light elements (such as images containing dot matrix characters or fax images). Applying this filter to an image that does not contain such elements may cause characters and lines to blend together.
- Fill Line Breaks is recommended for use with images that contain lines. However, it may cause parallel lines close together to be merged (that is, lines that are separated by only one pixel). For images that contain parallel lines that are close together, use the Fill Line Breaks and Preserve filter.
- Fill Line Breaks and Preserve is recommended for use with images that contain lines that are close together (that is, lines that are separated by only one pixel).
- Use QuickZones to evaluate your settings while creating your zones. This improves results during processing.

Smooth and Clean Filter

This filter, which smooths characters, removes background noise, and may eliminate lines, has the following characteristics:

- Usually has a positive impact on the image, although it is a destructive filter
- Usage should be determined based on image quality
- Increases legibility
- Increases OCR accuracy
- Consistently reduces compressed file sizes by at least 10-15 percent

This filter is faster than using the Thinning filter followed by a Light Thicken filter, but has exactly the same effect. It sets any black pixel to white if it cannot be considered part of at least a 2x2 block of black pixels in the source image.

Smooth, Clean, and Preserve Filter

This filter, which smooths characters and lines and removes background noise, has the following characteristics:

- Usually has a positive impact on the image, although it is a destructive filter
- Usage should be determined based on image quality
- Increases legibility
- Increases OCR accuracy
- Consistently reduces compressed file sizes by at least 10-15 percent

This filter is identical to the Smooth and Clean filter, except that it preserves horizontal and vertical black line segments that are one pixel wide.

Character Smoothing Filter

This filter, which smooths characters and lines, has the following characteristics:

- No negative impact on the image. It is a non-destructive filter.

- Usage should not be determined based on image quality
- Increases legibility
- Increases OCR accuracy
- Consistently reduces compressed file sizes by 10-15 percent

This filter considers the color of the four perpendicular pixels (strong neighbors) of every pixel in the source image. If the majority of the strong neighbors have the color opposite the pixel's color, the color of the pixel is toggled to match that of its neighbors.

Thin Filter

This filter thins characters and lines and may remove background noise. The Thin filter has the following characteristics:

- Potentially negative impact on the image. It is a destructive filter.
- Usage should be determined based on image quality
- Good for character separation (for elements that are ballooned or blended together)
- May reduce compressed file sizes

This erosion filter thins down image elements by setting any black pixel to white if it is perpendicular or diagonally adjacent to at least one white pixel in the source image.

Light Thicken Filter

This filter thickens characters and lines and may exaggerate background noise, but it is not as aggressive as the Thicken filter. It performs approximately half the thickening of the Thicken filter. The Light Thicken filter has the following characteristics:

- Potentially negative impact on the image. It is a destructive filter.
- Usage should be determined based on image quality.
- Good for dot matrix characters or for enhancing fax images (for thin or light elements).
- May increase compressed file sizes.

Thicken Filter

This filter thickens characters and lines and may exaggerate background noise. The Thicken filter has the following characteristics:

- Potentially negative impact on the image; it is a destructive filter.
- Usage should be determined based on image quality.
- Good for dot matrix characters or for enhancing fax images (for thin or light elements).
- May increase compressed file sizes.

This dilation filter thickens image elements by setting any white pixel to black if it is perpendicular or diagonally adjacent to at least one black pixel in the source image.

Fill Line Breaks Filter

This filter, which fills in and smooths lines, has the following characteristics:

- Potentially negative impact on the image because parallel lines close together may be merged. It is a destructive filter.
- Usage should be determined based on image content (images containing lines).

- May increase legibility.
- May increase compressed file sizes.

This closing filter sets any pixel to black if it cannot be considered part of at least a 2x2 block of white pixels in the source image.

Fill Line Breaks and Preserve Filter

This filter, which fills in and smooths lines while maintaining the interline gap, has the following characteristics:

- Potentially positive impact on the image because parallel lines close together are not merged. It is a non-destructive filter.
- Usage should be determined based on image content (images containing lines).
- Increases legibility.
- May increase compressed file sizes.

This filter is identical to the Fill Line Breaks filter, except that it preserves horizontal and vertical white line segments that are at least one pixel wide.

Dot Matrix Fonts

Dot matrix fonts are made up of dots printed in patterns to form characters or numbers. Some dot matrix fonts use a very dense pattern of dots, while others use a more sparse pattern. Because of these differences, you should try several types of settings to achieve the best results for processing dot matrix text on your forms. In addition to adjusting the settings for despeckle, you might also try selecting one or more edge enhancement filters such as "Character smoothing," "Light thicken," or "Smooth, clean, and preserve." For best results, you should always test your settings with sample batches that are representative of the ones you'll process in production.

Tips for Removing Vertical Lines

For best results, follow these guidelines:

- Set the minimum height to a large enough value so that text objects (such as the vertical bar of a capital "T") are not mistaken for vertical lines. Setting a larger value also allows the vertical line removal algorithm to work faster because many objects (such as text) can be ignored when searching for lines.
- Set the maximum gap to a maximum value of 2 or 3 pixels (at 200 dpi). Doing so helps prevent text characters from being considered vertical lines to remove.
- Use QuickZones to evaluate your settings while creating your zones. This improves results during processing.

Tips for Removing Shaded Areas

For best results, follow these guidelines:

- Set the minimum width and minimum height as large as possible without making the values larger than the smallest shaded area to detect. For example, if all shaded areas to be removed are 5 inches wide and 2 inches tall, you can set the minimum height to 1.5 inches (any value less than 2 inches) and the minimum width to 4.5 inches (any value less than 5 inches). Setting the values too small (for example, less than 1 inch) could cause the deshade algorithm to detect text objects as shaded areas.

- Leave the Max speckle width and Max speckle height at their default values. The defaults should be sufficient to detect most shaded areas.
- Leave the Horizontal adjust and Vertical adjust at their default values. The defaults should be sufficient for most speckles in detected shaded areas.
- Use QuickZones to evaluate your settings while creating your zones. This improves results during processing.

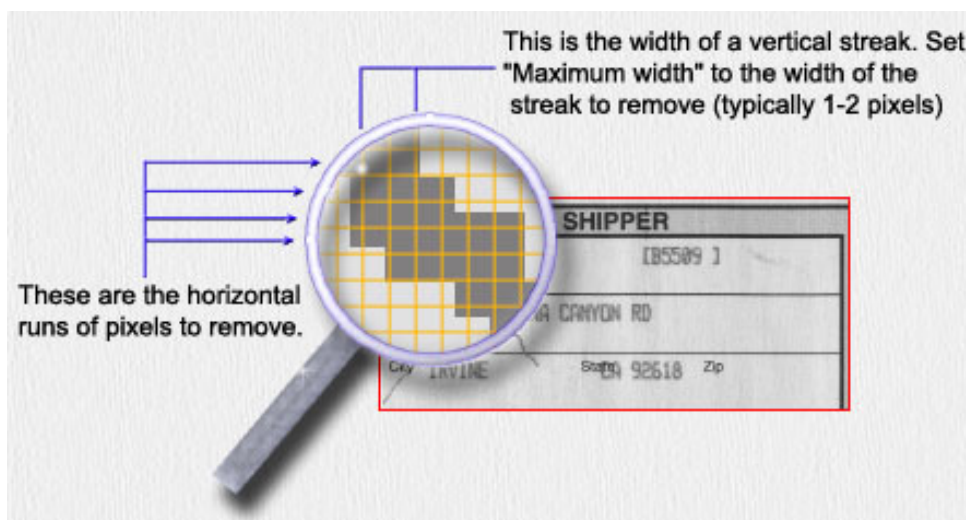
Streak Removal

Sometimes, streaks are captured on an image when it is scanned as a result of the following:

- Marks on the original page
- Dust in the scanner assembly
- Faulty scanner CCD (camera)

You can use the streak removal feature to eliminate these streaks.

To remove streaks, you must define the maximum width of the streaks to remove.



Streak Removal

Note that the streak removal feature processes each horizontal scan line on the image to detect runs of black pixels. Any series of black pixels less than or equal to the streak width are removed. Even though streak removal processes the image from left to right, its main purpose is to eliminate vertical streaks.

You specify streak removal settings on the Image Cleanup Profiles window. The settings become part of an image cleanup profile, which you can then include in a recognition profile.

Tips for Removing Streaks

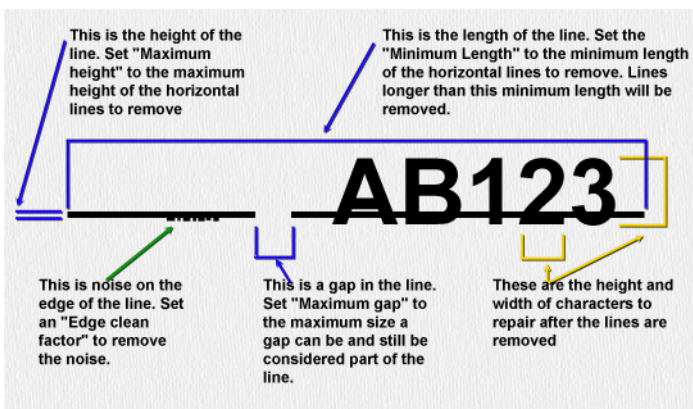
For typical images, set the width of the streaks to remove to a value of 1 or 2 pixels. Since streak removal looks for any series of pixels that are alike and also less than or equal to the streak width, setting the width too high could have an adverse effect by eliminating data from the image.

Use QuickZones to evaluate your settings while creating your zones. This improves results during processing.

Horizontal Line Removal

If your images contain unwanted horizontal lines, you can remove them with the horizontal line removal feature. You can optionally select character reconstruction to repair text that intersects the lines that are removed. Removing lines and repairing characters improves the readability of your images.

To remove horizontal lines, define the characteristics of the lines to remove. You must define the minimum length and maximum height of the lines to remove, along with other characteristics such as an edge clean factor and the characteristics of the characters to repair.



Example of Horizontal Line Removal

Specify your line removal settings on the Image Cleanup Profiles window. Your settings become part of an image cleanup profile, which you can include in a recognition profile.

Tips for Removing Horizontal Lines

For best results, follow these guidelines:

- Set the minimum length to a large enough value so that text objects (such as the horizontal bar of a capital "T") are not mistaken for horizontal lines. Setting a larger value also allows the algorithm to work faster because many objects (such as text) can be ignored when searching for lines.
- Set the maximum gap to a maximum value of 2 or 3 pixels (at 200 dpi). Doing so helps prevent text characters from being considered horizontal lines to remove.
- Use QuickZones to evaluate your settings during zone setup. This improves results during processing.

Despeckle

Speckles on an image are groups of black pixels surrounded by white pixels (or white pixels surrounded by black pixels). Removing unwanted speckles provides a cleaner image for OCR processing and also helps reduce compressed file sizes.

To remove speckles from an image, you define the characteristics of the speckles to remove. You must specify the maximum height and width of the unwanted speckles, and all speckles that satisfy the defined characteristics are removed.



Example of Speckles on an Image

You specify despeckle settings on the Image Cleanup Profiles window. Your settings become part of an image cleanup profile, which you can include in a recognition profile.

Tips for Removing Speckles

For best results, follow these guidelines:

- Set the maximum width and maximum height to appropriate values for your image. Using large values for these properties could remove portions of the image that you want to keep.
- Check your image to ensure that punctuation marks (such as commas, periods, and quotation marks) are not being removed. If they are, adjust the values of the maximum width and maximum height.
- Use QuickZones to evaluate your settings during zone creation. This improves results during processing.

Black Border Removal / Cropping

Black borders can appear on images as a result of capturing the images on scanners that have black belts or drums. If black borders exist on your images, you can remove them with the black border removal or black border cropping feature.

- With black border removal, the black border pixels are changed to white pixels on the image. This cleans up the image without changing the height and width of the image.
- With black border cropping, the black border pixels are removed from the image. This cleans up the image and reduces the height and width of the image by the size of the black border.

To remove a black border, the software starts at the outer left and right edges of the image and works inward, turning black pixels into white until it detects a white pixel. When it detects a white pixel, the software determines whether the white pixel is part of white noise in the border or the edge of the image. When the software detects the edge of the image, the black border removal process stops.

To crop a black border, the software starts at the outer left and right edges of the image and works inward, removing black pixels. As soon as it detects a white pixel, the software determines whether the white pixel is part of white noise in the border or the edge of the image. When the software detects the edge of the image, the cropping process stops.

You specify black border removal/cropping settings on the Image Cleanup Profiles window. Your settings become part of an image cleanup profile that you can include in a recognition profile.

White Noise in a Black Border

White noise can be any white pixel or series of white pixels in a black border, and all black borders contain a certain amount of it. White noise is not necessarily visible to the naked eye, but it could impact the process for black border removal or black border cropping.

You can specify a value called "white noise gap," which determines how much white noise the software ignores during a black border removal or black border cropping process.

- If a series of white pixels in the black border is less than or equal to the value of the white noise gap, it is considered white noise. The white noise is ignored, and the black border removal/cropping process continues.
- If the number of consecutive white pixels is greater than the value of the white noise gap, it is considered the end of the border and the black border removal/cropping process stops.



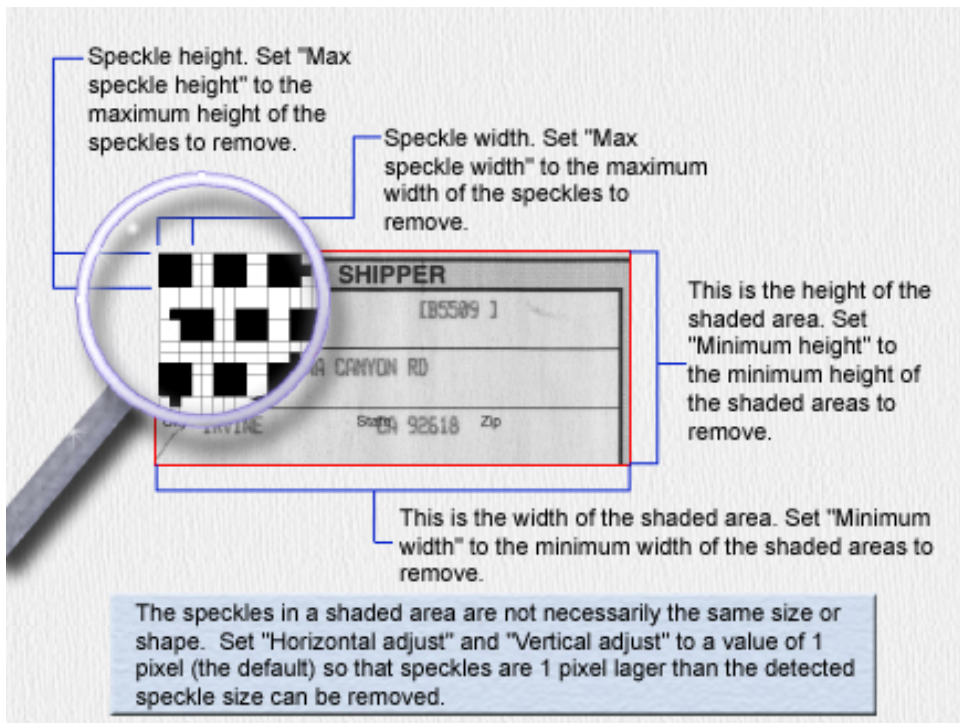
White Noise Gap

For best results, set the white noise gap to a large enough value to remove/crop the entire black border; setting it too low prematurely stops the black border removal/cropping process.

Deshade

Shaded areas on an image are rectangular areas made up of a pattern of black speckles. You can remove shaded areas from your image with the deshade feature. The deshade process removes the speckles that make up the shaded areas while preserving the text inside the shaded areas.

To remove shaded areas from an image, you must define the characteristics of the shaded areas to remove. You specify the height and width of the areas and the size of the speckles in them. All shaded areas that satisfy the defined characteristics are removed. Any text within the shaded areas is preserved.



Definition of a Shaded Area

You specify deshade settings on the Image Cleanup Profiles window. Your settings become part of an image cleanup profile, which you can include in a recognition profile.

Hardware-Based Image Enhancement

Kofax Capture provides access to image enhancement algorithms available with Adrenaline hardware accelerator products. The algorithms are similar to the deshade and edge enhancement filters available for cleaning up images, but running them on the hardware is faster.

The following algorithms are available.

Descreening

A shade removal algorithm, which is especially useful for removing halftones from photographs.

Image Smoothing

An image smoothing algorithm, which is especially useful for smoothing characters and lines that seem jagged on your image.

The default is no image enhancement algorithm enabled.

Note The image enhancement algorithms are not available when using scanners (such as Kodak scanners) that return compressed images.

Deskew

Because of the mechanical feeding action of scanners, documents may shift out of alignment during the scan process. The varying amounts of misalignment are referred to as "skew."

The deskew feature can calculate and correct skew angles up to 12 degrees. Correcting an image for skew can be useful for making the image more readable and for improving operations such as bar code recognition and OCR.

Note The deskew process scales images slightly, and the amount of scaling is greater at higher degrees of skew. If the image is skewed more than 10 degrees, the scaling of the image is noticeable.

You specify your deskew settings on the Image Cleanup Profiles window. Your settings become part of an image cleanup profile, which you can include in a recognition profile.

Field Types

A field type is a global definition for an index field. An index field is a keyword used to retrieve a document after it has been exported to permanent storage.

Field types provide an efficient way to set up index fields and their validation criteria. You can define a pool of field types, and then select from this pool when you define document classes.

For example, a field type named "Address" can be defined once, and then be used by all varieties of document classes requiring an address for an index field. When the index field for the address information is defined, it is simply a matter of selecting "Address" from the list of defined field types.

You create new field types on the Create Field Types window.

You edit field types on the Field Type Properties window.

Data Types

Kofax Capture supports 11 ODBC-compliant data types for your field types, as shown in the Data Types table.

You specify the data type for a new field type on the Create Field Types window.

You edit the data type for an existing field type on the Field Type Properties window.

Data Types

Data Type	Description
CHAR	Variable-length character string. You can specify up to 25,000 characters.
DATE	Date string. Note that validation of date fields is sometimes dependent on the regional date format settings specified from Windows Control Panel.

Data Type	Description
DECIMAL	Signed, numeric value with the number of numeric digits greater than or equal to 1, and less than or equal to 15, and the number of decimal places greater than 0, but less than or equal to the number of numeric digits.
DOUBLE	Signed, floating-point value with the number of digits equal to 15.
FLOAT	Signed, floating-point value with the number of digits equal to 15.
INTEGER	Numeric value with the number of numeric digits equal to 10, and the number of decimal places equal to 0. The range is -2,147,483,648 to 2,147,483,647.
NUMERIC	Signed, numeric value with the number of numeric digits greater than or equal to 1 and less than or equal to 15, and the number of decimal places greater than 0 but less than or equal to the number of numeric digits.
REAL	Signed, single-precision value with the number of numeric digits equal to 7.
SMALLINT	Numeric value with the number of numeric digits equal to 5, and the number of decimal places equal to 0. The range is -32,768 to 32,767.
TIME	Time string.
VARCHAR	Variable length character string. When defining a field type as a CHAR or VARCHAR data type, you must specify the maximum number of characters for the field type. For example, if you specify 25 as the number of characters, data for that field can be up to 25 characters in length. You can specify up to 25,000 characters. However, the maximum length of known values for field types based on CHAR or VARCHAR is 254 characters.

The DATE Data Type

When defining a field type as a DATE data type, you must consider the date settings specified from Windows Control Panel. These settings affect the format of the date field and impact validation of the date field as shown in the table.

The standard validation for DATE checks for the short date format. In addition, the standard validation does not allow dates earlier than 1930. To use a long date format (such as Tuesday, December 22, 1998) or a date earlier than 1930, you must update your validation scripts.

With this Windows regional setting:	You can use this format for Validation:	Notes:
mm/dd/yy	Any date format	
m/dd/yy	Any date format	
m/d/yyyy	Any date format	
mm/dd/yyyy	Any date format	
yy/mm/dd	yy/mm/dd dd-mmm-yy yyyy-mm-dd	Other formats could cause validation errors.
yyyy-mm-dd	yy/mm/dd dd-mmm-yy yyyy-mm-dd	Other formats could cause validation errors.

With this Windows regional setting:	You can use this format for Validation:	Notes:
dd-mmm-yy	yy/mm/dd dd-mmm-yy yyyy-mm-dd	Other formats could cause validation errors.

Default Validation and Formatting

Kofax Capture provides basic data type validation of index field data. For each index field, the default validation code checks that the string generated by a recognition engine or typed in by a validation operator is an acceptable value for the data type of the field type.

Data Type	Description and Default Processing
Char Varchar	Variable Length String. Validation code tests whether the length of index field string (excluding leading and trailing spaces) does not exceed the specified maximum number of characters.
Smallint	16-bit integer. Validation code tests whether the index string can be converted into an Integer.
Integer	32-bit integer. Validation code tests whether the index string can be converted into a Long.
Decimal Numeric	Floating-point number. Validation code tests whether the index field string can be converted into a decimal number with the specified total number of numeric digits and precision.
Double Float	Double-precision floating-point number. Validation code tests whether the index string can be converted into a Double.
Real	Single-precision floating-point number. Validation code tests whether the index string can be converted into a Single.
Date	Validation code tests whether the index field string can be converted into a short date and if possible then returns the date in the short format according to the current regional setting of the system. To process dates in other formats, you need to implement your own validation code in the script.
Time	Validation code tests whether the index string can be converted into a Time, and if possible, returns the time in the long format according to the current regional setting of the system.

Valid Maximum Values Table

This table lists the values supported as field length maximums.

The values listed in these columns specify the minimum and maximum values you can set for the maximum length of a field. For example, you can set the maximum length for an index field to be any value from 7 to 32. If you set the maximum length to a value of 10, you can use index field names of 1 to 10 characters in length.

Field	Minimum Max Value	Maximum Max Value	Notes
Batch class name	1	32	
Document class name	1	32	
Form type name	1	32	

Field	Minimum Max Value	Maximum Max Value	Notes
Batch field name	7	32	
Index field name	7	32	
Field type name	1	32	
Field type description	1	80	
Field type length for known values	1	254	VARCHAR and CHAR types only

Force Match and Case-Sensitive Attributes

In addition to specifying known values for a field type, you can assign the "force match" and/or "case-sensitive" attributes to the values. The attributes you select apply to all the known values for a field type.

- With force match selected, the list of known values is sent to the recognition engine (OCR, ICR, bar code recognition, etc.) processing the index field. In addition, the validation and verification operators are required to select from the list of values.
- With case-sensitive selected, the known value must be matched exactly by the recognition engine. This forces a distinction between upper and lowercase characters.

You select these attributes from the Create Field Type window or the Field Type Properties window.

Known Values for Field Types

You can specify known values for a field type. Then, for all index fields based on that field type, the known values are available to enhance validation operations.

- At data capture time: If automatic recognition is specified, the recognition engine is provided with a list of values to resolve unrecognized words. This improves the accuracy of the engine. Note that the "force match" attribute for the field type controls which recognition engines can use the known values:
 - If force match is selected, the values are provided to any automatic recognition engine specified (OCR, ICR, bar code recognition, etc.).
 - If force match is not selected, the values are provided to Kofax Capture's OCR and ICR engines only.
- At validation time: The validation and verification operators are provided with a list of the known values to select. This makes validation and verification easier, and potentially increases validation accuracy.
 - If force match is selected, the validation and verification operators are required to select or accept a value from the list of known values.
 - If force match is not selected, the validation and verification operators are able to select a value from the list or enter a different value.

You specify known values for a new field type on the Create Field Type window.

You edit known values for an existing field type on the Field Type Properties window.

Note If you specify both known values and a Zonal dictionary, the dictionary is not used.

Creating a Field Type

You create field types with the Create Field Type window in the Administration module.

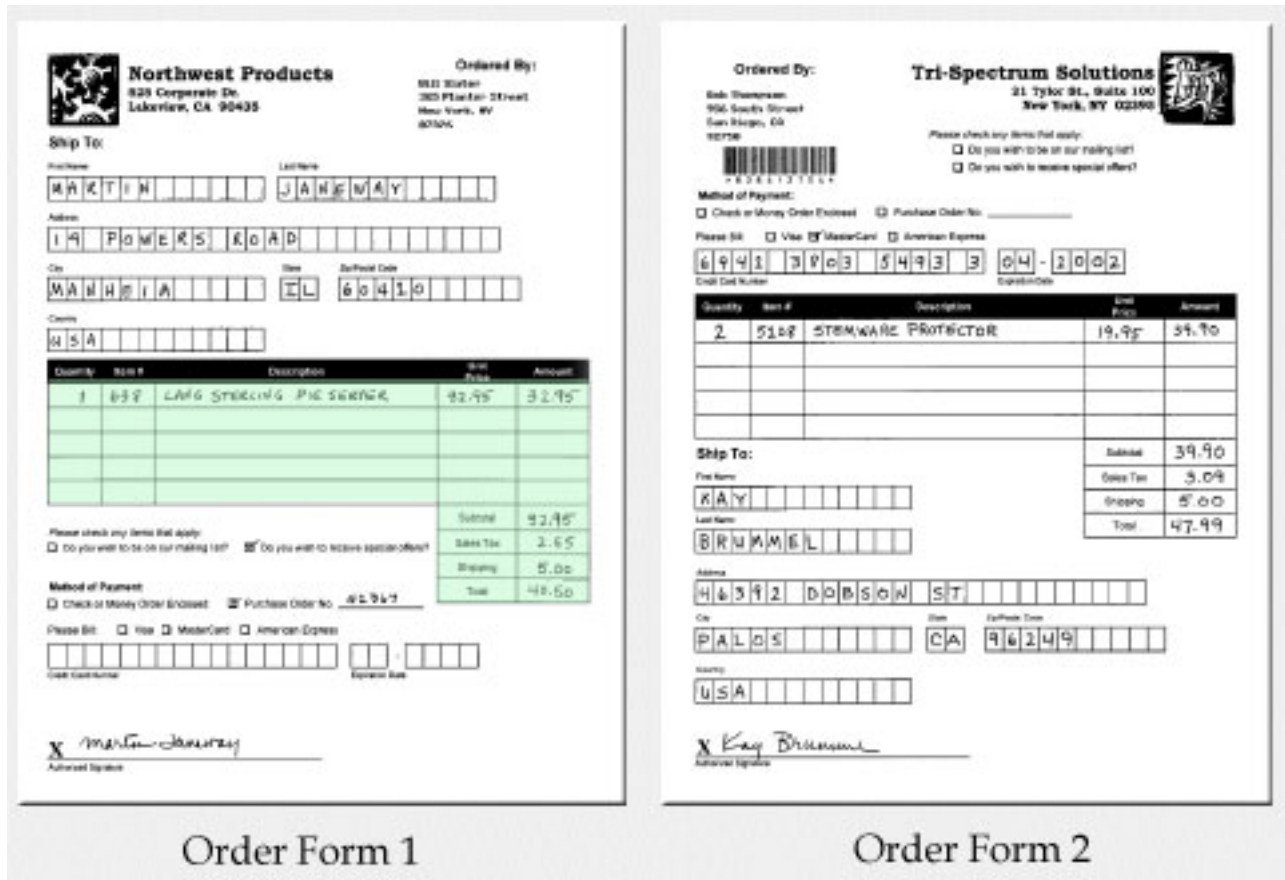
1. On the **Insert** tab, in the **Create New** group, click **Field Type**.
2. On the **Create Field Type** window - **General** tab, enter the name for the field type. You can enter up to 32 characters, including spaces.
The name, which must be unique, is not case-sensitive. Leading and trailing spaces are removed.
3. Enter a description for the field type. The description appears whenever field type properties are displayed.
You can enter up to 80 characters.
4. Enter the path and file name of a zonal dictionary for the field type.
5. Enter the data type for the field type. Note that some data types require additional information:
 - a. For CHAR and VARCHAR data types, enter the maximum number of characters for the field type.
 - b. For DECIMAL and NUMERIC data types, enter the total number of numeric digits and the number of decimal places for the field type. For more information on numeric digits and decimal places, see the [data types table](#).
 - c. In addition, the date settings in the Windows **Control Panel** affect the format for field types assigned the [DATE data type](#).
6. Enter known values for the field type.
 - a. Click the **Values** tab.
 - b. Enter a known value in the edit box.
 - c. Click **Add** or press Enter.
The value is added to the list of known values.
 - d. Select **Force match** or **Case sensitive** for the list of values.
Your selection is applied to all the known values for this field type.
 - e. Repeat the preceding substeps for each known value to add.
 - f. If required, sort values by using **Alphabetically** or **Custom** buttons in the **Sort Options** group.
7. Click **Save** to save your field type settings and clear the window. (Alternatively, you can press the Enter key.)
The new field type appears in the **Field Types** tree view tab.
8. Click **Close** to close the window.

Form Types

A form type defines a unique form, such as an order form from a particular vendor or a medical form from a particular hospital. You can associate one or more form types with a document class.

Use form types to define zone locations on different types of forms within a document class. You can also customize processing options for a particular form type.

For example, you might have two form types defined for a document class: Order Form 1 and Order Form 2. Both forms contain the same types of information, although the information appears in different locations. Order Form 1 contains some shaded areas that might make OCR processing difficult. Order Form 2 contains validation information encoded in bar codes.



Two Different Order Form Types

You can define separate form types for each of these forms, and then tailor the processing settings for each. For example, you can remove the shaded areas from Order Form 1 before you perform OCR processing to capture index data. You can use bar code recognition to capture data from the bar code on Order Form 2.

When to Define a Form Type

You must define at least one form type for a document class. In addition, a form type should be defined whenever:

- The processing for the form includes automatic recognition (such as form identification, automatic validation, etc.)
- Page Registration is selected
- You have different form types within a document class

All form types within the document class use the same index fields. For some types of processing, you must scan or import a sample page for the form type.

You define a form type from the Create Form Type window or Form Type Properties window.

Form Identification Zones

Form identification zones compare specific zones on each scanned image with the same zones on the sample pages of the batch class. Every time a match is found, document separation occurs and the new document is identified with the matching form type.



Form Identification Zone Form Identification

Refer to [form identification zone separation](#) to learn the most common way form identification zones are implemented. With the exception of manual separation, form identification zones can be used in conjunction with every other method of document separation.

Form Identification Zones

A form identification zone is an optional zone that can be used to assist Kofax Capture's page-level form identification feature. It is typically used to help the form identification engine distinguish between forms that are very similar. For example, a form identification zone could be very useful for identifying different revisions of the same form.

You can specify more than one form identification zone for a form type. For multipage form types, the zone must be on the first page.

Form identification zones are only used in conjunction with page recognition as the method of identifying forms. The page recognition process uses the page-level form identification engine and the form identification zones (if any). You select page recognition on the Custom Separation and Form Identification tab on the Batch Class Properties window.

By using a shape recognition profile with a form identification zone, you can separate your batch into forms using geometric shapes instead of other elements, such as bar codes.

Note the following:

- A form identification zone is optional. You can perform page recognition without specifying a form identification zone.
- Form identification zones cannot belong to a SmartGroup.

- Page-level form identification is typically processed first. If a form identification zone is specified:
 - It is only processed if page-level form identification is successful.
 - It determines whether the form is successfully identified. If the results of processing the form identification zone are successful, the form is considered recognized. If not, the form is not considered recognized.
 - If you use multiple Form ID zones on the same page, zone processing stops after the first Form ID zone is processed with sufficient confidence (based on your profile settings). At that point, the form is considered “identified” and there is no reason to process additional zones. See [Advanced Form Identification Issues](#) for more information.

When you define a form identification zone, you must specify:

- A recognition profile that specifies the recognition method (such as OCR, bar code recognition, shape recognition, or others) and image cleanup settings for the zone.
- Depending on the recognition method, a confidence threshold, which indicates the minimum acceptable confidence returned from the recognition method. If you enter search text, it must exactly match the data to be captured from the zone. For example, if you draw a zone around the data "invoice", the search text must be specified as "invoice" (you cannot abbreviate the search text as "inv"). The search text must be recognized within the confidence threshold. If an exact match is required, the confidence threshold should be set to 100.
- For a shape recognition profile, a search shape.

Creating a Form Identification Zone

You create form identification zones on the sample pages you scan for your form types.

1. Select a sample page to display it.
2. On the **Insert** tab, in the **Zones** group, click **Form**.
(If your sample document contains multiple pages, you must create your form identification zone on the first page.)
3. Draw a rectangle around the area of your sample page to use as a form identification zone.
The **Create Form Identification Zone** window appears.
4. Select a recognition profile from the list. If none of the options in the list is appropriate, select **Edit** and define a custom recognition profile.
5. Enter the search text that must be captured to identify the form.
The search text must be recognized within the confidence threshold. If an exact match is required, the confidence threshold should be set to 100.
Search text is optional and must be matched within the confidence threshold or the form is not recognized. If no search text is specified, the results must be non-null.
6. Use the slider to specify a confidence threshold for the recognition.
Kofax Capture does not consider the form identified unless the confidence returned from processing the zone is greater than or equal to the specified confidence threshold.

Note You cannot specify a confidence threshold for bar code or patch code recognition. If the selected recognition profile uses either of these methods, the confidence slider is grayed and the expected confidence is 100 percent. If the bar code or patch code is found, the zone will "pass." If search text is specified, an exact match is required.

7. Click **Test** to apply your settings to this zone and check the results.
"Test" is not available if the sample page is displayed from the **Document class tree view** tab.
8. Select **OK**.

Editing a Form Identification Zone

You edit form identification zones with the Form Identification Zone Properties window (the title on the window is Create Form Identification Zone).

1. With the sample page displayed, right-click the form identification zone to edit, and then click **Properties**.
2. On the **Form Identification Zone Properties** window, edit the properties.
3. Click **Apply** to save the changes without closing the window.
4. Click **Test** to apply your settings to this zone and check the results. The sample page must be displayed from the **Batch class tree view** tab to use QuickZones to verify your recognition and cleanup settings.
5. Click **OK** to save the changes and close the window.

Advanced Form Identification Issues

Kofax Capture's internal form identification engine can identify images by comparing them to sample pages that were previously "learned." To learn a sample page, Kofax Capture creates a histogram of the sample. Then, to identify a scanned or imported image, the physical characteristics of the image are compared to the histogram. Images that match the histogram within specified thresholds are considered identified.

You can optionally define one or more form identification zones, which can assist the form identification engine. If page recognition is selected and a form identification zone is defined, processing occurs in two phases:

- Phase 1 - Page-level form identification: A scanned or imported image is compared against the sample pages already "learned" by the form identification engine. Each comparison returns a confidence and a difference. To "pass" this phase, the confidence and difference returned must be greater than or equal to the specified thresholds.
- Phase 2 - Zone-level form identification: All images that pass the first phase are searched for form identification zones. To "pass" this phase, a form identification zone must be found and successfully processed. If you have more than one form identification zone on the page, processing stops with the first successful zone.

Typically, there is only be one "winner." If multiple sample pages are identified, the one with the highest confidence is used.

Note Images on which form identification zones cannot be found or successfully processed are not identified. This is the case regardless of the confidence and difference returned from Phase 1 (described earlier) for the image.

The internal form identification engine is very robust and can identify a wide variety of forms. In some cases, though, you may get better results by "turning off" page-level form identification and only using the results from a form identification zone.

Turn off page-level form identification on the Custom Separation and Form Identification window. In this window, set the confidence for the selected page recognition profile to 0, which essentially forces all images to "pass" Phase 1 described earlier.

Similar Sample Pages

If all your sample pages are very similar, turning off page-level form identification could result in a slight performance improvement. For example, you might be processing different revisions of the same form. Each revision contains a marker (such as a form revision number or a box) clearly printed in a known location on every revision.

If page-level form identification is selected, it will probably "pass" all revisions of the form and rely on zone-level identification to distinguish between the samples. Since revision markers are often printed in letters suitable for OCR processing or encoded in bar codes, the results of a carefully drawn form identification zone are very reliable. In this case, bypassing page-level form identification removes the overhead of the page-level processing without diminishing successful results.

You may also be able to identify your forms based on certain geometric shapes found on the form. In such cases, you can use a recognition profile for your form identification zone.

Images with Varying DPIs

If you are processing images with varying dpis or images with a different dpi than the associated sample pages, page-level form identification fails. In this case, you should turn off page-level identification and rely on a form identification zone to identify your forms.

One solution is to create multiple form types with identical settings, but use sample pages scanned at all expected dpis. For example, consider this scenario: You know that some of your forms are scanned at 200 dpi and others are scanned at 300 dpi. To account for the differences in dpi, you can create one form type with sample pages scanned at 200 dpi and another form type with identical settings and sample pages scanned at 300 dpi. Page-level form identification is able to match the images against the sample pages with the same dpi.

If the preceding solution does not work (for example, you have no way of knowing the dpis of the images you'll be processing), you can use a form identification zone instead.

Distorted Images

Scanning forms printed on very thin paper (such as onion skin or pressure-sensitive multipage form paper) may produce "stretched" or otherwise distorted images. Distorted images are typically the result of how a scanner's feeding mechanism pulls the pages through the scanner. Since the scanner won't distort all images in exactly the same way, the results of page-level identification are very low.

Even with the distortion, it may be possible to identify an area on the image that can be used as a reliable form identification zone. If so, you should disable page-level identification and rely on a form identification zone to identify your forms.

Image Variations on Sample Pages

Some forms contain sections that are standard, and other sections that can vary from form to form. For example, the top half of a form might have a standard header format that is always filled in the same way. The bottom half of the form might be non-standard and contain free-form data.

- If you are processing this type of form, page-level identification fails. One solution is to scan a sample page with the free-form section "blanked out." (For example, you can tape a white sheet of paper over the free-form area.) This may allow the pages you are scanning to match the sample page. Since the confidence won't be as high, you may need to reduce the confidence threshold.
- Another solution is to turn off page-level form identification and rely on a form identification zone to identify your forms.

Images with More Data Than Sample Pages

Sometimes, the images you are processing contain more filled-in data than the sample pages do. For example, the images used as samples might have few fields filled in while the images in your batches have many fields filled in. If the differences are significant, the results of page-level form identification could be low.

One solution is to rescan your sample pages with forms that are more representative of the batches you'll be processing. This could improve page-level form identification. If this is not feasible, you should turn off page-level form identification and rely on a form identification zone to identify your forms.

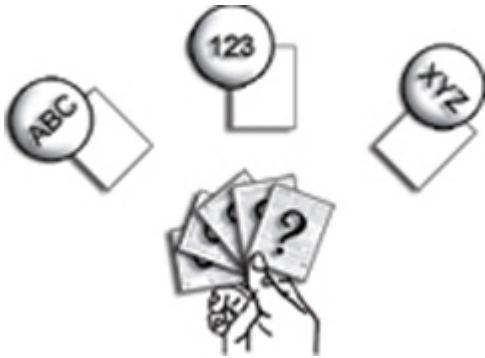
Performance Issues

As a rule of thumb, page-level form identification takes about 1-2 seconds per page, whereas processing a single OCR or shape recognition zone takes about a third or a sixth of a second, respectively. If this increased time is a problem, you can turn off page-level form identification and rely on one or more form identification zones to identify your forms.

Make sure you carefully draw and specify settings for the form identification zone.

Manual Form Identification

You can manually identify forms within your batch. Typically, this would be done by a scan or quality control operator.

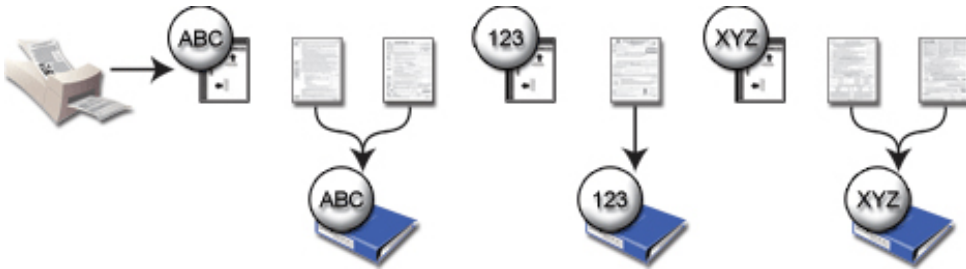


Manual Form Identification

Manual form identification is easy, but takes more time than the other separation methods. It requires that the scan or quality control operator manipulate each document. Refer to [Manual Separation](#) to learn how to process manual separation and form identification.

Kofax Separator Sheets Form Identification

Kofax separator sheets can be printed with a bar code that identifies the following document's form type.

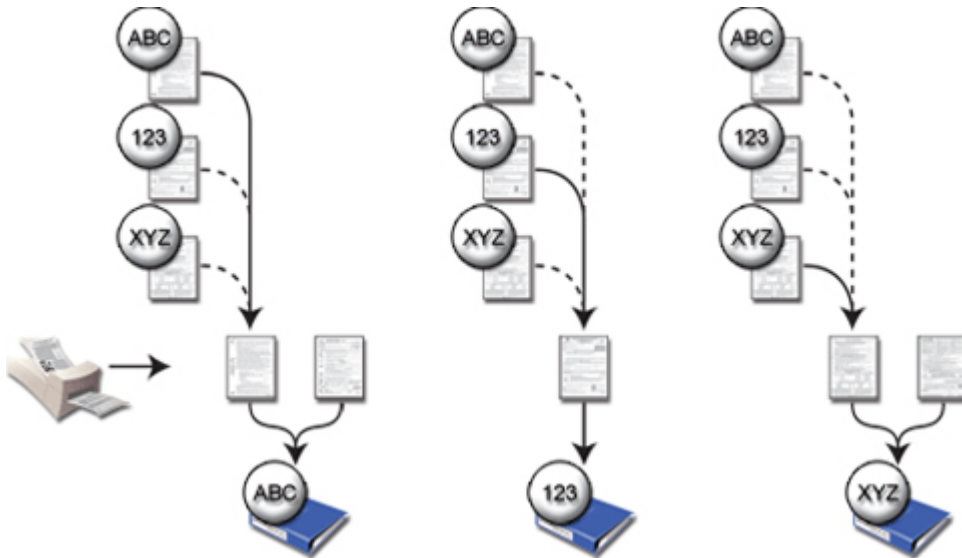


Kofax Separator Sheets Form Identification

Refer to [separator sheet separation](#) to learn more about Kofax separator sheets and the most common way to implement them. Separator sheets cannot work in conjunction with other separation methods.

Page Recognition Form Identification

Page recognition compares each entire image with the first page of each form type looking for an overall match. Every time a match is found, document separation occurs and the new document is identified with the matching form type.



Page Recognition Form Identification

Refer to [page recognition separation](#) to learn more about page recognition and the most common way to implement page recognition identification. However, much like form identification zones, page recognition identification can be used in conjunction with every other type of document separation method (except for manual separation).

Single Form Type Form Identification

Single form type identification only works when the batch class has one form type. Since there is only one form type, each document is identified with that form type by default.

Four separation methods identify the form type of the document if only one form type exists in the batch class:

- [Kofax fixed pages](#)
- [Kofax patch code separators](#)
- [Kofax bar code separators](#)
- [Separator zone](#)

Kofax Capture Values / Kofax Values

Kofax Capture supports a set of macros that produce results based on the current Kofax Capture environment. These macros, called *Kofax Capture Values* or *Kofax Values*, can be used to fill batch fields, index fields, endorser strings, and/or export values.

Note Throughout the product, the term *Kofax Capture Values* is used, except in the context of export connectors, where the term *Kofax Values* is used.

For example, the value {Batch Class Name} produces the name of the batch class associated with the current batch. If your processing requirements dictate that the names of your batches be exported with your batches, you might use {Batch Name} as the default value for a batch field that you export with each batch.

Furthermore, you can enter special Kofax Capture Values for Index fields, export links, endorsing text, or batch fields. When the system processes such fields, the Kofax Capture Values are translated into their actual values.

Using Kofax Capture Values on Localized Systems

When using Kofax Capture Values on localized systems (or across regions), keep the following in mind.

KCN Server

Kofax Capture Values, used for endorsing strings, batch field defaults, batch field values, index field defaults, index field values, and export connector setup links, are correctly translated into the language of the localized version of Kofax Capture when a batch class is downloaded from the central site or a batch is transferred between sites.

If a Kofax Capture Value (such as {Validation Operator's Station ID}) exists in a batch field or index field when a batch is uploaded, that Kofax Capture Value is correctly translated into the language of the localized version.

English Kofax Capture Values

You can submit English Kofax Capture Values irrespective of the localized version of Kofax Capture when using the following:

- Export Setup Link
- Retrieve Export Value
- Batch Field Default Value
- Index Field Default Value
- Batch Field Value
- Index Field Value
- ACCI (OCX/Input Script)

Using Export Setup Link is limited to export connectors because all current export connectors do not allow the user to type in Kofax Capture Values that are not in the localized set of suggested values. For example, an English export connector can save an English Kofax Capture Value in the export link table. During export, the Kofax Capture Value is correctly translated on a localized version of Kofax Capture.

For Retrieve Export Value, suppose during export setup the English {Batch ID} Kofax Capture Value is linked by hard coding the value in English. In this case, on a localized version of Kofax Capture, the English {Batch ID} is correctly expanded during export.

English Kofax Capture Values have the following limitations:

- English Kofax Capture Values (on non-English versions of Kofax Capture) cannot be used for endorsing strings.
- You can only use Kofax Capture Values that are available on the localized version of Kofax Capture.

- You cannot use English Kofax Capture Values (on non-English versions of Kofax Capture) in the Export Setup user interface. This is because all export connectors limit the user to setting only those Kofax Capture Values that are in the list of localized possible values.

List of Kofax Capture Values

The following Kofax Capture Values are supported for batch fields, endorser strings, and index fields.

Values for Batch Fields, Endorser Strings, Index Fields

Value	Description
{Current Time}	The current system time.
{Current Date}	The current system date.
{User Name}	Windows user name.
{Station ID}	Kofax Capture Station ID, which is the name associated with the workstation, with the Windows session number appended to it.
{StationIDCommonName}	Kofax Capture Station ID, which is the name associated with the workstation, without the Windows session number appended to it.
{Site ID}	Kofax Capture Site ID, which is the name associated with the Kofax Capture installation.
{Batch ID}	A unique, sequential number associated with the batch; assigned when a batch is created.
{Batch Name}	The name of the current batch.
{Batch Reference ID}	Reference passed from a batch to its child batches; used for internal purposes only.
{Batch Description}	The description of the current batch.
{Batch Creation Date}	The date the current batch was created.
{Batch Creation Time}	The time the current batch was created.
{Batch Creator's Station ID}	Kofax Capture Station ID of the computer where the batch was created.
{Batch GUID}	A type of batch ID that is unique across the central site and all remote sites that comprise a Kofax Capture installation.
{Scan Operator's Station ID}	Kofax Capture Station ID of the computer used to scan the batch.
{Scan Operator's User ID}	The user ID for the scan operator.
{Validation Operator's Station ID}	Kofax Capture Station ID of the computer used to validate the batch.
{Batch Class Name}	The name of the associated batch class.
{Document Count}	Reserved.
{Document Creation Date}	The date the current document was created.
{Document Creation Time}	The time the current document was created.

Value	Description
{Operator User ID}	The user ID of the logged in Kofax Capture user. Since different Kofax Capture users may process the same batch, the user ID captured depends on the module where the Kofax Capture Value is processed: Batch Manager, Scan, Validation, or Export. If the Kofax Capture User Profiles feature is not enabled, the logged in Windows user ID, if applicable, is used. If there is no logged in Windows user ID, the returned value is "unknown."
{Operator Name}	The user name associated with the user profile, if any, of the logged in Kofax Capture user. The user name captured depends on the module where the Kofax Capture Value is processed: Batch Manager, Scan, Validation, or Export. If the Kofax Capture User Profiles feature is not selected, the logged in Windows user ID, if applicable, is used. If there is no logged in Windows user ID, the returned value is "unknown."
{Operator Description}	The description, if any, of the logged in Kofax Capture user. The description captured depends on the module where the Kofax Capture Value is processed: Batch Manager, Scan, Validation, or Export. If the User Profiles feature is not enabled, the returned value is null.
{Queue}	Name of the process that is currently running in the batch class workflow.
{Sequence Number}	A sequence number that increments by one for each batch class. The default value for {Sequence Number} is 0. This value can increment up to 2,000,000,000. If the value becomes greater than 2,000,000,000, the value is set to 0 again.
{UTC Offset}	UTC Offset is used to provide Coordinated Universal Time (Greenwich Mean Time) as part of the generated batch name. For example, when used with Pacific Time, the UTC Offset value generates (-7:00).

The following values can be used for index fields and export values.

Values for Index Fields and Export Values

Value	Description
{Document GUID}	A type of document ID that is unique across the central site and all remote sites that comprise a Kofax Capture installation.
{Document ID}	A unique, sequential number associated with the document. It is assigned by Kofax Capture.
{Document Form Name}	The name of the associated form type.
{Document Class Name}	The name of the associated document class.
{Repository Document ID}	This is a specific value that can be read/written by export connectors to store and retrieve the document ID used by the first invoked Export Connector. This Kofax Capture Value directly mirrors the value stored in the RepositoryDocumentID. If no value has been stored into RepositoryDocumentID, this Kofax Capture Value resolves to an empty string.
{Remote Validation User ID}	Reserved.

Value	Description
	<p>You can use the preceding Kofax Capture Values as default values in index fields. If an index field is blank at export time, and the document has not been indexed, then the default value is used (in this case the "expanded" Kofax Capture Value).</p> <p>The following values are derived from the endorsing information for the first page of the current document (when document separation has been performed at scan time). These values may be used in index fields and in export values. There is no way to retrieve endorser information for pages other than the first.</p>
{First Page Endorsing String}	The endorsing string (prefix plus counter). Not used by Kodak scanners, except for models 1500, 2500, and 3500.
{First Page Image Address}	The image address. Used only by Kodak scanners that support image address.
{First Page Roll Number}	The roll number for the film being scanned. Used only by Kodak scanners that support microfiche scanning.
{First Page Original File Name}	The original file name and extension of the first page of the document. The extension of image files is always <i>.tif</i> . Note that because the final extension of image files can be changed at export time, this name may not match the exact name of the exported image. If the first page image file was not imported and the original file name has not been set via some other means, this value returns an empty string.

A special value type can be used to produce the value of a batch field. The sequence to enter this is a "{" character followed by the "\$" character, followed by the batch field name, followed by the "}" character. For example, the value "{\$Text1}" would produce the runtime value of the batch field "Text1". Batch field values may be utilized in endorser strings, index fields, and export fields.

Batch Classes

A batch class describes how the documents in a batch are processed by Kofax Capture. During production, each new batch is based on a batch class definition that determines:

- Which modules the images are processed by, and in which order
- How images are separated into documents
- How forms are identified
- How images are cleaned up

A batch class contains one or more document classes, which in turn contain one or more form types. This gives you the ability to have different kinds of documents and forms within one batch. Kofax Capture can automatically separate the pages into documents and identify different types of forms.

With Kofax Capture, you can define a pool of batch classes to select from when you create batches. You define batch classes on the Create Batch Class window.

All batches in Kofax Capture are defined by their batch class. Therefore, you must define a batch class before you scan or import documents.

You must perform the following tasks to set up a batch class:

- Create one or more field types (optional)
- Create one or more document classes
- Create one or more form types

- Add the necessary sample pages for your form types (optional)
- Create a batch class
- Associate one or more document classes with your batch class
- Publish your batch class

Kofax Capture provides an object-oriented approach to setting up your batch classes. While some steps must be done before others, most can be done in any order.

Specifying UNC Paths During Batch Class Setup

During batch class setup, you must use UNC paths in the Kofax Capture Administration module to specify any folders or files to be accessed from a network. UNC paths are required if you specify network folders or files for any of the following:

- Image folder on the Batch Class Properties window - General tab
- File names and export folders on the following windows:
 - Kofax Export Connector for Text Setup window - Index Storage tab
 - Kofax Export Connector for Text Setup window - Advanced tab
 - Kofax Export Connector - Database Setup window - Database tab
 - Kofax Export Connector - Database Setup window - Document Storage tab
- Full Text or Zonal dictionary on the following windows:
 - Create Field Type window - General tab
 - Field Type Properties window - General tab
 - Create Document Class window - OCR tab
 - Document Class Properties window - OCR tab
 - Create Document Class window - PDF tab
 - Document Class Properties window - PDF tab
- Imported Value List on the Field Type Properties window - Values tab
- Field macro source file or folder on the Field Script/Macro window
- Script source file or folder in the Validation Script window or the Recognition Script window
- Files to import or export

Importing PDF Files

In Kofax Capture, you have the option of importing PDF files as either eDocuments or converting them to TIFF images. Which option you select depends on whether you process the file as a native PDF file or if you need to perform some auto-recognition on the contents of the file.

This section provides instructions on how to select these options, and also describes how to import PDF files for use as sample pages for your form types.

Importing PDF Files as eDocuments

For any batch class, you can have PDF files imported as eDocuments by selecting the "Allow import of eDocument files" check box on the Advanced tab of the Create Batch Class or the Batch Class Properties window.

Make sure the "Treat imported PDF files as TIFF images" box is not selected. Once imported into Kofax Capture, the PDF files are treated like any other eDocument.

A PDF file is counted as a single page, regardless of the actual number of pages. The number of available pages of your Kofax Capture license volume is decremented by one for each PDF file imported as an eDocument.

Treating PDF Documents as TIFF Images

For any batch class, you can select to treat PDF files as TIFF images. Each PDF file is converted to a multipage TIFF that is processed based on the batch class settings, just like any other supported image file.

To have every imported PDF file for a particular batch class be converted to a TIFF image file, you must select the "Treat imported PDF files as TIFF images" check box on the Advanced tab on the Create Batch Class or Batch Class Properties window.

Each page in the PDF file is converted to a page within the multipage TIFF file. The number of available pages in your Kofax Capture license volume is decremented by one for each page in the TIFF file.

Importing PDF Files as Sample Page

When defining your form types, you can import PDF files to use as sample pages. When you select a PDF file to import, it is converted to a TIFF image. The dpi of these images is calculated based on the scale of the imported PDF image.

All sample page images used in a single form type must be of the same dpi. The dpi is calculated based on the scale of the imported PDF file, and you receive an error message if the dpi is not the same. If you need to import PDF files of different dpi values, you can create multiple form types.

Processing Priority

All batches have a processing priority level assigned to them to specify the order in which the batches are processed at each module. The priority levels can be any value from 1 to 10, with 1 being the highest priority and 10 being the lowest. The priority level is defined as part of a batch class.

The default priority level for a batch class is assigned in the Administration module on the Create Batch Class window or Batch Class Properties window. However, the priority level for a batch can be changed from the Scan module or Batch Manager.

Batch Fields

Use a batch field to associate certain descriptive information with each batch. For example, you might want to know the user ID of the operator who scanned the batch, the date and time the batch was scanned, etc.

You can export batch fields to your target database just like index fields.

You specify batch fields for a new batch class on the Create Batch Class window.

You specify or edit batch fields for an existing batch class on the Batch Class Properties window.

Sample Pages

For some types of processing, you must have sample image files for your form. For example, you need sample image files for:

- Defining index zones
- Defining OCR registration zones
- Defining separation zones
- Setting up form identification
- Setting up page-level bar code recognition

The sample image should be a form or document of the type defined by the form type. For example, if order forms from ABC Company are to be processed, you should scan or import an order form from the ABC Company.

Notes

- Use clean, good quality images for your sample pages.
- Use forms that are representative of the ones you'll be processing in your batches.
- For best results, use the same make/model of scanner and the same settings for scanning sample pages as you intend to use for scanning batches. This is particularly true if you intend to use page recognition as your method of document separation and form identification.
- You must use the same resolution (dpi) for scanning sample pages as you intend to use when scanning batches. If your documents are scanned at different dpis (for example, some at 200 dpi and others at 300 dpi), you can create a separate form type for each dpi. Then, add the same sample pages scanned at the appropriate dpi for each form type.
- Kofax Capture automatically attempts to set the scanner to deskew your sample pages. Therefore, you must use a device capable of deskewing images as you scan sample pages.
- When using unattended scanning, a batch is created for each page scanned if single document processing is selected in the Batch Class Properties - Advanced tab, and if the batch class contains multiple document classes with sample pages.

Adding Sample Pages

Use the Administration module to import or scan sample pages for your form types.

Importing Sample Pages

To import a sample page, image files must already exist on disk for your form type. You can use any image file scanned from a form and saved to disk.

1. On the **Scan** panel, in the **Scan Source** list, select an import source.
2. On the **Document** class tree view tab, select the form type for which you want to add a sample page.
3. On the **Home** tab, in the **Form Type** group, click **Add Sample Pages**.
The "**Import files**" window appears.
4. On the "**Import files**" window, select a file and click **Open**.
The sample page is associated with the form type and displayed in the Administration module view window.

The bottom section of the Import window contains a list box for "Files to import." You can select the files to import and then click the Add button. The files you select are added to the list of "Files to import." You can use the pointer to reorder the list. Then, click Open to import the files. The files are imported in the order listed. This is useful if you want to import files from different folders, or import the files in a particular order.

Scanning Sample Pages

To scan a sample page, you must have the following:

- Scanner attached to your workstation.
- Source device defined for the scanner. You define source devices with the Scanner Configuration Utility.
- Clean, good quality forms to scan.
 1. On the **Scan** panel, in the **Scan Source** list, select a source device.
 2. Place the sample pages in your scanner's ADF or flatbed.
 3. Right-click **Scan Controls**.
A context menu appears.
 4. Select your scanner settings and on the **Scan Panel**, select a profile from the **Scanner Profiles** list.
 5. From the **Document** class tree view tab, select the form type for which you want to add a sample page.
 6. On the **Home** tab, in the **Form Type** group, click **Add Sample Pages**.
 7. On the **Home** tab, in the **Scan** group, click **Scan**.
The sample page is scanned, associated with the form type, and displayed in the Administration module viewing window.

Note You can also use color .tif images for your sample pages. See "Using QuickZones" and "About Color Support" in the *Administrator's Guide* for more information.

Advanced Source Properties

You can associate one or more advanced properties to a source device so that whenever that source device is selected, the advanced features are applied.

Text Annotations and Endorser Support

Some scanners are equipped with small imprinters that allow pages to be mechanically endorsed with short text strings as they pass through the scanner. These imprinters are called "endorsers." There are two types of endorsers:

- Pre-scan endorsers print the text before the page is scanned, allowing the printed string to appear on the scanned image.
- Post-scan endorsers print the text after the page is scanned so the printed string does not appear on the scanned image. This is not recommended if you want the electronic images to match the original hard copy documents.

Use the Kofax Capture endorser/annotation feature to specify an endorser string to be stamped on the hardcopy documents by the scanner's endorser, and superimpose that same string on the electronic images before the images are processed. This way, your electronic images always match the original documents.

Text annotations can be used independently of the scanner's endorser and vice-versa, although they are most useful when the two are combined.

Note Not all scanners support the endorser/annotation feature provided by Kofax Capture. See your scanner documentation for more information. Also, see [Setting Up Endorser/Annotation Support](#) for more information about this feature.

Annotation Text String

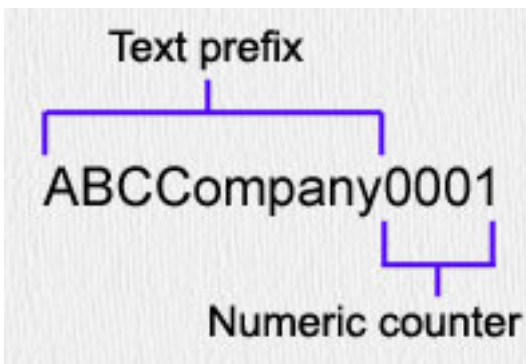
The endorser/annotation text is a string made up of an alphanumeric prefix plus an optional numeric counter. The text prefix, the number of digits for the counter, and the increment and reset settings for the counter are specified when you set up the Scan module for a batch class.

The initial value for the counter is based on the last value from the previous batch of the same batch class. An operator can change this value when creating a new batch from the Scan module or Batch Manager.

For example, if you set up the following:

- Text prefix = ABCCompany
- Counter digits = 4
- Starting number for the counter = 1 (specified at scan time)

Your initial endorser/annotation string is the following.



Endorser/Annotation String

You specify prefix text and counter digits on the Scan Properties window - Endorsing tab when you set up the Scan module for a batch class.

Note Kofax Capture supports a maximum of 80 characters for the text prefix and 6 digits for the counter. However, the maximum length for the endorser string varies from scanner model to another. See your scanner documentation for more information. Also, see [Setting Up Endorser/Annotation Support](#) for important notes related to this feature.

Position and Font for Endorser/Annotation Text String

Most scanners that support the endorser/annotation feature provide limited control over where the endorser prints the endorser string on a page. Some allow you to specify a top and left position for the

text, while others allow you to specify only the top or left position. Still others allow no user-specified position for the text.

When setting up your endorser/annotation settings, you can specify position information for your endorser/annotation text, and font settings for your annotation text as shown below. You specify font and position settings from the Scan Properties window - Endorsing tab when you set up the Scan module for a batch class.

Text Offsets

These settings are used for endorser and annotation text.

- Top specifies the top position for your endorser/annotation text.
- Left specifies the left position for your endorser/annotation text.

Font Settings

These settings are used for annotation text only.

- "Type" specifies type size of your annotation text. Typically, you would match the type used for your endorser string.
- "Orientation" specifies the orientation for your annotation text.

Note Not all scanners support all the font and position options provided by Kofax Capture. See the documentation that came with your scanner for more information. Also, see [Setting Up Endorser/Annotation Support](#) for important notes about this feature.

Using Custom Endorser Prefixes

You can add almost any prefix to your endorser text string.

Creating a Custom Prefix

1. In the **Batch class tree view**, select a batch class.
2. Right-click to open the **Batch Class Properties** window.
3. Click the **General** tab.
4. Click **New** to create a new batch field.
5. Create a batch field.
6. Click **Apply** to save your changes without closing the window.

Adding a Custom Prefix to Endorser Text

1. In the **Batch class tree view**, select a batch class.
2. Right-click to open the **Batch Class Properties** window.
3. Click the **Queues** tab.
4. Select the Scan module.
5. Click **Properties** to open the **Scan Properties** window.
6. Click the **Endorsing** tab.
7. Select endorsing.
8. Click **Values**.
9. Select your custom prefix (or any other prefix) from the list.

During scanning, the prefix is added to the endorser text.

Controlling the Behavior of the Endorser/Annotation Counter

You specify increment and reset settings for the counter from the Scan Properties window - Endorsing tab when you set up the Scan module for a batch class. You can set the following:

- Counter digits
Specify from 1 to 6 digits. The number of digits in the counter controls the maximum value for the counter. For example, if you specify 3 as the number of digits, the maximum value is 999. If you specify 6 as the number of digits, the maximum value is 999,999.
- Counter increment
Select to have your counter increment by a particular value after every n pages are scanned or after a patch code is detected. Additional options are available for incrementing on a patch code.
- Counter reset
Select to [reset your counter](#) to a particular value after every n pages are scanned or after a patch code is detected. Additional options are available for resetting on a patch code.
- Counter Patch Code Control
If you are incrementing and/or resetting your counter after a patch code is detected, specify a left offset for the patch code. The value should fall within the patch codes on your pages, and provide Kofax Capture a starting point for searching for the patch code. This could improve performance. If you select 0, Kofax Capture searches anywhere in a horizontal direction.
You can optionally choose to skip the first patch code detected. This applies to incrementing and resetting after patch code.

The initial value for the endorser/annotation counter is based on the final value generated from the previous batch using the same batch class. You can change the initial value when a batch is created from the Scan module or Batch Manager. Some scanners do not support all the counter options provided by Kofax Capture. See your scanner documentation for more information. Also, see [Setting Up Endorser/Annotation Support](#) for important notes about this feature.

Setting Up Endorser/Annotation Support

Select the endorser/annotation feature when you set up the Scan module for a batch class. Then, you can specify the settings for endorser/annotation operations.

For example, you can specify:

- Endorser/annotation string, which consists of a text prefix and a numeric counter
- Font and position information for the endorser/annotation string
- Increment and reset options for the numeric counter

All settings are saved as part of your batch class. Then, whenever batches are created based on that batch class, the settings are applied.

Note the following:

- Your scanner must be equipped with an endorser (even if you are using only the annotation feature).
- Endorsing/annotation does not support grayscale scanning, and it does not work with scanner models that return compressed data.

- The endorser/annotation feature is only available with scanners that provide a programmatic API to their endorsing capabilities. See your scanner documentation for more information.
- Some scanners do not support all the endorser/annotation options listed for the Scan module. Kofax Capture doesn't validate your settings until you attempt to scan a batch from the Scan module or process a batch from Batch Manager.
- If you select settings that are not supported by your scanner, your scan operator is warned that the settings are invalid. The operator can select to scan the batch anyway, without using the endorser/annotation feature. Therefore, you should make sure you understand the capabilities of the scanner used to scan the batch and only select options supported by the scanner. You should also instruct your scan operators on how they should handle batches with invalid settings. For example, you may not want them to create batches if problems exist in the batch class.

Selecting the Endorser/Annotation Feature

Use the Endorsing tab on the Scan Properties window to select endorsing and/or annotations. See [Setting Up Endorser/Annotation Support](#) for important notes related to the endorser/annotation feature.

1. On the **Create Batch Class** window or **Batch Class Properties** window, click the **Queues** tab.
2. Click **Scan** on the list of selected queues, and then click the **Properties** button.
The **Scan Properties** window appears.
3. Click the **Endorsing** tab.
4. On the **Endorsing** tab, check **Endorsing enabled** and/or **Annotation enabled**.
The other settings on the window become available.
5. Specify the endorser/annotation string. The string is made up of a text prefix and a numeric counter value.
 - a. Enter/select a prefix string. You can enter a value or select from a list of Kofax Values. You can enter up to 80 characters, but your scanner might not support a string of that length. See the note below.
 - b. Specify the number of digits for the automatic counter. The range is 1 to 6 digits.

Note The length of the endorser/annotation string is the length of the prefix plus the number of digits in the counter. The maximum length for the string is determined by the capabilities of the scanner. See your scanner documentation for more information.

 - c. Specify the offsets for positioning the endorser/annotation text on the page/image. The top offset specifies the vertical location, and the left offset specifies the horizontal location. Not all scanners support a user-specified position for the endorsing text. Also, some scanners only allow user-specified top positions, while others only allow user-specified left positions. If your scanner does not support the offset positions you specify, they are ignored.
6. If you enabled annotations, specify the font settings:
 - a. Select a font type. You can choose small, medium, or large.
 - b. Select an orientation for the text.

7. Specify how to increment your counter with the **Counter Increment** options.
 - a. To turn off the counter, select **Off**.
 - b. To increment the counter after n pages, select **After n pages**. Enter a number for n. Then, enter the increment value in the **By** option.
 - c. To increment the counter after a patch code, select **After x patch code**. Select a patch code type for x. Then, enter the increment value in the **By** option.
8. Specify how to reset your counter with the **Counter Reset** options.
 - a. To turn off resetting the counter, select **Off**.
 - b. To reset the counter after n pages, select **After n pages**. Enter a number for n. Then, enter the reset value in the **By** option.
 - c. To reset the counter after a patch code is detected, select **After x patch code**. Select a patch code type for x. Then, enter the increment value in the **By** option.
9. If you are incrementing or resetting the counter whenever a patch code is detected, select options from the **Counter Patch Code Control** group.
 - a. Enter the left offset for the patch code.
 - b. Check **Skip first patch code**.
10. Click **OK** to save your selections and close the window.

Scanner Profile Sharing

Shared profiles, which are saved to a shared location on the network, have the following characteristics:

- Profile loading rules determine which profiles, local or shared, are used by Kofax Capture.
- If User Profiles is selected, only users with rights to access Administrative Utilities can save shared profiles. This is controlled by the "Allow admin utility usage" user profile setting.
- If User Profiles is selected, users can edit scanner profiles only if the "Allow modification of Scanner Profiles" user profiles setting is selected. When selected, users can access the following settings in the Administration, Scan, Quality Control, or custom modules:
 - Edit Scan Source Settings
 - Save Profile
 - Save as Shared Profile
 - Revert as Shared Profile
 - Delete Profile
- When you uninstall Kofax Capture, local profiles are removed but shared profiles are not.

Profile Loading

When you select a scan source, a Kofax Capture module normally uses shared profiles. Local profiles are used if any of the following is true:

- Shared profiles do not exist for the selected scan source.

- The local set of profiles was inherited from the set of shared profiles, but the set has been modified locally. A set of profiles for a given scan source is considered modified if you have:
 - Saved or deleted one or more scanner profiles.
 - Saved Kofax VRS settings.
- The local set of profiles was not inherited from the set of shared profiles for the selected scanner. This could happen if local profiles existed prior to an upgrade or a standalone conversion to a remote site.

To convert local profiles to shared profiles or remove local changes, you can do so manually.

Note If User Profiles is selected, make sure you have selected the "Allow admin utility usage" setting. Only users with rights to access Administrative Utilities can save local profiles as shared, or revert to shared profiles.

- To share local profiles: On the Scan panel, click **Share the current profile**.
- To remove local changes, on the Scan panel click **Revert to shared profiles**.

Profile Locations

The profile storage location is a hierarchical set of folders organized by scan source. Scanner profiles, including Kofax VRS profiles, are stored in a folder specific to the scan source, and they can be local or shared.

Local profiles are stored in the `ScannerProfiles` folder under the Kofax Capture `<LocalPath>` folder. The following is a sample folder hierarchy.

```
<ServerPath>
  SharedScannerProfiles
    Software Import
      Default.*
        Kodak i-30 with VRS
          Default.*
            MyProfile.*
```

Note On a standalone installation, shared profiles are not selected and the shared profiles folder does not exist.

Shared Profiles and KCN Server

With Kofax Capture Network Server, you can share profiles between the primary central site and remote sites. Synchronization of shared profiles is bi-directional, between the remote site and its primary central site. Only shared profiles for updated scan sources are transferred. Both sites have the most recent set of profiles.

Remote site synchronization includes shared (not local) profiles.

Note Synchronization is based on the date/time of the shared profiles folder for a given scan source. All profiles in the older folder are deleted, and then all profiles in the most recent folder replace those in the older folder. Synchronization of shared profiles is not configurable. It cannot be turned off.

Converting to a Remote Site

When you convert a server installation to a remote site, existing shared profiles are deleted. If the workstation was a standalone installation, the shared profile folder is configured automatically.

Disaster Recovery

Shared profile synchronization occurs between a remote site and its primary central site. Alternate central sites are not included.

Independent Verification

Use the Verification module to double check the indexing done during the validation process. Independent verification ensures even greater accuracy by preventing a batch from being verified by the same person that validated it.

When independent verification is selected, you are not able to open a batch in the Verification module if you also validated that batch.

Example

Suppose your company has a pool of operators, and you have some batch classes that require independent verification.

Normally, all the operators perform validation. Eventually a number of batches are waiting for verification, so several operators work on verification for awhile. When opening batches in the Verification module, each operator selects one of the waiting batches. However, the batches presented are somewhat different for each operator. Specifically, the list does not show batches validated by the same operator. Each operator can only process the batches he or she did not validate.

Independent verification, which is off by default, is selected in the Verification Properties window.

Note To use independent verification, the User Profiles feature must be on, and must remain on. If you attempt to publish a batch class that does not meet this requirement, a publish error occurs. If you turn off user profiles after publishing the batch, independent verification may not work as expected.

In some rare cases, more than one operator may have verified a batch. Only the most recent operator is recognized by the independent verification feature.

eDocuments

Kofax Capture can import, process, and export almost any type of file. You do not need to limit your batches to image files. Image files are defined as those with the following extensions:

- .tif
- .jpg
- .bmp
- .pcx
- .cal

In addition to the graphic file formats in the preceding list, Kofax Capture can also import .pdf files, which are imported as .tif files and processed like any other .tif file. You can also select to treat .pdf files as eDocuments rather than as .tif files.

All other types of non- image files are classified as eDocuments regardless of content.

The support of eDocuments is controlled at the batch-level, and each batch can be set independently of other batches. See [Using eDocuments](#) for more information.

Examples of eDocuments:

- Simple text files
- Microsoft Word documents
- Microsoft Excel documents
- Microsoft PowerPoint documents
- Adobe Acrobat PDF files
- Adobe Photoshop files
- Audio Video Interleaved (.avi) files
- Corel WordPerfect documents
- Corel Ventura documents

In simple terms, eDocuments are treated like blank pages by the Kofax Capture modules. Additionally, each eDocument is treated as if it were a single page.

Although eDocuments can move from module to module with the batch, it is not possible to use zone-based automatic recognition or data capture features with them. However, you can manually index them in the Validation module. You can also write a custom script, OCX, or custom module to pull electronic data. Or you can use the Kofax Capture XML Import Connector module.

Each module with an image viewer attempts to display eDocuments. The Scan, Quality Control, Validation, and Verification modules all have image viewers, and you can view eDocuments as a normal part of your batch processing. The eDocument displays as if it were opened in Internet Explorer.

The main advantage of eDocuments is that you can create a batch based on your archiving or processing needs. All the documents you need can now be processed together in a single batch regardless of file type.

Data cannot be automatically captured from eDocuments. Any indexing for these documents must be done manually in the Validation module. Auto-indexing eDocuments results in blank index values with zero confidence. This does not generate an error, but depending on your needs may require manual validation. If your batch has a large number of eDocuments as compared with image files, your manual validation time could increase significantly.

In many cases, your process may not require the indexing of eDocuments. Each module in Kofax Capture with an image viewer gives you the option of suppressing the display of eDocuments. If there is no need for your operators to look at them, they simply display as blank screens in the viewer. Suppressing the display, when possible, improves your processing time.

The Recognition Server treats eDocuments as blank pages. Any image cleanup performed in this or the Scan module does not affect eDocuments.

The OCR Full Text module also treats eDocuments as blank pages.

eDocument Limitations

When viewing eDocuments, please keep the following limitations in mind.

- The Kofax Capture image viewers make use of some features in Internet Explorer 5.0 and higher. Consequently, the image viewers exhibit the same features and limitations as the browser. Kofax Capture can display any type of file that the browser recognizes and displays.
- Because IE does not support rotate or zoom, the rotate and zoom toolbars, keyboard shortcuts, and other items in the image viewer are disabled when an eDocument is being displayed.
- Depending on the type of file, the eDocument appears in the image viewer window or in its native application.
- If the eDocument can be displayed in the image viewer window, then you do not need the native application installed on your workstation. However, depending on the type of document, you may need one or more plug-ins for Internet Explorer. These plug-ins are available from a number of sources, most frequently the manufacturer of the application that was used to create the eDocument.
- If the eDocument cannot be displayed in the image viewer window, and if you do not have the native application installed, the standard Windows Open With window appears. Use this window to select an alternate program to use for viewing the eDocument.
- If a required plug-in is missing, operators may be prompted to install the plug-in.
- If you do not have a suitable alternate application, the image viewer remains blank.
- Depending on the application and the eDocument, it may take a few moments for the contents to display.
- The contents of an eDocument cannot be predicted or controlled from within Kofax Capture. Microsoft Word documents, for example, may contain links to other files, OLE objects, or Web sites. Some of these links may still function in the image viewer.
- When viewing eDocuments, your zoom settings are not retained by the image viewer. Viewing behavior for eDocuments cannot be predicted because the Kofax Capture image viewers make use of certain features in Internet Explorer. Consequently, Kofax Capture can display any type of file that Internet Explorer can display, but with the same capabilities and limitations as the browser.
- Some eDocuments may have macro capabilities that could potentially cause problems when opened. For example, a macro might be looking for a file that does not exist on the current workstation.
- Certain types of computer viruses may also be transmitted in eDocuments. It is suggested that you install appropriate anti-virus software.
- Kofax Capture sets the properties for eDocument files to "read-only." In some cases it may be possible to make changes to the eDocument when it is displayed in an image viewer. These changes cannot be saved in the source folder, and the integrity of the original file is preserved by Kofax Capture.
- Single document processing is not available when processing eDocuments because they are not automatically separated in the Scan module.

Form Identification

Form identification cannot be used on eDocuments, although any image files in the same batch are identified. In this case, eDocuments are passed through as if they were blank pages.

Export Connectors

Export connectors may be set to support or not support eDocuments. This is handled by setting the value for a property in the .inf file that came with Kofax Capture. The default .inf file installed with Kofax Capture is set to enable eDocument support for the default text and database export connectors. Changing the property to “false” turns off eDocument support for that export connector.

The Export Connector Manager has a Properties button that displays a window that indicates support for eDocuments. If you attempt to use eDocuments with an export connector that does not support them, you receive a warning message when you publish the batch.

Custom Modules

Custom modules may be set to support eDocuments. This is handled by setting a property in the .aex file. The default .aex file that is installed with Kofax Capture (for the sample custom module) is set to enable eDocument support. Changing the property to “false” turns off eDocument support for that custom module. See the *Kofax Capture Developer's Guide* for more on custom modules.

The Custom Module Properties window indicates support for eDocuments on the General tab. If you attempt to use eDocuments with a custom module that does not support them, you receive a warning message when you publish the batch.

Document Separation

As with image files, eDocuments can be separated using a variety of methods. Remember that for separation purposes, the Recognition Server treats each eDocument as a single page.

Each method of separation is discussed below.

Manual Separation

Manual separation of eDocuments is the same as for image files.

Auto-Import Separation

Auto-import of eDocuments is exactly the same as for image files.

Fixed Page Separation

You can use the fixed page method to separate eDocuments, but keep in mind that all eDocuments are treated as single page documents regardless of the actual page count.

Patch and Bar Code Separation

Patch codes and bar codes cannot be used to separate eDocuments. In this case, eDocuments are passed through as if they were blank pages. Image files are separated correctly.

Page Recognition Separation

Page recognition cannot be used to separate eDocuments. In this case, eDocuments are passed through as if they were blank pages. Image files are separated correctly.

Kofax Capture Export Library

When the Export module detects an eDocument, it sends that document straight to the export destination without alteration. In the case of a multipage image file, eDocuments are saved in a subfolder. Doing this helps organize the files in an easily accessible structure.

PDF Support

Kofax Capture can import PDF files as either eDocuments, or as .tif image files.

Batch Classes Import and Export - An Overview

Kofax Capture allows you to import and/or export your batch classes. This makes your batch classes portable, and allows you to share batch classes with other sites.

When you export a batch class, all the elements configured for one or more batch classes (such as field types, document classes, batch properties, sample pages, scripts, and more) are compressed into a .cab file (Microsoft cabinet file). You can send the .cab file to another site, where it can be imported into that system.

Importing a Batch Class

1. From the Administration module, on the **Home** tab, in the **Batch Class** group, click **Import**.
The **Open** window appears.
2. Browse to the folder where your .cab files are located.
(Batch classes are exported as .cab files.)
3. Select a .cab file and click **Open**.
The **Import/Export** window appears. As soon as the **Import/Export** window appears, the .cab file is unpacked and prepared for import. The results of this process appear in the **Unpacking** results area on the window. When done, the "**Unpacking done. Completed**" message appears.
4. When the message "**Unpacking done. Completed**" appears, click **OK**.
The **Import** window appears.
5. On the **Import** window, select the batch classes to import from the list of **Available Batch Classes**. Click the **Add** button to add them to the list of **Selected Batch Classes**.
The list contains all the batch classes that were exported into the .cab file you unpacked.
6. Select a **Transfer Mode**. You can choose one of the following:
 - Do not import duplicates: Does not overwrite duplicate batch class settings.
 - Save duplicates to new name: Saves duplicate batch class settings to a new name.
 - Replace duplicates with items imported: Overwrites duplicate batch class elements (such as index fields) with the ones you are importing.
7. Click **Import**.
Once the batch class is imported, it cannot be used until you publish it. In addition, you may need to recompile any custom scripts associated with the batch class.
The **Import/Export** window lists the import results.

Importing Batch Classes that Export Index Data to a Database: In some cases, you may need to set up your export connectors again after you import batch classes. Consider this scenario: You import a batch class that was set up at another site. The export connector for the batch class uses field IDs to reference a back-end database, and the field IDs match the ones for the database at the other site. If the field IDs

in your database do not match the field IDs from the other site, you are not able to export the index data. For this case, you do not get errors or warnings when you publish the imported batch class. However, you do get errors at export time. As a workaround, you should run a test batch through to export after you publish your imported batch classes. If problems occur at export time, set up the export connector again and republish the batch class.

Partial Batch Export

The Partial Batch Export feature offers an alternate approach to exception processing, whereby a batch with documents or pages in error is not automatically routed to Quality Control for repair. Instead, a batch with errors is processed through the modules in the order originally defined for the batch class. Once the batch reaches the Export module, the error-free documents and pages are exported. The exception documents and pages are routed back to Quality Control for repair and then processed through the batch class workflow, starting with the first module after Scan. This approach is helpful if you do not want to delay batch processing for error-free documents or pages that exist in the same batch with exception items.

How Partial Batch Export Works

Select Partial Batch Export in the Administration module on the Batch Class Properties - Advanced tab. On the Advanced tab, you select the processing module at which Partial Batch Export should first go into effect. Starting with the specified module, rejected documents and pages are forwarded along with error-free items to the next module. The feature remains in effect for any modules in the workflow that follow the specified module.

For example, you might have Scan, Recognition Server, Validation, Verification, and Export set up as the processing modules for a batch class. Beginning with the Validation module, you specify that batches in error be advanced to the next module.

As a result, Partial Batch Export is not enabled for the batch if errors occur in the Scan or Recognition Server modules. If a bad document is detected in these modules, the batch is sent to Quality Control for repair. If a bad document is detected after the batch reaches the Validation module, the batch in error is forwarded through the workflow in the module order designated on the Batch Class Properties - Queues tab. After reaching the Export module, the error-free items are exported and the bad document is routed back to Quality Control for repair. The repaired item is then processed through the batch class workflow, starting with the first module after Scan.

Page Registration

Sometimes, registration differences exist between a form image and its sample page. For example, a form image might be shifted horizontally or vertically from the sample pages. This might occur if different scanners are used to scan the form image and sample page. This might also occur because the paper slips as the documents enter the scanner's mechanical feeder or optical differences in scanner mechanisms.

To account for these differences, Kofax Capture supports a page-level registration feature. Page-level registration involves comparing a newly scanned image with its sample page. Then, zones on the image are automatically adjusted based on any horizontal or vertical shifting introduced by the scanner. (The adjustment process is called registration.)

Page-level registration is defined at the form type level and is selected by default. You can edit the settings for page-level registration from the Image tab on the Create Form Type window or the Form Type Properties window. You can specify:

- A confidence threshold that indicates the minimum acceptable confidence returned by the registration process. Kofax Capture does not consider the form image registered unless the confidence returned is greater than or equal to the specified confidence level. The default confidence is set to 1 percent, which works for a wide variety of forms. You can adjust the confidence to a higher setting.

Note The page-level registration feature is very sensitive to differences between images and their sample pages. Adjusting the confidence to higher values could cause images that don't look like the samples to be rejected. This might be useful for catching a variety of problems such as incorrect pages, inadequate scans, and so on because the images won't match the samples. On the other hand, it could cause more images to be rejected. Therefore, you should try several settings in some test batches before you use your settings in production.

- Whether all pages should be registered. Typically, you would select this option to verify registration for all the pages in your documents. You should set the confidence threshold to 75 percent or more to force a stricter match between images and the sample pages.

Tip Optionally, you can define an OCR registration zone or a shape registration zone to augment page-level registration.

Turning Off Page Registration

The page registration feature is very robust and can correctly register a wide variety of forms. In some cases, though, you may get better results by turning off page registration and using a registration zone instead.

You can turn off page registration from the Create Form Type window - Image tab or the Form Type Properties window - Image tab by setting the Page Registration confidence to 0.

Registration Zones

A registration zone can be used to augment or replace page-level registration. Page-level registration attempts to offset all zones based on how far large features on the page are offset from the same features on the sample page. This works extremely well in most cases, but produces invalid results in others.

Page-level registration may not give you the desired results if your images are different from the sample pages, zone locations vary on the pages, or the scanned images are stretched or distorted. If page-level registration is not working, you may get better results by using one or more registration zones.

Registration zones include the following elements:

- A registration point, represented on the sample page by a cross.
- A recognition profile based on an OCR recognition engine or the Shape engine.
- A specification that tells the engine what to search for (text or type of shape).

Note You can test your zones using the QuickZones feature to make sure that your registration zone is being processed with high confidence.

OCR Registration Zones

An OCR registration zone is an area on an image containing text data that is "fixed" in relation to index data on a form. For example, your form may have a company name in the same spot on each page. OCR Registration zones are used to correctly position index zones on your images, which could enhance the automatic capture of index data.

OCR Requirements

To get reliable results, your OCR registration zones must meet the following minimal requirements. Zones that do not meet these requirements may still yield acceptable results, but performance of the recognition engine cannot be predicted in such cases.

OCR registration zones include the following Kofax Capture elements:

- A registration point. The point is typically located at the lower-left corner of the first character of the text in the zone on your sample page.
- A recognition profile that uses OCR as the method of recognition.
- Search text (optional). As a rule of thumb:
 - The first character must match the raw OCR results.
 - The remaining characters are compared against the processed OCR results (after any recognition script has been run). A match occurs if about half the characters match, or if the search text is contained in the results.
 - For best results, search text should be as short as possible.
 - You can test your zones with the QuickZones to make sure that your search text is being recognized with high confidence.

Note The use of search text is recommended in most situations. If there is no suitable text for a registration zone, you may want to create a registration zone without search text. In that case, the registration process is based on the position of the first text character detected in the zone at runtime.

Page Registration

Sometimes, registration differences exist between a form image and its sample page. For example, a form image might be shifted horizontally or vertically from the sample pages. This might occur if different scanners are used to scan the form image and sample page. This might also occur because of paper slippage as the documents enter the scanner's mechanical feeder or optical differences in scanner mechanisms.

To account for these differences, Kofax Capture supports a page-level registration feature. Page-level registration involves comparing a newly scanned image with its sample page. Then, zones on the image are automatically adjusted based on any horizontal or vertical shifting introduced by the scanner.

Page-level registration is defined at the form type level and enabled by default. You can edit the settings for page-level registration from the Image tab on the Create Form Type window or the Form Type Properties window. You can specify:

- A confidence threshold that indicates the minimum acceptable confidence returned by the registration process. Kofax Capture does not consider the form image registered unless the confidence returned is

greater than or equal to the specified confidence level. The default confidence is set to 1 percent, which works for a wide variety of forms. You can adjust the confidence to a higher setting.

Note The page-level registration feature is very sensitive to differences between images and their sample pages. Adjusting the confidence to higher values could cause images that don't look like the samples to be rejected. This might be useful for catching a variety of problems such as incorrect pages, inadequate scans, and so on because the images won't match the samples. On the other hand, it could cause more images to be rejected. Therefore, you should try several settings in some test batches before you use your settings in production.

- Whether all pages should be registered. Typically, you would select this option to verify all pages in some way. Therefore, you should set the confidence threshold to 75 percent or more to force a stricter match between images and the sample pages.

Tip Optionally, you can define an OCR registration zone to enhance page-level registration.

Augmenting Page Registration

You can augment page registration with registration zones.

Registration zones contain data to be read for registration purposes. This type of zone is typically used with Kofax Advanced OCR or Kofax Shape Zonal processing to ensure that other zones on the page are correctly aligned. To use Kofax Advanced OCR or Kofax Shape Zonal registration, you define one or more registration zones.

If you create only one registration zone on a page, it should be positioned near the index zones. The search text for a single registration zone should be clear and distinct so that it yields good results.

You can define multiple registration zones per page.

Shape Registration Zones













A shape registration zone is a type of registration zone that (instead of text) uses geometric patterns that are "fixed" in relation to the data on a form. A shape registration zone is used to accurately position recognition zones on your images, which could enhance the automatic capture of the data.

Shape Types

Kofax Capture is capable of recognizing a variety of geometric shapes on a form. These shapes may be used for shape registration zones as well as other zones that use shape recognition profiles. The following shapes can be recognized.

Shape Table

Name	Icon	ID*	Definition
Line Intersection	+	1	A shape that resembles a "plus" sign. However, the intersection point does not need to be in the center of either of the lines.
Top Intersection	⊥	10	A vertical line whose highest point meets a horizontal line between its endpoints.

Name	Icon	ID*	Definition
Bottom Intersection		11	A vertical line whose lowest point meets a horizontal line between its endpoints.
Left Intersection		12	A horizontal line whose leftmost point meets a vertical line between its endpoints.
Right Intersection		13	A horizontal line whose rightmost point meets a vertical line between its endpoints.
Lower-left Corner		20	A vertical line whose lowest point meets a horizontal line at its leftmost point.
Lower-right Corner		21	A vertical line whose lowest point meets a horizontal line at its rightmost point .
Upper-left Corner		22	A vertical line whose highest point meets a horizontal line at its leftmost point.
Upper-right Corner		23	A vertical line whose highest point meets a horizontal line at its rightmost point.
Lower-left Edge		30	The lower left quadrant of a solid rectangle.
Lower-right Edge		31	The lower right quadrant of a solid rectangle.
Upper-left Edge		32	The upper left quadrant of a solid rectangle.
Upper-right Edge		33	The upper right quadrant of a solid rectangle.
General		100	Any shape that cannot be classified as one of the preceding shapes.

*The ID number is returned if the shape is found. It is seen in index fields or windows (such as the Zone Test window) where the results of the shape recognition process are reported. The ID number can also be used in scripts.

Shape Requirements

To get reliable results, your shapes should meet the following minimal requirements. Shapes that do not meet these requirements may still yield acceptable results, but performance of the recognition engine cannot be predicted in such cases. If you have a shape that falls outside of these guidelines, you may need to experiment to see if you can use it.

Note that the skew of any shape cannot be greater than 1 in 5 (approximately 11 degrees). For example, the Line Intersection shape cannot be rotated so that it resembles an "X".

Note These requirements are specified in pixels because shape recognition happens at the pixel level. At 200 pixels per inch, 20 pixels is 0.1 inches or 2.5 mm.

- For lines:
 - The line thickness must be least 2 pixels.
 - All line lengths must be at least 20 pixels.
 - The length of the line must be at least 5 times the thickness, but cannot be less than 20 pixels.

- For edges:
 - The edges of a solid rectangle must be at least 20 pixels in both the vertical and horizontal directions.
 - The edges of a solid rectangle must be at least 20 pixels in both the vertical and horizontal directions.
- General
 - The general shape must contain at least 1400 black pixels and no more than 10% white pixels.

Special Tip

You can also assign a shape recognition profile to separator zones, form identification zones, and index zones.

For index zones, Kofax Capture examines the content of the zone and attempts to find a corresponding shape. If a shape is found, its ID number is placed in the associated field. These results are then available in the Validation and Verification modules. They can also be used in your custom recognition scripts or custom modules. If you assign a shape recognition profile to an index zone, you cannot specify a specific search shape. All shapes are examined and the closest match used.

Multiple Registration Zones on a Single Page

Registration zones contain data to be read for registration purposes. This type of zone is typically used with OCR or shape processing to ensure that other zones on the page are correctly aligned. You can define one or more OCR or shape registration zones on a single page.

You can define multiple registration zones per page. To achieve optimal results, follow these guidelines.



Zone Placement - Single Registration Zone



If you create only one registration zone on a page, it should be positioned near the index zones. The shape for a single registration zone should be clear and distinct so that it yields good recognition results.

Zone Placement - Multiple Registration Zones

You can define multiple registration zones per page. To achieve optimal results, refer to the table.

Note While results improve with multiple registration zones on a page, be aware that an increased number of zones may adversely affect the time it takes to process your batch.

Number of Zones	Placement Suggestions	Placement Example
One Zone	Place as close to index zones as possible.	 <p>The form shows a 'Ship To:' label circled in red. The shipping information fields (Name, Address, City, State, Zip, Country) and the 'Method of Payment' section are highlighted with green boxes. The 'Purchase Order No.' field contains the value 41367.</p>
Two Zones	Place the two registration zones in diagonally opposite corners of the page.	 <p>The form is identical to the one-zone example, but the 'Ship To:' label is circled in red and the 'Purchase Order No.' field (containing 41367) is circled in green, illustrating the placement of two registration zones.</p>

Number of Zones	Placement Suggestions	Placement Example
<p>Three Zones</p>	<p>Place the registration zones so that the registration points form a triangle on the page.</p>	 <p>The example shows a form with three registration zones. The 'Ship To' zone is circled in red, the 'Ordered By' zone is circled in blue, and the 'Method of Payment' zone is circled in green. These three zones are positioned to form a triangle on the page.</p>
<p>Four or more zones</p>	<p>Place the registration zones near the data that is to be processed on the page. Also, do not rely on the success of a single registration point. For example, if you have several registration zones near the top of a page, and a single registration point near the bottom, the registration alignment could be poor if the registration fails for the bottom zone.</p>	 <p>The example shows a form with four registration zones. The 'Ship To' zone is circled in red, the 'Ordered By' zone is circled in blue, the 'Method of Payment' zone is circled in green, and a fourth registration point is circled in green at the bottom of the form. This illustrates poor alignment when registration points are not clustered together.</p>

Multiple Export

Normally, the final step for Kofax Capture is exporting a batch (including captured data) to a long-term storage system. This is handled by the Export module, which relies on export connectors to govern the process.

In most cases, the batch is exported to a single destination, such as a text file, database, or document management system. There may be occasions when you want to export a batch to more than one destination (back-end). The multiple export feature makes this possible.

The multiple export feature uses the concept of an "assigned export connector" in Kofax Capture. This refers to an export connector that has been assigned to a document class and which contains the various settings that pertain to that assignment. Consequently, if you repeatedly use the same export connector, each becomes a different "assigned export connector." When you assign an export connector to a document class, it may be given a name (if supported by the export connector type). This is called the "assigned name."

You can assign up to 99 export connectors to a document class.

Other

When setting up a document class for multiple exports, keep the following in mind:

- The multiple export feature can support up to 99 assigned export connectors within a document class.
- If all the assigned export connectors for a batch have been successfully processed, the batch is automatically deleted.
- Once an export connector is assigned, it may then cause problems if batch fields or index fields are added, deleted, or modified. Therefore, assign export connectors only after you are sure that changes are final.
- On-screen log messages in the Export module include the assigned export connector number and assigned name (if any).
- Multiple export publish checks occur as they do for single export connectors. If a document class has multiple assigned export connectors, then any publish checks occur in the order specified on the Export Connectors window.
- If some documents could not be exported to all their destinations during processing, those documents are rejected with a partial export error. When you open the batch in the Quality Control module, the partially exported documents are displayed in the Partial Export Errors window for your review.

Using Multiple Export

With the multiple export feature, you can export the same document within a batch to more than one destination. This feature also includes some settings that allow you to optimize the export process.

Before you can use an export connector in Kofax Capture, the connector must be registered.

Procedural Overview

This section describes the basic procedure to follow for using the multiple export feature. The following assumes that the batch class and document class are already defined. It also assumes that Export is the final queue in the batch class.

1. If necessary, run the Administration module.
2. If necessary, register the export connector with Kofax Capture using the **Export Connector Manager** window.
3. Select a document class in the **Batch class tree** view.
4. Assign an export connector.
5. Complete the setup windows.
6. Repeat steps 3 and 4 until all required connectors have been assigned.
7. Adjust the order of the connectors by dragging them up or down.
8. Publish and process the batch.

Assigning Multiple Export Connectors

1. Click the **Batch class tree view** tab.
2. Select a document class for your connectors.
3. Right-click the selected document class.
4. Select **Export Connectors** to open the **Export Connectors** window - **General** tab.
5. Select an export connector from the **Available Export Connectors** column on the left.
6. Click **Add** to move the connector to the **Assigned Export Connectors** column and open the corresponding setup window.

Depending on which export connector you assign, the setup window may vary.

7. Provide the necessary setup information.
8. Click **OK**.

The connector you selected is now listed in the **Assigned Export Connectors** column.

9. If necessary, reposition the connector in the list by dragging it up or down.
10. Repeat steps 4–9 for all the connectors you want to assign.

File Format/Compression Format Combinations

JPG - JPEG Compression

Multipage TIFF - CCITT Group 4

Multipage TIFF - CCITT Group 3

Multipage TIFF - CCITT Group 3/2-D

Multipage TIFF - Uncompressed

Multipage TIFF - JPEG Compression

Multipage TIFF-LZW Compression

PCX - PackBytes

TIFF - CCITT Group 3

TIFF - CCITT Group 3/2-D

TIFF - CCITT Group 4

TIFF - JPEG Compression

TIFF - Uncompressed

Notes for color and grayscale images:

- JPG is the standard file format for color and grayscale images. You cannot convert bitonal (black and white) images to the JPG file format.
- If all the images in the batch are color and/or grayscale, you should select "JPG - JPEG Compression."
- If the images in the batch are mixed (color, grayscale, and/or bitonal images), you should select a combination that includes the TIFF file format with any compression other than JPEG. The exported images all have the ".tif" extension. However, any color images in the batch contain compressed JPEG data within the TIFF file format.

Treat Non-TIFF Images as eDocument Files

In certain situations, you may want to force all non-TIFF files to be treated as eDocument files:

- When JPG and BMP files are processed, they are usually repeatedly re-compressed in Kofax Capture. Even with the JPG compression slider set to 100%, these images are subtly changed. By treating them as non-image files, the images are not processed.
- At export, JPG and BMP files are typically converted to TIFF files with JPG images inside them. This option provides a way to force these files to keep their original file type.
- Although Kofax Capture is able to run OCR Full Text on color images, it may produce invalid results if run on some pictures. You may want to skip imported pictures, but process TIFF files normally in the same document.

An additional benefit of the "Treat Non-TIFF Images as eDocument Files" setting is that the Kofax Capture system does not attempt to process these images in any way. Provided the setting isn't required, it greatly speeds up Kofax Capture processing. This may be especially critical when working with extremely large image files.

Creating a Batch Class

Create a batch class with the Create Batch Class window.

A new batch class does not go into effect until you publish it.

1. On the **Insert** tab, in the **Create New** group, click **Batch Class**.
The **Create Batch Class** window appears.

2. Enter the information on the following tabs:

- **General**
- **Queues**
- **Workflow Agents**
- **Separation and Form Identification**
- **Folding**
- **Batch Naming**
- **Advanced**

For details on individual settings, click **Help** on any tab.

3. Click **OK** to save the batch class information and close the window.

Using Database Validation

Use the Database Validation feature to automatically fill in index fields from data stored in a database.

Procedural Overview

This section describes the basic procedure to follow for using the Database Validation feature. The following assumes that the batch and document classes are already defined. It also assumes that the Validation module is in the batch class module.

1. Select a document class.
2. Open the **Database Validation** window.
3. Complete the setup windows.
4. If necessary, adjust the order of the validations.
5. Publish and process the batch.

Adding a Database Validation

Before you can take advantage of the Database Validation feature, you must add a validation and set parameters.

1. Select the appropriate document class in one of the tree views.
2. Right-click the selected document class to open a context menu.
3. Select **Database Validation**.
The **Database Validation** window appears.
4. Click **Add** to view the **Database Validation Properties** window - **Database** tab.
5. In the **Name** field, provide a name for this database validation.
Try to use a name that is meaningful to you or your operators.
6. On the **Database type** list, select the type of database to use when looking up the data. Depending on your selection, the lower portion of the screen may vary slightly.
7. In the next field, for an Access database, provide the name of the Access database file. For an ODBC level 3 compliant data source, provide the name of the data source. For a SharePoint list, provide a URL.
8. Provide the workgroup file name (Access only).
9. Provide a user name and the password, if required.

10. Click the **Table Settings** tab to display the table options.
11. On the "**Index field to validate**" list, select the index field to use as the basis for a match.
12. On the "**Validate against table**" or "**Validate against list**" list, select the item that contains the necessary data.
13. On the "**Match column**" list, select the item that contains the data that serves as the basis for a match. The contents of this column are compared to the index field you selected earlier.
14. Select **Auto-fill index fields from results** to link index fields to database fields.
15. Match the index fields you want to have automatically filled to the corresponding database columns. If you leave a match blank, auto-fill does not occur for that index field.
16. Click the **Options** tab and set the options.
17. Click the **Workstation** tab and set up the caching options.
18. Click the **KCN Server** tab and set up the type of database connection and cache to use. Depending on the database type, the settings on this tab may be unavailable.
19. Click **OK** to close the window and add your database validation to the list in the Database Validation window.

Note You can change the order of database validations in the Database Validation window by selecting a validation and dragging it up or down. Database validations are processed in the order listed.

Removing a Database Validation

1. Select the appropriate document class in one of the tree views.
2. Right-click the selected document class to open a context menu.
3. Select **Database Validation**.
The **Database Validation** window appears.
4. Select the database validation to remove.
5. Click **Remove** to delete it from the list.

Editing a Database Validation

1. Select the appropriate document class in one of the tree views.
2. Right-click the selected document class to open a context menu.
3. Select **Database Validation**.
The **Database Validation** window appears.
4. Select the database validation to edit.
5. Click **Properties** to open the **Database Validation Properties** window.
6. Make any necessary changes.
7. Click **OK** to close the window and save your edits.

Moving a Database Validation in the List

1. Select the appropriate document class in one of the tree views.
2. Right-click the selected document class to open a context menu.
3. Select **Database Validation**.
The **Database Validation** window appears.

4. Select the database validation to move.
5. Drag it up or down in the list.

Downloading Batch Classes Using Automatic Synchronization

You can set a specific synchronization time when new or modified batch classes are downloaded automatically to the appropriate remote sites. The batch classes that a site receives depend on the remote site profile for that site.

1. Create or select a remote site profile at the central site using the **Kofax Capture Network Server Remote Site Profiles** window available from the Administration module and assign it to a remote site.
Once the remote site profiles are defined and downloaded to the remote site, the settings take effect for the remote site.
2. If desired, you can also set synchronization polling times at the remote site in the **RSA Polling Settings** window. This window is available from Batch Manager at the remote sites.

The polling times set by either method are also used by the RSA if it has been installed as a service.

Using eDocuments

Use the eDocuments feature to seamlessly process batches containing both image and non-image files. The support of eDocuments is controlled at the batch class level, and each batch class can be set independently of other batches.

Using eDocuments in a batch is simply a matter of selecting the feature.

Selecting the eDocuments Feature

1. Create a batch class or select an existing batch class to edit.
2. Right-click to display the context menu.
3. Select **Properties** to display the **Batch Class Properties** window.
4. Click the **Advanced** tab.
5. Select the **Allow import of non-image files** check box.
6. Click **OK** to save your settings and close the window.

Note When you create a new batch class, eDocuments are inactive by default.

Showing eDocuments

You can select to show or hide eDocuments in the image viewer.

1. Open one of the following:
 - Scan module
 - Quality Control module
 - Validation module
 - Verification module

2. Click the **Kofax Button**, and then click **Options**.
The **Options** window appears.
3. Click the **View** tab to display viewing options.
4. Select the **Suppress eDocument file display** check box.
5. Click **OK** to save your settings and close the window.

Enabling Single Document Processing

By default, Kofax Capture processes all the documents in a batch as a group. This means that in a batch of a hundred documents, the first document is not sent to the next module until the rest of the 99 documents are processed. Single document processing removes this delay by creating a new batch every time a new document is separated so that the single document batch can be sent to the next module as soon as it is separated. Depending on the system configuration and the number of documents in each batch, single document processing can significantly speed up document processing.

Note Single document processing is only available when the Scan module automatically performs document separation; otherwise, an error occurs when you publish the batch class, and you have to either change the separation method or turn off single document processing.

When unattended scanning is used, the single document processing feature requires the batch class to contain multiple document classes with sample pages.

Single document processing is not available for use in the Quality Control module or with Kofax Capture Import Connector - Email.

1. On the **Batch class tree view** tab, select the batch class to edit.
2. Right-click the selected batch class, and then click **Properties**.
3. On the **Batch Class Properties** window, select the **Advanced** tab.
4. Select the **Process documents as independent batches** check box.
5. Click **OK** to save your settings and close the window.

Publishing a Batch Class

When finished setting up or editing a batch class, you must publish it. Publishing your batch class ensures it is complete and ready to use to scan or import documents.

You cannot create batches based on a batch class until it is successfully published without errors. Before publishing a batch class, use the Validate function to identify errors or warnings that need to be resolved.

1. On the **Home** tab, in the **Batch Class** group, click **Publish**.
The **Publish** window appears.
2. On the **Publish** window, select one or more batch classes. Click **Select All** to select all batch classes on the list.
3. Select the **Cancel Publish / Validate operation if error occurs** check box to automatically cancel the **Validate** or **Publish** operation if an error occurs. In this situation, a message appears to indicate how many batch classes are published successfully prior to the error.

4. Before publishing the batch classes, validate them to identify any issues that need resolution.
 - a. Click **Validate**.

The **Validate** process runs stringent checks on your batch class selections. If you are validating multiple batch classes, a progress bar appears. The validation results appear in the **Results** box.
 - b. If errors or warnings appear in the Results box, click **Close** to fix or review the affected settings.
 - Errors are generated for settings that prevent successful processing of a batch. You cannot publish the batch class until these settings are fixed.
 - Warnings are generated for settings that could cause a problem, but they do not prevent you from publishing the batch class. Check the settings to ensure they are valid.

Tip You can copy the contents of the **Results** box into a text or document file.

 - c. If no issues are detected, proceed to the next step.
5. Optionally, you can click **Versions** to view the Version History for a selected batch class to select a different version to publish. You can also delete a batch class or compare it to another version. For details, see the **Version History** Window help topic.
6. Publish your batch classes.
 - a. Click **Publish**.

The **Publish** process runs stringent checks on your batch class selections. If you are publishing multiple batch classes, a progress bar appears. The publishing process results appear in the **Results** box.
 - b. If errors or warnings appear in the Results box, click **Close** to fix or review the affected settings.
7. Repeat the preceding steps until the **Publish** process is error-free.
8. Click **Close** to exit the window.

Retaining Batch Class Versions

Enable the Versions feature to retain published batch class versions. You can retain all versions of every batch class, or you can specify the number of recent versions to retain.

1. On the **Home** tab, in the **Batch Class** group, click **Versions**.

The **Batch Class Versions** window appears.
2. Select one of the following:
 - **Do not retain batch class versions:** Disables the Versions feature. Previously published batch class versions are not retained.
 - **Retain all versions:** (Default) All versions of previously published batch classes are retained.
 - **Retain this number of recent batch classes:**

Retains the specified number of recent versions per batch class. For example, if you select 15, the 15 most recent published versions are retained per batch class. Each time you publish a batch class, the list is refreshed.

If the number of published batch class versions exceeds 15, the oldest version is automatically deleted if it is not in use. If still in use, the version is deleted as soon as all affected batches are exported or deleted.

Viewing the Batch Class Version History

When the Versions feature is enabled, you can access the Version History for any batch class.

1. Select a batch class, right-click, and select **Publish**.
2. On the **Publish** window, click **Versions**.
The **Version History** appears for the selected batch class.
3. See the "Version History Window" topic in the Kofax Capture help for information about the options to republish, delete, or compare batch class versions.

Renaming a Batch Class

You can rename a batch class on the Batch class tree view tab or the Batch Class Properties window.

When renaming a batch class, be aware of the following:

- As soon as you rename a published batch class, it is automatically unpublished (unavailable). The new name goes into effect when you republish the batch class.
- After you rename a batch class, any existing batches created under the original batch class name retain their references to the original name.
- Duplicate batch class names are not allowed.
- If a renamed batch class contains a document class with an export connector referring to the batch class name, you must update each batch class name reference in the connector settings.

Renaming a Batch Class on the Batch Class Tree View Tab

1. On the **Batch** class tree view tab, select the batch class to rename.
2. Press F2 to enable Edit mode, and then type the new name.
3. Press Enter to save the new batch class name.

Renaming a Batch Class on the Batch Class Properties Window

1. On the **Home** tab, in the **Edit** group, click **Properties**.
The **Batch Class Properties** window appears.
2. On the **Batch Class Properties** window, place your cursor in the **Name** field and replace the existing name with a new name.
3. If appropriate, update the **Description** field.
4. Click **Apply** to save the new batch class name without closing the window.
5. Click **OK** to save the new batch class name and close the window.

Editing a Batch Class

After editing a batch class, you must publish it before your changes can be applied to batches. The changes cannot be applied to batches created before the new publication date.

1. On the **Batch** class tree view tab, select the batch class to edit.
2. On the **Home** tab, in the **Editing** group, click **Properties**.
The **Batch Class Properties** window appears.
3. On the **Batch Class Properties** window, edit the properties.

4. Click **Apply** to save your settings without closing the window
5. Click **OK** to save your settings and close the window.

Deleting a Batch Class

1. On the **Batch** class tree view tab, select a batch class.
2. On the **Home** tab, in the **Edit** group, click **Delete**.

Document Classes

A document class is a definition of a particular type of document, such as an order form or medical form. For each document class, you can specify:

- Index fields to use to retrieve the documents (optional)
- Attributes for the defined index fields (such as hidden, sticky, etc.)
- At least one form type (required)

Document classes provide a convenient mechanism for associating the same group of index fields to multiple form types. You can define a document class, and then add one or more form types to it. Then, you can associate a set of index fields to the document class. The same set of index fields is shared across all the forms types defined for the document class.

For example, consider this scenario: A sales department receives order forms from five different sources. Each order form is formatted differently, but all contain the same types of information (customer name, customer address, item number, total, etc.).

For this case, one document class called "Catalog Orders" can be defined. A different form type for each form can be added to the document class.

Then, a set of index fields can be associated with all form types in the document class.

You create new document classes with the Create Document Class window.

You edit document classes with the Document Class Properties window.

Using Kofax PDF Text Under Image or Kofax PDF Image + Text

The Kofax PDF Text Under Image and Kofax PDF Image + Text output options both produce a PDF file that contains bitmaps for images and text for data that has been converted to character strings. The resulting files are smaller than image-only files and can be searched as if they were text documents.

The following procedure assumes that your document and batch classes already exist. If not, you can make these selections while creating new classes.

1. Open the **Document Class Properties** window.
 - a. Click the **PDF** tab.
 - b. Select **Enable Kofax PDF generation**.
 - c. Select a dictionary.
 - d. On the **Recognition Profiles** list, select **Kofax PDF Text Under Image** or **Kofax PDF Image + Text**.
 - e. Optionally select **Skip first page of each document**.
 - f. Optionally set values in the information fields that are used as metadata when the file is opened in a PDF document reader after export.
 - g. Click **OK**.
2. Open the **Batch Class Properties** window.
 - a. Click the **Queues** tab.
 - b. Add the Kofax PDF Generator and other required modules.
 - c. Click **OK**.
3. Select the document class, right-click to open the **Export Connector** window, and select the export connector to be used for PDF output. You can select any connector that supports Kofax PDF output, including a custom export connector.
4. On the export connector setup window, select the option for PDF output, and specify the output folder. Save the settings and exit the setup window.
5. Publish the batch class.

Using Kofax PDF Image Only

The Kofax PDF Image Only output option produces a PDF file that contains bitmaps for both images and text. The resulting files are significantly larger than image under text files, and they cannot be searched. However, image only files are simpler to create and do not require additional licensing from Kofax.

The following procedure assumes that your document and batch classes already exist. If not, you can make these selections while creating new classes.

1. Open the **Document Class Properties** window.
 - a. Click the **PDF** tab.
 - b. Select **Enable Kofax PDF generation**.
 - c. Select a dictionary.
 - d. In the **Recognition profiles** list, select **Kofax PDF Image Only**.
 - e. Select **Skip first page of each document**.
 - f. Optionally set values in the information fields that are used as metadata when the file is opened in a PDF document reader after export.
 - g. Click **OK**.

2. Open the **Batch Class Properties** window.
 - a. Click the **Queues** tab.
 - b. Add the PDF Generator and other required modules.
 - c. Click **OK**.
3. Select the document class, right-click to open the **Export Connector** window, and select the export connector to be used for PDF output. You can select any connector that supports Kofax PDF output, including a custom export connector.
4. On the export connector setup window, select the option for PDF output, and specify the output folder. Save the settings and exit the setup window.
5. Publish the batch class.

Copying a Document Class

Use Copy to duplicate an existing document class. The copy method is useful for adding a document class that is similar to an existing one. You can also copy a document class to a selected batch class. When you paste a copied document class, it is given a different name, such as Name1, Name2, and Name3. You can then modify the document class as needed.

When copying a document class, certain items associated with the document class are copied, and others are linked. The following table shows the items that are copied and linked.

Copied and Linked Items

Copied Items	Linked Items
Index fields	Field types
Table Index fields	Recognition profile
Form types (and related items)	Separation and form identification profiles
Custom storage strings	Image cleanup profiles
Document validation scripts	Color image cleanup profiles
Database validation	
The following items are copied only when the copied document class is pasted to the same batch class from the batch class tab:	
PDF Properties	
Setup export connectors	
Document separation zone	

Note All related items within Form Types are also copied or linked.

Copying a Document Class to the Document Class Tree View Tab

1. On the **Batch** class tree view tab or the **Document** class tree view tab, select an existing document class to copy.
2. On the **Home** tab, in the **Clipboard** group, click **Copy**.
3. From the **Document** class tree view tab, select an existing document class.
4. On the **Home** tab, in the **Clipboard** group, click **Paste**.

A copy of the document class is created with a unique name, such as Name1, Name2, and Name3. If you perform a copy and paste on a previously copied document class such as Name2, then the new document class is created with a unique name such as Name21, Name22, and Name23.

You can edit the copied document class from the Document Class Properties window.

Copying a Document Class to a Batch Class

1. On the **Batch** class tree view tab or the **Document** class tree view tab, select an existing document class to copy.
2. On the **Home** tab, in the **Clipboard** group, click **Copy**.
3. On the **Batch** class tree view tab, select the batch class to which you want to copy the document class.
4. On the **Home** tab, in the **Clipboard** group, click **Paste**.
A copy of the document class is created with a unique name, such as Name1, Name2, and Name3. The copied document class is associated with the selected batch class.
5. Edit the copied document class from the **Document Class Properties** window.

Creating a Document Class

You create document classes with the Create Document Class window.

1. On the Insert tab, in the **Create New** group, click the arrow next to **Document Class**, and then click **New Document Class**.
2. On the **Create Document Class** window, on the **General** tab, enter the name for the document class.
You can enter up to 32 characters, including spaces (leading and trailing spaces are removed). The name is not case-sensitive and must be unique.
3. Enter a description for the document class.
The description appears whenever document class properties are displayed. You can enter up to 80 characters.
4. Define the index fields to be associated with the document class:
 - a. Click **New Index Field**.
Default information for a new index field is appended to the list of index fields in the **Index Fields** table. You can edit any of the default values.
 - b. Change the name for your index field.
You can enter up to 32 characters, including spaces (leading and trailing spaces are removed). The name is not case-sensitive and must be unique.
By default, index field names are added in the form *namen* (where n is a value from 0 to the maximum number of index fields). Since the name of the index field appears (unless you specify

a display label) during validation and verification in the Validation and Verification modules, you should select names that are meaningful to your validation and verification operators.

- c. Select a field type for your index field from the **Field Type** list. To define new field types, click **New Field Type**.
- d. Specify a default value.
You can enter a value, or select from the list of Kofax Values. If specified, the default value appears as data in the index field during validation. The validation or verification operators are able to enter a different value if necessary.
- e. Select **True** or **False** in the **Required** column. If you select **True**, the index field is required to contain a value during validation. The validation and verification operators are not allowed to close the batch until a value is entered for this field.
- f. Select **True** or **False** in the **Verify** column.
If you select **True**, the index field must be verified in the Verification module after being processed in the Validation module.
- g. Select **True** or **False** in the **Hidden** column.
If you select **True**, the index field is not shown to the validation or verification operators. This might be useful for certain types of processing. For example, you might want to collect values during automatic validation, and compare them with a validation script. Then, the results can be assigned to a non-hidden index field. Or, you might want to set values in a script that you do not want the validation or verification operators to change.
- h. Select **True** or **False** in the **Sticky** column. If you select **True**, the value of this index field for one document is carried over to the next document. The validation or verification operator can override the value in the subsequent document if necessary.

Note If you specify "**Sticky**" and a default value, the default value is used and the "**Sticky**" attribute is ignored.

- i. Select **True** or **False** for the **Total** attribute.
For numeric index fields, you can set **True** to select batch totaling. The scan operator is prompted for a value for the batch.
5. Repeat the preceding substeps for each index field you want to add.
 6. Click the **OCR** tab and select settings for OCR Full Text processing:
 - a. Select **Enable OCR full text** to select OCR Full Text processing.
 - b. Enter the path and file name of a Full Text dictionary for the document class.
 - c. Select a recognition profile from the list of profiles. If necessary, click **Edit** and define a custom profile.
 - d. Select **Skip first page of each document**.
The first page of your documents is skipped.

7. Click the **PDF** tab and select the settings for PDF processing.
 - a. Select **Enable Kofax PDF generation** to apply PDF processing.
 - b. Enter the path and file name for a Full Text dictionary file or browse for the file. The Full Text dictionary is used to check unrecognized words during PDF generation. The dictionary file must be accessible to the PDF Generator module.
 - c. Select a recognition profile from the list of profiles. If necessary, click **Edit** and define a custom profile.
 - d. Select **Skip first page of each document**.
The first page of your documents is skipped.
 - e. Select **Enable XMP (Extensible Metadata Platform) for metadata** to save metadata (title, subject, date, description, and more) of the PDF file as an XMP stream in the output.

Note If this option is not selected, by default the metadata is stored in a document information dictionary associated with the document. The metadata can be viewed if the compatible PDF reader application is used.
 - f. Configure **PDF Document Information** and **Custom Properties** settings.
8. Click **Apply** to save your settings without closing the window.
9. Click **OK** to save your settings and close the window.

Deleting a Document Class

1. Verify that the document class to be deleted is not currently in use by any batch classes.
2. On the **Document class tree view** tab, select the document class to delete.
3. Do one of the following:
 - On the **Home** tab, in the **Edit** group, click **Delete**.
 - Right-click and select **Delete**.
4. When prompted to confirm deletion, click **Yes**.

Deleting a Document Class from a Batch Class

Use this procedure to delete a document class from a batch class. The document class is still available after deletion, but it is no longer associated with the batch class.

1. On the **Definitions** panel, expand the batch class that contains the document class to remove.
2. Select the document class to remove and do one of the following:
 - On the **Home** tab, in the **Edit** group, click **Remove**.
 - Right-click and select **Remove**.
3. When prompted to confirm removal of the document class from the batch class, click **Yes**.

Editing a Document Class

After editing a document class, you must publish the batch class before the changes are applied to batches. Your changes cannot be applied to batches created before the new publication date.

1. On the **Document** class tree view tab, select the document class to edit.

2. On the **Home** tab, in the **Edit** group, click **Properties**. The **Document Class Properties** window appears.
3. On the **Document Class Properties** window, edit the properties.
4. Click **Apply** to save your settings without closing the window.
5. Click **OK** to save your settings and close the window.

Adding a Document Class into a Batch Class

You can add a document class to a batch class by inserting or copying it.

You can also use the Copy function to duplicate an existing document class and copy it to a selected batch class. The copy method is useful for adding a document class that is similar to an existing one.

Inserting a Document Class into a Batch Class

1. On the **Batch** class tree view, select the batch class where you want to insert a document class.
2. On the **Insert** tab, in the **Create New** group, click **Existing Document Class**. The **Insert Document Class** window appears.
3. On the **Insert Document Class** window, select one or more document classes to be inserted.
4. Click **OK**.

Renaming a Document Class

You can rename a document class on the Batch class tree view tab, the Document class tree view tab, or the Document Class Properties window. When renaming a document class, be aware of the following:

- New document class names go into effect when you republish the batch class associated with them.
- After you rename a document class, any existing batches created under the original document class name retain their references to the original name.
- Duplicate document class names are not allowed.
- If a renamed document class uses an export connector referring to the document class name, you must update each document class name reference in the connector.

Renaming a Document Class on the Batch Class or the Document Class Tree View Tabs

1. From the **Batch** class tree view tab or the **Document** class tree view tab, select the document class to rename.
2. On the **Home** tab, in the **Edit** group, click **Rename** and then type the new name.
3. Press **Enter** to save the new document class name.

Renaming a Document Class on the Document Class Properties Window

1. On the **Batch** class tree view tab or the **Document** class tree view tab, select the document class to rename.
2. On the **Home** tab, in the **Edit** group, click **Properties**. The **Document Class Properties** window appears.

3. From the **Document Class Properties** window, click in the **Name** field and replace the existing name with a new name.
4. Update the **Description** field.
5. Click **Apply** to save the new document class name without closing the window.
6. Click **OK** to save the new document class name and close the window.

Copying export connectors from one class to another

After configuring export connector settings for a document class, you can save time by copying them to another document class that uses the same connector. You can also export field mapping values for fields that have the same name and type. The following rules apply:

- If the batch class does not include the export queue, the export connector is copied, but a warning message is displayed when the batch is published or validated.
 - If the destination batch class/document class does not have corresponding field/index fields, such mappings are ignored and not copied.
1. On the **Document** class tree view tab, select the required document class.
 2. Right-click to display the context menu and select **Copy Export Connector**. If more than one export connector is associated with the document class, select the required export connector from the submenu.
 3. Navigate to the destination document class and right-click.
 4. Select **Paste Export Connector**.

A new export connector is created with all the copied settings from the source document class. When the message "Export connector successfully copied. Do you want to open the Export Connector Setup?" appears, do one of the following:

 - Click **Yes** to open the setup screen for the export connector.
 - Click **No** to close the screen without opening the export connector setup screen.

Folder Classes

Folder classes define the properties of folders for a batch class. Batches are a collection of pages, documents, and folders organized into a hierarchy that you define.

In addition to organizing your documents within Kofax Capture, the real advantage to using folders comes after the documents are exported. The document import process is much easier if the folder hierarchy in Kofax Capture matches (as closely as possible) the hierarchy used by your document management software.

A folder class is added to a batch class, and as with other elements of a batch class, you can create, edit, and delete folder classes.

Folders are created and filled with documents as the documents are processed through the Kofax Capture workflow. You can create folders manually (with batch editing), or you can set them to be created automatically based on rules you define. Likewise, you can place documents into folders manually or automatically.

Pages can be added to documents, and documents can be added to folders. Folders can be added to other folders (nesting) up to 32,000 levels. However, loose pages cannot be added to a folder (although you may have loose pages at the root level of your batch, they must be placed into a document before they are added to a folder).

Folder Creation

Automatic folder creation (auto-folding) is a process by which the folders in a batch are created or populated based on document index field values.

Although you can manually create a folder hierarchy through various batch editing functions, this may be time-consuming, and the results may not be consistently or correctly applied. To address this, Kofax Capture can automatically create and populate folders when a batch is closed at certain points in the workflow. You can also invoke auto-folding at any time in the workflow by selecting an option in the Batch menu in the interactive modules (Validation, Verification, Scan, and Quality Control).

In the Administration module, you identify which folder classes to use in a batch. You do not actually create any folders.

Folder creation rules define the organization for folders that are created and populated automatically. You can think of them as a "default" folder hierarchy, although the hierarchy does not actually exist until the batch is processed and the rules executed. The folders are created in accordance with the rules as a batch is processed through the workflow. You can create any type of folder structure; however, you are limited to the folder classes associated with the batch class, and you can have no more than 32,000 nested levels of folders.

If an unexpected error should occur during folder creation, in most cases the entire creation operation is rolled back. No new folders are created and no documents are placed in them. For certain types of errors, you may end up with the folder hierarchy partially created and partially populated with documents.

Basic Auto-folding Process

During automatic folder creation, a document's index field values are compared to existing folder index field values. If the appropriate rules are satisfied, then the document is placed in a matching folder.

Otherwise, a new folder is created, its folder index field values are copied from the document index field values, and the folder is added to the folder hierarchy. The document is then added to that newly created folder. This only affects documents that are not already in a folder.

Index Fields

Any document index field value (if it is not in a table) may be used to drive automatic folder creation. Hidden index fields may also be used. This may be useful if a field is automatically recognized and used to drive folder creation, but should not be visible to the validation operator.

Note that index fields can be filled in through a variety of techniques including bar codes, patch codes, OCR/ICR, scripting, and customizations. Appropriate index field values must be provided before they can be used to create a folder.

Folder Creation Rules

Automatic folder creation is driven by a series of rules that are defined as part of the batch class. A particular folder creation rule defines how document index fields can be used to identify an existing folder or create a new folder, and then place the document into that folder.

Rules are defined on the Foldering tab on either the Create Batch Class window or the Batch Class Properties window.

The document class index field is identified by selecting a document class, and associated index field. Only document classes attached to the batch class can be used.

Next, it is necessary to select a corresponding folder class and folder class index field. Only folder classes attached to the batch class can be used. For auto-foldering to function properly, the field type of the document class index field and the associated folder class index field must match.

The next step is to define a nesting level for the folder. The level parameter identifies the depth within the folder hierarchy that the rule is to be applied. If folders are never nested in other folders, then a depth of 1 is used (for example, folders situated directly off the batch). For more than one level of nesting, rules associated with a greater depth are necessary.

The final step is to identify the actual rule behavior. Two choices are available:

1. Create When Value is Unique

There are several choices for creating folders when the value is unique. The default value is "unique (null as error)" if this is the first time you are assigning a rule to an index field in a particular document class. Otherwise, the default value is the already assigned rule. In other words, the creation rules must be the same among all index fields in the same document class.

When using this method, the selected document index field value is checked against the corresponding folder index field value in already existing folders of the specified folder class. With this method, there is no need to manually sort your documents before scanning them. Documents with the same index field value can be scanned in any order, and auto-foldering places them all in the same folder.

If a match is found, then the document is placed in the folder and becomes the last document in that folder. If more than one folder matches, then the last matching folder (the one at the end of the hierarchy in the batch ordering) is used. All matching uses a case-insensitive string comparison. For example, "cat" and "CaT" are treated as a match. Note that "01" and "1" do not match since a string comparison (rather than numeric) is used, irrespective of the field type.

If a matching folder is not found, then a new folder is created. In this case, the folder class is the one specified in the folder creation rule. After the new folder is created, the document is moved into that folder.

Once a folder has been created, the folder index field is set to the value of the corresponding document index field. The confidence of the folder index field is set to the same value as that of the document index field. At this point, the values of all other folder index fields are blank, and their confidence values are zero. Blank folder index fields may not appear blank during validation if the Validation module applies a default value.

Use this method to organize your documents into logical folder groups within Kofax Capture. In order for your export connector and document management software to make use of this structure, you need to configure the Kofax Capture foldering rules so that the resulting folder hierarchy can be

recognized by them. For example, the folder name property in an export connector should typically be set to equal the value of the corresponding folder index field in Kofax Capture.

There are three variations on this method of auto-folding.

- unique (null as value): If you select this method, a blank document index field creates an "unnamed" folder and places the document in that folder. All the documents with blank index fields end up in the same folder.
- unique (null as wildcard character): If you select this method, a blank document index field matches any existing folders with the appropriate folder class, irrespective of the value. If there is more than one matching folder, then the last one is used.
- unique (null as error): If you select this method, a blank document index field results in an error, and puts the batch into an error state.

2. Create When Value is Not Null

This method (also referred to as "not blank") is best used in cases in which the sequence of documents is used to determine folder grouping, instead of the unique value of an index field.

With this method, if the document index field value is blank, then the document is moved to the most recently created folder. If no folder has been created by this algorithm, but a folder already exists, then the last existing folder is used, regardless of the folder class. If the document index field value is not blank, then a new folder is created, whether or not the index field value matches that of an existing folder.

The key concept with this method is that a folder is created when any non-blank value is recognized, even if it is the same value repeatedly. You may find this useful in cases in which "special" documents are inserted in the batch to flag the beginning of a new folder. For instance, a particular document may have a patch code that always indicates the creation of a new folder. It is the sequence of these documents, not the value, that identifies the folder grouping.

However, if no folders exist, and a document with a blank index field is processed, the document is rejected with the following note:

```
Automatic Folder Creation Error - Creation by Sequence rule requires a non-null value or existing folder.
```

Automatic folder creation stops at this point, and no further documents are processed. Prior folder creation results are retained. This method assumes you have already organized your documents into logical folder groups outside Kofax Capture.

Folder Creation Scenarios

Scenario 1: Single Level Folders by Social Security Number

Imagine you want to collect the performance reviews of multiple employees into folders for each employee, based on the social security number. Each time the social security number changes, a new folder is created. Assume that the batch class contains a single folder class called "Employee Records" with a folder index field called "SSN" (Social Security Number).

Assume that the batch class also contains a single document class called "Annual Review" with a document index field called "SSN." In this example, you intend to put a bar code on every annual review with the social security number, and have that value placed into the document index field "SSN."

To implement this example, first configure Kofax Capture to automatically read this data and place it into an index field.

You also decide to put a generic patch code on each document to allow document separation.

Next, enable folder creation, and set up a single folder creation rule, similar to the following example.

Auto-folding Rules:					
Document Class	Document Index Field	Folder Class	Folder Index Field	Level	Create when value is
Annual Review	SSN	Employee Records	SSN	1	unique (null as error)

Single Folder Creation Rule

After publishing the batch class, scan a batch that contains documents from various employees in no particular order. For each unique SSN, a folder is created. This folder contains all documents with a matching SSN.

Scenario 2 - Single Level Folders by Patch Code

In this case, you want to identify all documents associated with a particular insurance claim where the claim number serves as the folder key, yet it is not assigned until later in the workflow. Assume that the batch class contains a single folder class called "Insurance Claim" with a folder index field called "Claim Number." Also, the folder class includes an additional, hidden index field called "Folder Start."

Assume further, that the batch class also contains a single document class called "Claim Document" with a hidden index field called "Folder Start. "

Finally, in this example, "Folder Start" is filled at scan time with a bar code, and document separation is by patch code.

To implement this example, first configure Kofax Capture to automatically read this data and place it into an index field.

Next, enable folder creation, and set up a single folder creation rule, as shown in the example.

Auto-folding Rules:					
Document Class	Document Index Field	Folder Class	Folder Index Field	Level	Create when value
Claim Document	Folder Start	Insurance Claim	Folder Start	1	not null

Single Folder Creation Rule

After publishing the batch class, sort the claim documents corresponding to a claim number and place a patch code sticker on each for document separation. Additionally, on the first document of each group (of claim numbers), place a bar code sticker on the front. Note that the bar code is the same for all groups.

Next, scan the batch. When the batch is closed, folders are created around each collection of documents. Each time a document with a bar code is detected, a new folder is generated. Because the other documents in the group do not have a bar code, a blank or null value is returned, meaning that a folder is not created.

Note that the folders do not yet contain the Claim Number index value. The validation operator manually reviews each claim, and enters a claim number into the Claim Number folder index field.

Scenario 3 - Document Classes without Automatic Folder Creation Rules

There may be cases in which you want multiple document classes within a single folder. In such cases, it is likely that only one of those document classes would serve as a trigger for creating the folder.

For instance, a particular form might occur in the batch that indicates that a new folder should be created, and that has a key folder index field for that folder. Subsequent documents of various other document classes should be placed in that folder, but do not contribute any values to that folder, nor do they trigger creation of a new folder.

In this case, set up a folder creation rule for the document class that triggers folder creation; rules are not needed for the other document classes. During automatic folder creation, documents with document classes that do not trigger a new folder are placed in the most recently created folder. If no folder is created by the algorithm, then the last folder is used.

Note that a document with no form type still follows these rules. It has an implied document class of "none," which never has an automatic folder creation rule associated with it.

Scenario 4 - Multiple Document Classes per Folder Class

There may be cases in which you want multiple document classes to create multiple folders using the same folder class. In other words, you have several kinds of documents that should all go into the same folder.

The auto-folding rules might look something like the following example.

Auto-folding Rules:					
Document Class	Document Index Field	Folder Class	Folder Index Field	Level	Create when value is
Claim Document	Folder Start	Insurance Claim	Claim Number	1	unique (null as error)
Claim Rejected Document	Folder Start	Insurance Claim	Folder Start	1	unique (null as error)

Auto-Folding Rules

Scenario 5 - Multiple Folder Creation Rules per Document Class

It is possible to have multiple folder creation rules that involve the same document class and folder class, but use different index fields.

For instance, assume that a document has two bar codes: one that indicates SSN and one that indicates Name. If you want both the SSN and the Name to be automatically populated in new folders, then two automatic folder creation rules would need to be created, one for each field.

Auto-folding Rules:					
Document Class	Document Index Field	Folder Class	Folder Index Field	Level	Create when value is
Employee Documents	SSN	Employee Records	SSN	1	unique (null as error)
Employee Documents	Name	Employee Documents	Name	1	unique (null as error)

Auto-Folding Rules

You cannot have two folder creation rules with the same document class, document index field, folder class, and folder index field.

If your folder rules use one of the "create by value" methods, then if any of the document index fields involved in folder creation don't match, a new folder is created. Keep in mind that a blank field may act as a "wildcard" character in these cases.

Blank values act as wildcard characters, in that they match any existing folders with the appropriate folder class, irrespective of the value. If there is more than one matching folder, then the last one is used.

If your folder rules use "Create when Value is Not Null," then if any of the document index fields involved in folder creation are not blank, a new folder is created.

Multiple Levels

The preceding scenarios have been limited to single-level folder hierarchies. In some cases, you may wish to classify documents based on a multilevel folder hierarchy. Folder creation rules in these cases can become quite complex.

When there are rules involving multiple levels, each level is evaluated independently, with level 1 first, level 2 next, and so forth up to the nesting limit of 32,000 levels. After evaluating the rules for a particular level, the rules for the next level only apply to the sub-hierarchy selected (or created) by the rules at the prior level.

All the rules for a particular level must have the same creation rule. In other words, mixing creation rules within a level is not allowed.

All the rules with the same folder class and document class must be at the same level. This means that they must also have the same creation rule. If there are no rules for a particular level (but there are rules for higher levels), then the system chooses the last existing folder at that level (irrespective of folder class).

If there are no creation rules for the current level, and no folders at that level, the document is rejected with the following note:

```
Automatic Folder Creation Error - No rules for level <n>, and no existing folder.
```

Automatic folder creation stops at this point, and no further documents are processed. Prior folder creation results are retained.

Scenario 6 - Multiple Level Folders by Social Security Number, and Document Type

Assume that the Annual Review example is extended, so that multiple kinds of documents are involved. In this case, you want to classify the document first based on SSN, and second, based on document type.

The folder class "Employee Records" is used from the first scenario. Another folder class called "Employee Documents" is added to the batch class with a folder index field "Document Type." Also, assume that the document class "Annual Review" is replaced with a more general purpose document class called "Employee Document" with two index fields: SSN and Document Type.

Document separation is performed by patch code, as in the first example.

A bar code on every document indicates the social security number, which is used to populate the SSN document index field. Additionally, a second bar code indicates the document type.

Configure Kofax Capture to automatically read this data and place it into the Document Type index field. Next, enable folder creation, and set up rules.

Auto-folding Rules:					
Document Class	Document Index Field	Folder Class	Folder Index Field	Level	Create when value is
Employee Documents	SSN	Employee Records	SSN	1	unique (null as error)
Employee Documents	Document Type	Employee Documents	Document Type	2	unique (null as error)

Auto-Foldering Rules

When you scan a batch of documents, the batch contains various document types from various employees in no particular order. Under these rules, for each unique SSN, a top-level folder is created. For every unique document type found with that SSN, a subfolder is created.

Copying a Folder Class

Use Copy to duplicate an existing folder class. You can copy folder classes to do the following:

- Use an existing folder class to create a new folder class with similar features.
- Copy an existing folder class to another batch class.

When you paste a copied folder class, it is given a different name, such as Name1, Name 2, or Name3. You can then modify the folder class as needed. When copying a folder class, the following items are copied and linked to the copied folder class:

- Folder validation scripts
- Setup custom storage strings

Copying a Folder Class to the Folder Class Tree View Tab

1. On the **Batch** class tree view tab or the **Folder** class tree view tab, select an existing folder class.
2. On the **Home** tab, in the **Clipboard** group, click **Copy**.
3. On the **Folder** class tree view tab, select an existing folder class.
4. On the **Home** tab in the **Clipboard** group, click the arrow under **Paste** and then click **Paste**.
A copy of the folder class is created with a unique name, such as Name2 or Name3.
5. Edit the copied folder class from the **Folder Class Properties** window.

Copying a Folder Class to a Batch Class

1. On the **Batch** class tree view tab or the **Folder** class tree view tab, select an existing folder class.
2. On the **Home** tab, in the **Clipboard** group, click **Copy**.
3. On the **Batch** class tree view tab, select the batch class to which you want to copy the folder class.
4. On the **Home** tab, in the **Clipboard** group, click the arrow under **Paste** and then click **Paste**.
A copy of the folder class is created with a unique name, such as Name1, Name2, and Name3. The copied folder class is associated with the selected batch class.
5. Edit the copied folder class from the **Folder Class Properties** window.

Note If you perform a copy and paste on a previously copied folder class such as Name2, the new folder class is created with a unique name such as Name21, Name22, and Name23.

Creating a Folder Class

You create folder classes (which can be used for auto-folding) with the Create Folder class window in the Administration module.

1. On the **Insert** tab, in the **Create New** group, click the arrow under **Folder Class**, and then click **New Folder Class**.
2. On the **Create Folder Class** window - **General** tab, enter the name for the folder class.
You can enter up to 32 characters, including spaces (leading and trailing spaces are removed). The name, which must be unique, is not case-sensitive.
3. Enter a description for the folder class.
You can enter up to 80 characters.
The description appears whenever folder class properties are displayed.
4. Define the index fields to be associated with the folder class:
 - a. Click the **New Index Field** button.
Default information for a new index field is appended to the list of index fields in the **Index Fields** table. You can edit any of the default values as necessary.
 - b. Change the name for your index field.
You can enter up to 32 characters, including spaces (leading and trailing spaces are removed). The name, which must be unique, is not case-sensitive.
By default, index field names are added in the form *Namedn* (where n is a value from 0 to the maximum number of index fields). Since the name of the index field appears (unless you specify a display label) during validation and verification, select names that are meaningful to your validation and verification operators.
 - c. Select a field type for your index field from the **Field Type** drop-down list. To define new field types, click the **New Field Type** button.
 - d. Specify a default value. You can enter a value, or select from the list of Kofax Values. If specified, the default value is displayed as data in the index field during validation. The validation or verification operators are able to enter a different value.
 - e. Select **True** or **False** in the **Required** column.
If you select **True**, the index field is required to contain a value during validation. The validation and verification operators are not allowed to close the batch until a value is entered for this field.
 - f. Select **True** or **False** in the **Verify** column.
If you select **True**, the index field must be verified in the Verification module after being processed in the Validation module.
 - g. Select **True** or **False** in the **Hidden** column.
If you select **True**, the index field is not shown to the validation or verification operators. This might be useful for certain types of processing. For example, you might want to collect values during validation, and compare them by using a validation script. The results can then be

assigned to a non-hidden index field. Or, you might want to set values in a script that you do not want the validation or verification operators to change.

- h. Select **True** or **False** in the **Sticky** column.

If you select **True**, the value of this index field for one folder is carried over to the next folder. The validation or verification operator can override the value in the subsequent folder if necessary.

If you specify "Sticky" and a default value, the default value is used and the "Sticky" attribute is ignored.

5. Click **Apply** to save your settings without closing the window.
6. Click **OK** to save your settings and close the window.

Deleting a Folder Class

1. On the **Folder** class tree view tab, select the folder class to delete.
2. On the **Home** tab, in the **Edit** group, click the arrow next to **Delete** and then click **Delete**.

Deleting a Folder Class from a Batch Class

Use this procedure to delete a folder class from a batch class. The folder class is still available after deletion, but it is no longer associated with the batch class.

1. On the **Definitions** panel, click the **Folder** tab and select the folder class that contains the document class to remove.
2. Do one of the following:
 - On the **Home** tab, in the **Edit** group, click **Remove**.
 - Right-click and select **Remove**.
3. When prompted to confirm removal of the document class from the batch class, click **Yes**.
4. Republish the batch class.

Editing a Folder Class

1. On the **Folder** class tree view tab, select the folder class to edit.
2. On the **Home** tab, in the **Editing** group, click **Properties**.
The **Folder Class Properties** window appears.
3. On the **Folder Class Properties** window, edit the properties.
4. Click **Apply** to save your settings without closing the window.
5. Click **OK** to save your settings and close the window.

You must publish your batch class before your changes are applied to batches. Your changes cannot be applied to batches created before the new publication date.

Renaming a Folder Class

You can rename a folder class on the Batch class tree view tab, the Folder class tree view tab, or the Folder Class Properties window. When renaming a folder class, be aware of the following:

- New folder class names go into effect when you republish the batch class associated with them.

- After you rename a folder class, any existing batches created under the original folder class name retain their references to the original name.
- Duplicate folder class names are not allowed.
- If a renamed folder class uses an export connector referring to the folder class name, you must update each folder class name reference in the connector settings.

Renaming a Folder Class on the Batch/Folder Class Tree View Tabs

1. On the **Batch** class tree view tab or the **Folder** class tree view tab, select a folder class.
2. On the **Home** tab, in the **Editing** group, click **Rename**.
3. Type the new name.
4. Press Enter to save the new folder class name.

Renaming a Folder Class on the Folder Class Properties Window

1. On the **Batch** class tree view tab or the **Folder** class tree view tab, select a folder class.
2. On the **Home** tab, in the **Editing** group, click **Properties**.
The **Folder Class Properties** window appears.
3. Update the **Description** field.
4. On the **Folder Class Properties** window, click in the **Name** field and replace the existing name with a new name.
5. Click **Apply** to save the new folder class name without closing the window.
6. Click **OK** to save the new folder class name and close the window.

Image and Recognition Profiles

Profiles are a sets of saved settings that can be used to speed up the creation of batch classes and other definitions. Kofax Capture supports several types of profiles.

Image Cleanup Profiles

An image cleanup profile is a preset combination of settings for cleaning up images. You specify an image cleanup profile at the form type level and anywhere you specify a recognition profile.

Image cleanup profiles provide an efficient and convenient way to specify image cleanup settings for a process. Each profile specifies one or more image cleanup features, along with all their related settings. You can define a pool of image cleanup profiles, and then select from this pool whenever you are setting up a process that uses the image cleanup features.

Kofax Capture supports a set of Kofax-defined image cleanup profiles, which combine default settings for the most common processing tasks. You can also define, name, and test (using QuickZones) your own custom profiles.

Note Color images use a separate image cleanup profile that is optimized for color files. See [Color Documents](#) for more information.

Image Compression Profiles

An image compression profile is a preset combination of settings for compressing images. You specify an image compression profile at the document type level and anywhere you specify a recognition profile.

Image compression profiles provide an efficient and convenient way to specify image compression settings for a process. Each profile specifies one or more image compression features, along with all their related settings. You can define a pool of image compression profiles, and then select from this pool whenever you are setting up a process that uses the image compression features.

Kofax Capture supports two Kofax-defined image compression profiles: Kofax PDF and None. Kofax PDF provides the default settings for PDF compression; None disables PDF compression.

Recognition Profiles

A recognition profile is a preset combination of settings for automatically recognizing and capturing data. You can specify a recognition profile whenever you define the following types of processing:

- Bar code recognition
- Patch code recognition
- Form identification
- OCR Full Text processing
- Zone processing
- PDF and and Image recognition

Recognition profiles provide an efficient and convenient way to specify recognition settings. Each profile combines a recognition engine (such as bar code recognition, zonal OCR, and others), all associated recognition settings, and an optional image cleanup profile. You can define a number of recognition profiles, and then select from this pool whenever you set up an automatic recognition process.

Kofax Capture ships with a set of Kofax-defined recognition profiles, which combine default settings for the most common types of automatic recognition. It also allows you to define, name, and test (using QuickZones) your own custom profiles.

Selecting Recognition Profiles

A recognition profile specifies a recognition engine and its associated settings, along with an optional image cleanup profile.

You can define recognition profiles that use the following recognition engines:

- Optical Character Recognition (OCR): Recognizes machine printed characters and translates them into computer-readable data.
- Kofax PDF Generation: Recognizes machine-printed characters and converts them into PDF files.
- Intelligent Character Recognition (ICR): Recognizes handwritten alphabetic and numeric data and translates it into computer-readable data.
- Optical Mark Recognition (OMR): Recognizes pencil or pen marks in specific document positions and translates the marks into computer-readable data.
- Shape recognition: Identifies shapes based on their geometric characteristics, and translates the shapes into numeric data.

- Bar code recognition: Reads bar codes and translates them into ASCII values. Bar code recognition is a reliable method for capturing data field information, separating documents in a batch, or identifying forms.
- Patch code recognition: Recognizes a patch code on a page and uses it to separate documents.
- Page recognition: Identifies forms based on their physical characteristics. You scan or import a sample page, which Kofax Capture "learns." Then, whenever you scan that same type of form, Kofax Capture can recognize the form and automatically identify it.

Recognition Engines

Kofax Capture supports the following recognition engines:

- Bar code
- Form identification
- ICR
- OCR Zonal and OCR High Performance
- OCR Full Text
- OMR
- Patch Code

Font Samples

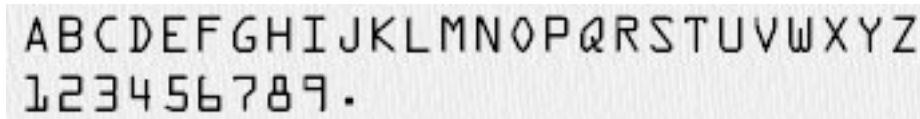
The following samples show the specialized fonts supported by certain Kofax Capture recognition engines. Note that these are samples only, and do not represent the full set of supported characters for each font.



4290048084065507

Farrington 7B

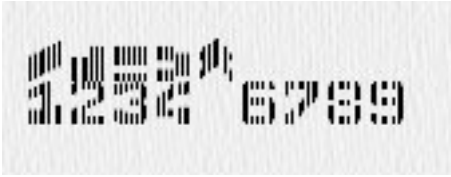
Farrington 7B is used by the Kofax High Performance recognition engine.



ABCDEFGHIJKLMNOPQRSTUVWXYZ
123456789.

OCR-A

OCR-A is used by the Kofax High Performance recognition engine.



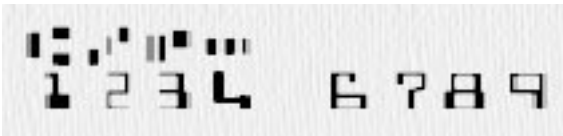
CMC7

CMC7 is used by the Kofax High Performance and the Kofax Advanced OCR recognition engine.

Auto-folding Rules:					
Document Class	Document Index Field	Folder Class	Folder Index Field	Level	Create when value is
Employee Documents	SSN	Employee Records	SSN	1	unique (null as error)
Employee Documents	Document Type	Employee Documents	Document Type	2	unique (null as error)

OCR-B

OCR-B is used by the Kofax High Performance recognition engine.



E13B

E13B is used by the Kofax High Performance and the Kofax Advanced OCR recognition engine.

Using the Kofax Advanced OCR Zonal Engine

On some forms, you may need to process OCR characters in an index zone. The Advanced OCR Zonal engine may yield better results than the other zonal OCR engines when the zones contain lengthy strings of text (instead of a single number or name).

You can select the Advanced OCR Zonal engine for the following zone types:

- Index Zone
- Separator Zone
- Form ID Zone

The Advanced OCR Zonal engine cannot be used with registration zones.

The following procedure assumes that your document and batch classes already exist. If not, you can make these selections while creating new classes.

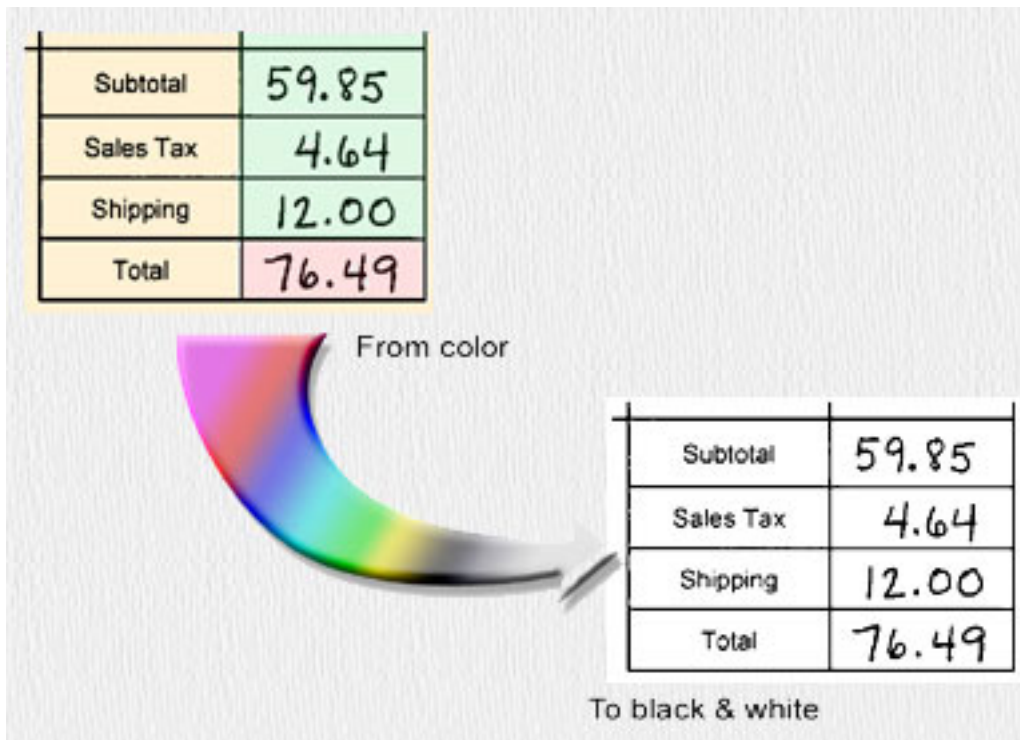
1. Open the **Batch Class Properties** window.
 - a. Click the **Queue** tab.
 - b. Add the Recognition module and other required modules.
 - c. Click **OK**.

2. On a sample form, draw an index zone around the text. The **Create Index Zone** window appears.
3. Configure the zone to use Kofax Advanced OCR Zonal.
 - a. Select the **Auto Recognition** check box.
 - b. Select the Kofax Advanced OCR Zonal engine from the profiles list.
 - c. Click **Edit** and make adjustments to the settings. Note that this requires saving the profile under a new name.
 - d. Click **Test** to verify the accuracy of your results based on the sample page.
 - e. Click **OK**.
4. Publish the batch class.

Color Support

Kofax Capture offers full data capture capability for color images. You can scan in a document and save it as a color image file.

As it processes the documents in a batch, Kofax Capture keeps watch for color images. When one is discovered, the image is first deskewed. Next a bitonal (black and white) copy is created. The bitonal image is processed by Kofax Capture as if it were originally scanned in black and white. The following graphic shows a portion of a document after the color has been removed.



Converting a Color Document into Black and White

Color images offer less contrast and contain more information than bitonal images. Color file sizes can be larger than an identical black and white image; up to 24 to 32 times larger. It takes proportionally more time to process color images. Everything from a simple deskew filter to complex edge detection could require more time and put an extra burden on your workstations and networks.

Kofax Capture can overcome many of the drawbacks of working with color image files. It intelligently manages this extra burden by converting the color image to a bitonal image the first time it is needed. Depending on a number of factors such as image size, workstation capabilities, network load, and others, it may take several seconds to convert a color image to bitonal. For this reason, the bitonal image is only created once. To maximize scan performance, this conversion is not automatically done at scan time, but rather the first time a bitonal image is required by one of the Kofax Capture modules.

Once a bitonal image has been created, it is saved and can be reused as the batch travels from module to module.

Since Kofax Capture offers flexibility in how you process batches, each module (that needs to) creates and saves a bitonal image if one doesn't already exist. The only exception to this is in the Administration module when using QuickZones. QuickZones creates bitonal images of the sample page for zone testing purposes, but does not save them (since samples are not a part of the batch).

Use the Color Image Cleanup Profiles window to toggle deskewing as well as adjust the brightness and contrast thresholds. As with bitonal images, deskewing color files can lead to distortions in the resultant image.

Compression

Kofax Capture internally stores color images as JPEG compressed TIFF files. This is a "hybrid" graphics format that falls within the TIFF file specification.

Note If you attempt to open this kind of TIFF file in a third-party application, you may encounter difficulties. JPEG compressed TIFF is a rarely used format, and some applications may not recognize the file structure.

There are two broad classes of compression: lossy and lossless.

- Lossy compression shrinks a file by throwing away information. This information cannot be recovered when the image is opened for viewing. Most lossy compression schemes attempt to discard information that is not critical or very visible to the eye, but as the rate of compression is increased, the missing information becomes more noticeable.
- Lossless compression schemes retain all information. When the file is decompressed, it looks exactly like the original. A lossless compression scheme cannot compress a file as much as a lossy scheme.

JPEG is a lossy method of compressing files, and so quality becomes an issue.

The JPEG standard permits variable compression rates that allow you to trade file size (amount of compression) against image quality. The more highly compressed an image, the worse the image quality becomes.

This tradeoff is made with the quality setting when you save a document using JPEG compression. A quality setting of 100 percent (the maximum) yields the best image, but with minimal compression.

Automatic data capture is very sensitive to the image quality. Good OCR results require a high-quality setting, usually 100 percent. Bar codes and patch codes can usually be recognized with quality settings as low as 75 percent (in ideal cases, it could even be lower).

Important Notes about Color Support

Sample Pages and Color:

- Both bitonal and color sample pages are normally deskewed. However, this step is skipped if "Deskew Sample Images" is not selected.
- Color sample pages are displayed in color in the Administration module and in the image viewer. When making use of color sample pages, keep in mind that (depending on the colors) it may be difficult to view the zones on the page. For example, index zones are shown on the sample page with green rectangles. If the sample page has a green background, then these rectangles may be difficult to view.

Color Profiles:

Kofax Capture ships with three standard color profiles:

- None: This profile turns off all color processing except thresholding.
- Kofax Color Photo: This is the default profile, and is optimized for image files with color photographs. Deskewing is turned off.
- Kofax Color Image: This profile is optimized for color forms. Deskewing is enabled.

Publishing:

Batch classes with color sample pages may take somewhat longer to publish than if all the images are bitonal.

Scanning and Separation:

- Color images are not deskewed in the Scan module. All deskewing for color images takes place in the Recognition Server.
- If the Scan module performs automatic separation, it treats color images as if they were blank.
- When separator sheets are used at scan time, a warning message appears if the first page is not a separator. However, this warning is suppressed if the first page is color because Kofax Capture assumes separation on color documents is done in the Recognition Server. Once this has occurred, all separation is ignored for the duration of the scan.
- Fixed page separation can be used at scan time with color images. Other methods of separation that rely on reading values from the color image (such as bar codes) cannot be performed by the Scan module. These types of separations are done in the Recognition Server.
- The Scan module also marks color documents for auto-recognition so that they are processed by the Recognition Server.

Recognition Server:

- If a bitonal image has not already been created, the Recognition Server creates one. When color image files are deskewed or converted to bitonal by the Recognition Server, the message "Enhanced document" displays in the event log. (This message is also used if permanent bitonal image cleanup is set for the form type.)
- Once a bitonal image is created, it is available to the various recognition scripts for processing. All automatic recognition is done on bitonal images.
- The Recognition Server performs permanent image cleanup on bitonal images. Other modules (custom modules for example) may need a clean bitonal image after the Recognition Server is through with it.

Image Viewer Support

- The Scan, Validation, Verification, and Quality Control modules all have an image viewer that can display color documents. Color display is turned on by default but can be turned off by checking "View Bitonal Image" on the View tab, in the Display group. When checked, it forces the image viewer to display the bitonal version of the color image for the current page. As soon as the page is switched, the image viewer reverts to showing color images.
- In the image viewer, you can rotate the view of the page. If you are rotating a color image, its corresponding bitonal image must also be rotated. Consequently, the rotation process takes somewhat longer. Not only do you have more pixel information to rotate in the color image, but you have to rotate an entirely separate (and usually hidden) bitonal image as well.
- The same applies to bitonal images in the image viewer. If you rotate a bitonal image, any corresponding color image also needs to be rotated.

Color Documents

You don't have to do anything special to use color document images in Kofax Capture. The feature is always available, and operates automatically in the background. By default, when Kofax Capture detects a color image, it converts it to a bitonal image and carries on with the processing. If the image is not color, the conversion is skipped and processing continues.

In most cases, the default color settings work just fine. If adjustments are necessary, use the Color Image Cleanup Profiles window.

The "Kofax Color Photo" profile is the default setting. If you set it to "none," color image cleanup does not occur. Color documents can still be scanned and exported with the batch, but a bitonal version is not created and automatic recognition features are turned off.

If your batch contains color images, keep the following points in mind:

- Color images are larger and take longer to process.
- Color images take longer to send over your network or the Internet. You may find that your current network cannot meet the added demand.
- You can import color images as sample pages.
- Sample pages are automatically deskewed. If you are not happy with the results of the deskewing process, you can temporarily disable it on the Scan Settings tab, in the Settings group.
- Good OCR and ICR results require resolutions of at least 200 dpi; 300 dpi is preferred. You should also use the highest JPEG quality setting. OCR results with lower resolutions or quality may be problematic. In general, larger characters yield better results than smaller text as resolution or quality drops.
- OCR accuracy may be dramatically improved simply by turning on the fill line breaks and thickening image processing options. In many cases, this appears to repair the fuzziness caused by JPEG compression. This suggestion may not help for every document, but it should improve OCR accuracy in a significant number of cases.
- If you create a custom module that will be exposed to color images, it must be able to:
 - Detect a color image.
 - Reference the bitonal image for a given color page if it comes after the Recognition Server in the queue list.
 - Modify a color image if it comes before the Recognition Server in the queue list.
- Automatic separation by patch code, bar code, or Kofax Separator Sheets treats color images as if they were blank pages in the Scan module.

Note Kofax Capture only supports 24-bit .bmp files. If you attempt to import .bmp files with a different color depth, an error message occurs. To avoid the error, ensure that all .bmp files are 24-bits prior to importing them into Kofax Capture.

Shape Recognition Limitations

To get reliable results, your shapes must meet the following minimal requirements. Shapes that do not meet these requirements may still yield acceptable results, but performance of the recognition engine cannot be predicted beyond these limits. If you have a shape that falls outside these guidelines, you may need to experiment with it.

- The line thickness must be at least 2 pixels.
- The line length must be at least 20 pixels.
- The line must be at least 5 times the thickness, but cannot be less than the 20 pixels already specified.
- The edges of a quadrant must be least 20 pixels in both directions.
- Each column and row of the quadrant must be at least 90% black.
- For the vertical edge, the sum of vertical pixels of the shape (after the image has been deskewed) must go from less than a minimum line width to a density of 90% in 4 pixel columns. The horizontal edge must also meet an analogous specification.
- The general shape must contain at least 1400 black pixels and no more than 10% white pixels.

- The skew cannot be greater than 1 in 5 (approximately 11 degrees).

Note These requirements are specified in pixels because shape recognition happens at the pixel level. At 200 pixels per inch, 20 pixels is 0.1 inches or 2.5 mm.

Defining a Custom Image Cleanup Profile

You can define a custom image cleanup profile on the Image Cleanup Profiles window.

1. On the **Tools** tab, in the **Image Profiles** group, click the **arrow** under **Cleanup**, and then click **B & W** or **Color**.
2. Select the name of an image cleanup profile on the list. The other options on the window change to indicate the settings defined for that profile.
3. Select and configure one or more filters:
 - a. Select a filter from the list of **Filters**.
Custom options for the filter appear in the **Custom Settings** frame.
 - b. Select the options for the filter:
 - Black Border Removal
 - Deshade
 - Deskew
 - Despeckle
 - Horizontal Line Removal
 - Streak Removal
 - Vertical Line Removal
 - Edge Enhancement
 - c. Repeat substeps a and b for each filter to select.
4. Click **Save As** to save your settings without closing the window.
5. Click **Save** to save your settings and close the window.

Defining a Custom Image Compression Profile

You can define a custom image compression profile on the Image Compression Profiles window.

1. On the **Tools** tab, in the **Image Profiles** group, click **Compression**.
2. In the **Name** box, select an existing name or create your own custom profile using **Save As**.
For the following Kofax PDF Compression settings, we recommend that you accept the default settings because they are preset to produce the best results for a variety of documents.
3. Optionally adjust the **Sensitivity**. High settings preserve faint data; low settings suppress textured backgrounds.
4. Optionally adjust the **Background** quality.
The background is rendered as a compressed image, and this parameter controls the quality of this image. A high setting increases quality, but decreases compression, increasing file size; a low setting reduces quality, but increases compression, reducing file size.

5. Optionally select **Picture detection** and adjust the Quality.
Pictures are rendered as compressed images. This option adjusts picture quality and file size. For each of these parameters, high settings increase quality but increase file size; low settings reduce quality and reduce file size.
6. Click **Save As** to save your settings without closing the window.
7. Click **Save** to save your settings and close the window.

General Guidelines

- In general, use the default values.
- Set scanning resolution to 300 DPI or higher if very small font sizes are expected.
- Set the lowest possible compression ratio for any other modules that process images before they are processed by Kofax PDF Compression.
- If a batch does not contain any pictures, save processing time by not selecting Picture detection.
- If documents have highly textured backgrounds, such as transcripts, decrease the sensitivity to suppress the background; to strengthen any weak data, increase the sensitivity.
- Both quality sliders control the trade-off between image quality and file size.

Limitations

Kofax PDF Compression has no effect on the following types of images and files:

- Black and white images compressed using JBIG2
- Color and gray scale images with a resolution that is lower than 140 DPI

Defining a Custom Recognition Profile

You can define a custom recognition profile on the Recognition Profiles window.

To display this window:

- On the Tools tab, in the Recognition group, click **Profiles**. When the window is displayed this way, you can define one or more custom recognition profiles that are available for selection when you set up an automatic recognition process.
- On any window from which you set up bar code recognition, patch code recognition, form identification, or zone processing, click the **Edit** button. (All windows from which you can select a recognition profile contain a list of predefined profiles and an Edit button.)

To define a custom recognition profile, you must start with a predefined profile. Then, you can modify the settings and save them to a new name. If you select a Kofax-defined profile, the settings are the defaults for the associated recognition engine.

1. Select the name of a predefined recognition profile from the list.
2. Select settings for your new profile.
3. Select an **Image Cleanup** profile from the list. If none of the profiles is appropriate for your needs, click the **Edit** button.

The **Image Cleanup Profiles** window appears so that you can define a custom profile.

4. Click **Save As** to save your settings without closing the window.
5. Click **Save** to save your settings and close the window.

Selecting an Image Cleanup Profile

You can select an image cleanup profile from any window where you set up image cleanup settings. For example:

- On the Create Form Type window, on the Image tab; or on the Form Type Properties window, on the Image tab, you can select an image cleanup profile for permanent image cleanup.
- On the Recognition Profiles window, you can select an image cleanup profile to associate with that recognition profile.

1. Select a predefined image cleanup profile from the list.

You can select one of the Kofax-defined profiles as listed below, or any custom predefined profile from the list.

- **Kofax Dot Matrix OCR**
- **Kofax Form Identification**
- **Kofax ICR**
- **Kofax OCR**
- **Kofax OCR Full Text**
- **Kofax Scan**

2. Save your selection as appropriate for the window.

Selecting a Recognition Profile

You can select a recognition profile from any window from which you set up bar code recognition, patch code recognition, form identification, or zone processing. The windows contain a list of predefined profiles.

1. Select a predefined recognition profile from the list of profiles. You can select one of the Kofax-defined profiles as listed below, or any custom predefined profile on the list.
 - Kofax 128 Bar Code
 - Kofax 3 of 9 Bar Code
 - Kofax Advanced OCR Zonal
 - Kofax Enhanced OCR Zonal
 - Kofax Advanced OCR Full Text
 - Kofax Enhanced OCR Full Text
 - Kofax PDF Image +Text
 - Kofax PDF Image Only
 - Kofax Enhanced PDF Image Only
 - Kofax PDF Text Under Image
 - Kofax Enhanced PDF Image On Text
 - Kofax High Performance ICR Zonal
 - Kofax High Performance OCR Zonal
 - Kofax ICR Zonal
 - Kofax OMR Zonal
 - Kofax Patch Code
 - Kofax Shape Zonal
2. Save your selection as appropriate for the window.

Note If none of the predefined profiles is appropriate for your needs, you can define a custom recognition profile. Any window from which you can select a recognition profile also allows you click the Edit button to define a custom profile.

Advanced Page Registration

Kofax Capture's page registration feature can "register" images by comparing them to their associated sample page. If necessary, zones are adjusted to match the sample page. By default, page registration is enabled for all pages that contain one or more zones.

The page registration feature is very robust and can correctly register a wide variety of forms. In some cases, though, you may get better results by turning off page registration and using an OCR registration zone instead.

You can turn off page-level registration on the Create Form Type window - Image tab or the Form Type Properties window - Image tab by setting the confidence for page registration to 0.

For information on creating an OCR registration zone, refer to [Creating an OCR Registration Zone](#).

In some situations, as noted here, you may want to turn off page registration or adjust its confidence to a low setting.

Note You should always test your settings with sample batches that are representative of the ones to be processed during production.

In some situations, as noted here, you may want to turn off page registration or adjust its confidence to a low setting.

Images with Varying DPIs

If you are processing images with varying dpis or images with a different dpi than their associated sample pages, page registration will fail.

One solution is to create multiple form types with identical settings, but use sample pages scanned at all expected dpis. For example, consider this scenario: You know that some of your forms are scanned at 200 dpi and others are scanned at 300 dpi. To account for the differences in dpi, you can create one form type with sample pages scanned at 200 dpi and another form type with identical settings and sample pages scanned at 300 dpi. This could improve page registration.

If the preceding solution does not work (for example, you have no way of knowing the dpis of the images to be processed), you can use an OCR registration zone instead.

Distorted Images

Scanning forms printed on very thin paper (such as onion skin or pressure-sensitive multipage form paper) may produce "stretched" or otherwise distorted images. Distorted images are typically the result of how a scanner's feeding mechanism pulls the pages through the scanner. Since the scanner won't distort all images in exactly the same way, the results of page registration could be very low.

Even with the distortion, it may be possible to identify an area on the image that can be used as a reliable OCR registration zone. If so, you should turn off page-level registration and rely on an OCR registration zone to register your images.

Image Variations on Sample Pages

Some forms contain sections that are standard, and other sections that can vary from form to form. For example, the top half of a form might have a standard header format and is always filled in the same way. The bottom half of the form might be non-standard and contain free-form data.

If you are processing this type of form, page-level registration will fail. One solution is to scan a sample page with the free-form section "blanked out." (For example, you can tape a white sheet of paper over the free form area.) Since the confidence won't be as high, you may need to lower the confidence threshold.

Another solution is to turn off page-level registration and rely on an OCR registration zone to register your images.

Images with More Data Than Sample Pages

Sometimes, the images you are processing contain more filled-in data than the sample pages. For example, the images used as samples might have few fields filled in while the images in your batches have many fields filled in. If the differences are significant, the results of page registration could be low.

One solution is to rescan your sample pages with forms that are more representative of the batches you'll be processing. This could improve page registration. If this is impossible to do, you should disable page-level registration and rely on an OCR registration zone to register your images.

Performance Issues

As a rule of thumb, page registration takes about 1 second per page, whereas processing an OCR registration zone takes about a third of a second.

For best results, you should use either page registration or an OCR registration zone. If the overhead of page-level registration is a problem, you can turn it off and rely on an OCR registration zone. You can use QuickZones to interactively check the recognition profiles you set up for page registration.

Bar Code Recognition

A bar code is a machine-readable pattern of dark and light elements in which data is encoded. The data can include numbers, alphanumeric characters, special characters, and other information. Reading bar codes is one of the most accurate methods for capturing data from document images.

Kofax Capture can recognize individual bar codes found in predefined zones on a document. This type of zone-level processing is well-suited for bar codes that are always found in the same location on each document.

Alternatively, Kofax Capture can recognize a specified number of bar codes that may be found anywhere on a document page. This type of page-level processing is well-suited for reading bar codes that are found on a page, but not always in the same location. For example, the bar codes may be printed on stickers that could be applied anywhere on a document.

During a bar code recognition operation, the document image or zone being processed is searched for possible bar codes. If a potential bar code is found, it is examined to determine if it satisfies the requirements for the operation. For example, the physical characteristics of the candidate bar code (such as bar code type) are checked against the recognition settings you specified in your recognition profile. If the candidate bar code meets all the requirements, it is decoded and its ASCII data is returned for use in further processing.

For example, data returned from a bar code may be used to:

- Fill one or more index fields
- Separate documents and/or batches
- Identify forms
- Key into a database record, allowing index fields to be filled with values from the record

Where Bar Code Recognition Occurs

In Kofax Capture, bar code recognition occurs in various modules as follows:

Module/Feature	Activity	Type of Processing
Administration	When testing zones	Zone-level bar codes Page-level bar codes
Scan Quality Control	When scanning from a scanner or importing documents	Page-level bar codes Document separation based on bar codes ¹ Batch separation based on bar codes
Recognition Server	When using automatic recognition techniques to process documents	Zone-level bar codes Page-level bar codes (when used with zone-level bar codes ²)
Auto-import, XML Import Connector, or custom import scripts	When importing documents with the XML Import Connector module, a custom import script, or the standard Auto-Import feature	Page-level bar codes Document separation based on bar codes

¹ When processing color images with the Standard Bar Code Engine, document separation based on bar codes is performed in the Recognition Server module. See [Using Bar Code Separation](#) for details.

² Under certain conditions, page-level bar codes used with zone-level bar codes are processed in Scan, rather than Recognition Server. Refer to [Page Level Bar Code Processing](#) for details.

Note When single document processing is enabled, bar code document separation converts each separated document into an individual batch, then automatically closes the batch before separating the next document.

Enhanced Versus Standard Bar Code Engine

Kofax Capture supports an Enhanced Bar Code Engine and a Standard Bar Code Engine. Both engines process color and bitonal images as described below:

With the Enhanced Bar Code Engine, you can process color bar codes directly from color images with a dpi as low as 100. You can also process one-dimensional and/or two-dimensional (2-D) bar code types with this engine. It is typically more accurate than the Standard Bar Code Engine, especially for low-quality or low dpi images. However, the Enhanced Bar Code Engine may be slower than the Standard Bar Code Engine. The Enhanced Bar Code Engine requires additional licensing.

With the Standard Bar Code Engine, color images are internally converted to their bitonal (black and white) equivalents. Then, any Kofax Capture module processing the images uses the bitonal version. You can process one-dimensional bar code types with this engine. It is typically faster than the Enhanced Bar Code Engine, but less effective with low-quality or low-dpi images. With this engine, best results are achieved with 200 dpi images or higher. No additional licensing is required.

Bar Code Recognition Profiles

Bar code recognition settings are defined in recognition profiles, which are used by all modules that process bar codes. You define recognition profiles with the Recognition Profiles window when you set up your batch classes in the Administration module.

Note that if the Enhanced Bar Code Engine is enabled for a recognition profile, but the required licensing is not in place, the Standard Bar Code Engine are automatically be used. Processing for which a 2-D bar code type is specified produces empty results. No warnings or messages appear.

An exception to this is when you test zones on sample pages from the Administration module. If the Enhanced Bar Code Engine is enabled, but the required licensing is not in place, empty results are returned. However, a warning appears in the Results area of the Zone Test window.

You can enable or disable the Enhanced Bar Code Engine with a recognition profile, which you define from the Recognition Profiles window. If the Enhanced Bar Code Engine is enabled for a profile, and the required licensing is in place, it is used whenever that profile is used.

Document Separation with Bar Codes on Color Images

When processing color images with the Enhanced Bar Code Engine, separation based on bar codes is performed at scan time, either with the Scan module or the Quality Control module. The bar codes are read directly from the color images.

However, when processing color images with the Standard Bar Code Engine, document separation based on bar codes is performed with the Recognition Server module. For this case, a bitonal version of the color image is generated, and the bar codes are read from the bitonal image.

If you attempt to use the Standard Bar Code Engine for document separation based on a 2-D bar code, the first page is not recognized as a separator.

Page-Level Bar Code Processing

Page-level bar codes that appear on a page without any automatic index zones are recognized in Scan. When an automatic index zone is used on the same page as a page-level bar code, then the page-level bar code is recognized in Recognition Server.

However, when the following two conditions are met, then page-level bar codes that appear on the same page as an automatic index zone are recognized in Scan, rather than Recognition Server:

- Only one form type is used in the batch class.
- Only one bar code recognition profile is used for page-level zones and separator zones.

Bar codes that are not used for indexing or separation are typically discarded. You have the option of retaining them by selecting the "Retain bar codes and patch codes on all pages" check box on the Batch Class Properties - Advanced Tab. When you select this option, the bar code data (value, type, location) is stored at the page level. As a result, validation scripts or other customizations can use the decoded information without having to re-recognize the bar codes. For details, see the help for the Administration module.

Page-Level Bar Codes

Kofax Capture can read all the bar codes on a page, and use their values to fill index fields. You associate index fields with bar codes on the page with the Page Level Bar Code Properties window.

In addition, you specify the bar codes to search for other bar code settings at the form type level. You do so on the Create Form Type window - Page Level Bar Code tab or the Form Type Properties window - Page Level Bar Code tab.

Enhanced Bar Code Engine

Kofax Capture supports an Enhanced Bar Code Engine that allows:

- Color bar code processing directly from color images
- Color bar code processing at dpis as low as 100 dpi
- Support for one- and two-dimensional (2-D) bar code types from color or bitonal images

Note The Enhanced Bar Code Engine requires additional licensing. See [Licensing Requirements for the Enhanced Bar Code Engine](#) .

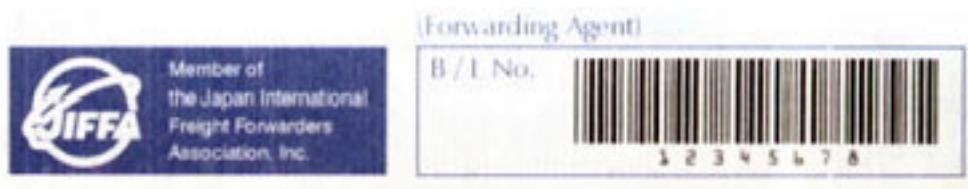
Color Processing Directly From Color Images

With the Enhanced Bar Code Engine, your Kofax Capture modules can process color bar codes directly from color images. This can yield improved recognition results because the color images typically provide more information to the bar code engine. The additional data from the color images better preserves the integrity of the bar code elements.

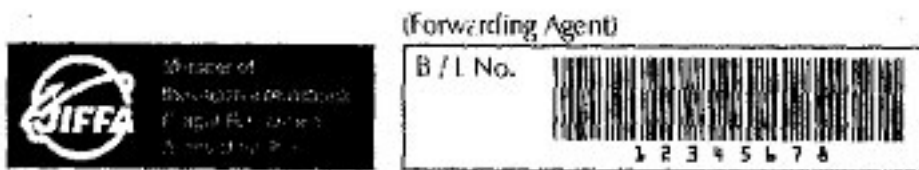
Color Processing of Low Resolution Images

The Enhanced Bar Code Engine allows the Kofax Capture module to process color images scanned at resolutions as low as 100 dpi. This means that you can scan your color images at lower dpis to speed up scan time. Since color images contain more data than bitonal images, you can process the lower dpi color images without sacrificing recognition accuracy.

Consider the following examples:



Color Image Scanned at 150 dpi



Bitonal Image Scanned at 200 dpi

As the graphics illustrate, the color image scanned at 150 dpi presents a cleaner bar code with straight lines and clear separation between the bars. The lines in the bitonal image scanned at 200 dpi are not straight, and blend together in places. Bar codes in this condition may be difficult to read.

Performance and Compatibility Considerations

The Enhanced Bar Code Engine is typically more accurate than the Standard Bar Code Engine, especially for low-quality or low dpi images. However, the Enhanced Bar Code Engine may be slower than the Standard Bar Code Engine in some cases. For example, the file sizes of color images can be much larger than otherwise identical bitonal images. This can adversely impact bar code processing directly from color images with the Enhanced Bar Code Engine.

In addition, the Enhanced Bar Code Engine adopts a more stringent interpretation of the bar code specifications. In rare cases, some bar codes that are slightly out of specification or very long may not be properly read. The Standard Bar Code Engine, which supports one-dimensional bar code types only, offers a more lenient interpretation of bar code specifications. You can disable the Enhanced Bar Code Engine for a recognition profile so that the Standard Bar Code Engine can be used. However, only one-dimensional bar codes can be read with the Standard Bar Code Engine.

Note Refer to your bar code documentation for details about bar code specifications. If your bar codes are out of specification, it is recommended that you change your process to produce bar codes that meet at least the minimum requirements of the specifications.

Two-Dimensional (2-D) Bar Code Support

With the Enhanced Bar Code Engine, Kofax Capture can process the following 2-D bar code types (on color or bitonal images).

- Aztec Code
- Data Matrix
- MaxiCode

- QR-Code
- PDF 417

In addition, the Enhanced Bar Code Engine can process all of the one-dimensional bar code types as the Standard Bar Code Engine, with the exception of Linear 2 of 5.

Tip For best results when drawing zones around bar codes, include at least a half inch boundary around all sides of the bar code. Make sure you include the entire bar code within the zone. See [Drawing Zones](#) for tips.

Processing Two-Dimensional Bar Codes

Two-dimensional (2-D) bar codes can hold thousands of characters. For example, the PDF 417 bar code can hold up to 1,850 characters. The encoded data is usually made up of multiple fields packed into a single string, with each value identified or delimited per custom requirements. An entire database record for a particular customer or prospect can be encoded into a single 2-D bar code. The fields that make up the record may be separated with one or more specific delimiter characters, by fixed length fields, or by some other method dictated by your own requirements.

With the Enhanced Bar Code Engine, Kofax Capture can read an entire 2-D bar code and store the result into one index field, but doing so may not yield usable results for your validation operators. To make the data usable, you can provide a custom validation script to parse the data and write the individual values to the appropriate index fields.

You can use either Visual Basic .NET language or C# to create the custom validation script to parse the data.

VB.NET Solution

The solution to parse the string data from the bar code can be done with a validation script written in VB.NET. You will define an index field to hold the customer information encoded in the 2-D bar code, and three index fields for the customer information (first name, last name, and customer number). To parse the data string, you add the processing event as shown in the example that follows.

When you create a validation script with VB.NET, certain variable declarations are automatically generated. The following field variables are generated when you create your VB.NET project using the Scripts feature on the Tools tab in the Administration module.

```
<IndexFieldVariableAttribute("Customer_Record")> _  
Dim WithEvents Customer_Record As FieldScript  
  
<IndexFieldVariableAttribute("First_Name")> _  
Dim WithEvents First_Name As FieldScript  
  
<IndexFieldVariableAttribute("Last_Name")> _  
Dim WithEvents Last_Name As FieldScript  
  
<IndexFieldVariableAttribute("Cust_Number")> _  
Dim WithEvents Cust_Number As FieldScript
```

Now, you will want to add the processing that parses the string data to individual values. From your VB.NET code editor, select the `DocumentPreProcessing` event from the `Declarations` list. The following `Private Sub` definition is generated:

```
Private Sub SampleDC2_DocumentPreProcessing(ByVal Param As Object, _  
ByVal Param1 As Kofax.AscentCapture.NetScripting.PreDocumentEventArgs) _
```

```
Handles Me.DocumentPreProcessing
End Sub
```

Add the following custom code within the `Private Sub` block to perform the data string parsing:

```
'*** This sub will extract the first name, last name, and customer
'*** number from a string similar to "John***Smith***1234***"

'*** The string we want to parse into an array.
Dim oDelimiterArray As String() = {"***"}

'*** Split on "***"
Dim oCustomerRecordArray As String()
oCustomerRecordArray = Customer_Record.IndexField.Value.Split( _
oDelimiterArray, StringSplitOptions.RemoveEmptyEntries)

'*** The customer's first name is stored first (index 0)
First_Name.IndexField.Value = oCustomerRecordArray(0)
'*** The customer's last name is stored second (index 1)
Last_Name.IndexField.Value = oCustomerRecordArray(1)
'*** The customer's number is stored last (index 2)
Cust_Number.IndexField.Value = oCustomerRecordArray(2)
```

Compile and save your validation script. Republish the batch class associated with the validation script.

C# Solution

The solution to parse the string data from the bar code can be done with a validation script written in C#. Similar to the VB.NET solution, define an index field to hold the customer information encoded in the 2-D bar code, and three index fields for the customer information (first name, last name, and customer number). To parse the data string, you add the processing event as shown in the example that follows.

When you create a validation script with C#, certain variable declarations are automatically generated. The following field variables are generated when you create your C# project from the Scripts feature on the Tools tab in the Administration module.

```
[IndexFieldVariableAttribute("Customer_Record")]
FieldScript Customer_Record;
[IndexFieldVariableAttribute("Cust_Number")]
FieldScript Cust_Number;
[IndexFieldVariableAttribute("First_Name")]
FieldScript First_Name;
[IndexFieldVariableAttribute("Last_Name")]
FieldScript Last_Name;
```

Now, you will want to add the processing that parses the string data to individual values. From your C# code editor, go to the default script constructor and add the `DocumentPreProcessing` event handler by typing `this` followed by a period. Select `DocumentPreProcessing` from the list of available methods, properties and events, followed by `+=` (plus and equals signs) and press `Tab` key, as in the following:

```
public SampleDC2(bool bIsValid, string strUserID, string strLocaleName)
: base(bIsValid, strUserID, strLocaleName)
{
    this.DocumentPreProcessing += SampleDC2_DocumentPreProcessing;
}
```

The following `void SampleDC2_DocumentPreProcessing` definition is generated:

```
void SampleDC2_DocumentPreProcessing(object sender,
Kofax.AscentCapture.NetScripting.PreDocumentEventArgs e)
{
    throw new NotImplementedException();
}
```

```
}

```

Clean the generated `throw new NotImplementedException();` statement and then add the following custom code within the `{ }` block to perform the data string parsing:

```
/** This sub will extract the first name, last name, and customer
/** number from a string similar to "John***Smith***1234***"
/** The string we want to parse into an array.
string[] oDelimiterArray = {"***"};
/** Split on "***"
string [] oCustomerRecordArray;
oCustomerRecordArray = Customer_Record.IndexField.Value.Split(oDelimiterArray,
StringSplitOptions.RemoveEmptyEntries);
/** The customer's first name is stored first (index 0)
First_Name.IndexField.Value = oCustomerRecordArray[0];
/** The customer's last name is stored second (index 1)
Last_Name.IndexField.Value = oCustomerRecordArray[1];
/** The customer's number is stored last (index 2)
Cust_Number.IndexField.Value = oCustomerRecordArray[2];
```

Compile and save your validation script. Republish the batch class associated with the validation script.

Turning off the Enhanced Bar Code Engine

The Enhanced Bar Code Engine is selected by default and used if proper licensing is in place for bar code recognition operations. However, in some cases, you may want to turn it off. For example, you may be processing one-dimensional bar codes from good quality bitonal images and achieve better performance with the Standard Bar Code Engine.

You can turn off the Enhanced Bar Code Engine for a recognition profile. This causes the Standard Bar Code Engine to be used for all processing that uses that recognition profile.

Note Once you turn off the Enhanced Bar Code Engine for a recognition profile, the Standard Bar Code Engine is used for all processing that uses that profile. This is true even if the licensing for the Enhanced Bar Code Engine is in place.

1. On the **Recognition Profiles** window, select the bar code recognition profile that uses the Enhanced Bar Code Engine.
2. Click **Advanced**.
The **Advanced Bar Code Settings** window for the selected recognition profile appears.
3. Clear the "Use enhanced engine if licensed" check box.

Tip Once you clear the "Use enhanced engine if licensed" check box, any 2-D bar code types previously selected on the **General** tab become cleared. Before you save the recognition profile, you should carefully review the selected bar code types on the **General** tab to ensure they are appropriate for your processing needs.

4. Click **OK**.
5. Click **Save** to save the selected recognition profile. Or, click **Save As** to save the selected profile to a new name.
6. Click **Close** to close the **Recognition Profiles** window.

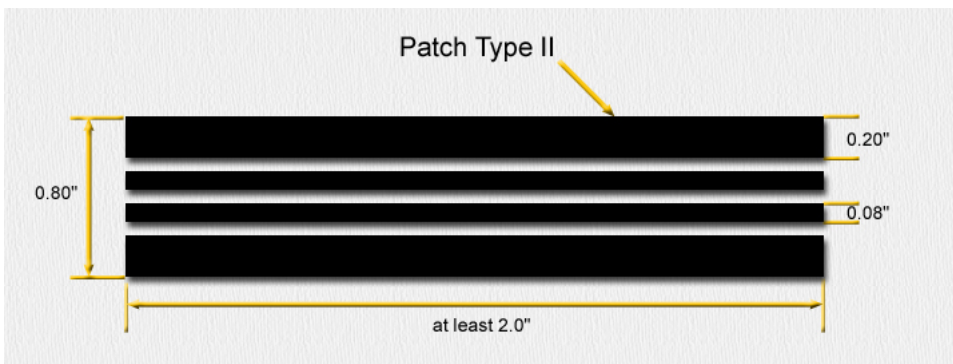
Patch Code Recognition

A patch code is a pattern of horizontal black bars separated by spaces and typically placed near the leading edge of a paper document to be scanned. It can be used to separate documents.

All patch codes are made up of narrow and wide bars, as follows:

- Narrow bars must be 0.08 inch in height.
- Wide bars must be 0.20 inch in height.
- Entire patch code must be 0.80 inch in height.
- Entire patch code should be at least 2.0 inches in width.

Patch codes that are not used for indexing or separation are typically discarded. You have the option of retaining them by selecting the "Retain bar codes and patch codes on all pages" check box on the Batch Class Properties - Advanced Tab. When you select this option, the patch code data (value, type, location) is stored at the page level. As a result, validation scripts or other customizations can use the decoded information without having to re-recognize the patch codes. For details, see the help for the Administration module.



Type II Patch Code

Patch Code Recognition Settings

There are several settings you can make to optimize patch code recognition.

Left Offset

This specifies a point measured from the left edge of the image that falls within the patch code. A value of 0 specifies searching anywhere in the horizontal direction for a patch code.

See [Patch Code Placement](#).

See [Patch Code Recognition](#).

Note Kofax Capture allows you to use patch codes for various types of processing. For example, you can use patch codes as batch separators, document separators, control the counter for the endorser/annotation feature, etc. When setting up each type of processing, you can specify a left offset for the patch code. If you specify different left offsets, Kofax Capture will automatically default all the left offsets to 0.

Patch Code Type

This specifies a type of patch code. Kofax Capture supports the following patch code types (Patch II, II, and T are Kodak ImageLink patch code types).

- Patch I
- Patch II
- Patch III
- Patch III
- Patch T
- Patch VI

A .wmf file for each patch code is included in your Kofax Capture Bin folder. The names of the files are Patch1.wmf, Patch2.wmf, etc.

Patch Code Placement

To be detected, a patch code must be positioned correctly on the page:

- The patch code must be horizontal.
- It must be located at least 0.20 inch from the leading edge of the image.
- It must not extend beyond 3.75 inches from the leading edge of the image.

Note For duplex scanning operations, patch codes are only detected on the front side of a page. Patch codes on the back side of a page is ignored.

User Tracking Feature

Kofax Capture can track activity for each user. Kofax Capture will maintain statistical records with information about users, documents, keystrokes, and other common activities.

When you enable the User Tracking feature, Kofax Capture tracks user activity in a number of database tables. The tables contain statistical records that are generated as a user creates and updates Kofax Capture batches and opens/closes processing modules. The records track information about various items such as user actions, documents, and keystrokes.

When User Tracking is enabled, an Administrative Audit and Logon Audit are also performed. Every action performed within the Administration module, including the user who initiated the action and the date and time, is recorded in the Statistics database. User actions related to Kofax Capture logon attempts are also tracked. If an issue arises, the Administrator can use the audit details to determine which change may have introduced a problem. For details about which actions are included in the Administrative and Logon Audit tracking, see the Kofax Capture help.

Depending on your database selection, the User Tracking statistics are stored in the standard Kofax Capture database or in your SQL Server, Oracle, or IBM DB2 database. Statistical tables can be maintained separately from the other database. Refer to [Database Utility](#) for more information about selecting a separate database for statistical tables.

When you install Kofax Capture for the first time, the statistics tables are initially empty.

If the User Tracking and User Profile features are enabled, statistics are maintained for linked operating system users in the same manner as for Kofax Capture users.

Track User Activity

When you enable the User Tracking feature, Kofax Capture tracks user activity in six database tables. The tables contain statistical records that are generated as a user creates and updates Kofax Capture batches and opens/closes processing modules. The records track information about users, documents, and keystrokes along with details related to actions taken in the Administration module.

When you install Kofax Capture, the tables are initially blank. With client/server installations, the statistics are compiled per workstation, with a separate database for each. With standalone installations, the statistics are also compiled separately.

User tracking occurs if Tracking is selected on the Tools tab in the Administration module. By default, the option is disabled. When using Kofax Analytics for Capture, the Tracking feature must be enabled.

Note When User Profiles are enabled for your Kofax Capture installation, users who have rights to the Administration module can enable/disable the User Tracking feature.

Enabling the User Tracking Feature

When you enable the User Tracking feature, it goes into effect for every user at your Kofax Capture installation. By default, the feature is disabled. When using Kofax Analytics for Capture, the Tracking feature must be enabled.

Note When the User Profiles feature is enabled, users who have rights to the Kofax Capture Administration module can enable or disable the User Tracking feature.

1. Start the Kofax Capture Administration module.
2. On the **Tools** tab, in the **User & Groups** group, click **Tracking**.
The feature toggles on or off each time you select it.

User Tracking Statistics

If the user tracking feature is enabled in Kofax Capture at the central site, user tracking begins for each module the next time that module is started. If a module is running when batch classes are downloaded, that module does not record user tracking until it is restarted.

Batch user tracking statistics are uploaded when a batch is uploaded. Statistics for deleted batches and launched modules are uploaded only when synchronization occurs.

Once uploaded, user tracking statistics are incorporated automatically into the central Kofax Capture database. Once a batch is successfully uploaded and inserted, the remote site RSA deletes all user tracking statistics associated with that batch at the remote site.

User Tracking Data Tables

Depending on your database selection, user tracking data is stored in different locations. The data schema and table structures remain the same, regardless of the storage location.

Standard Database Option

If you are using the Standard option, user tracking data is stored in your SQL Server Express database. You can use compatible reporting applications to view the user tracking data.

If you upgraded to Kofax Capture from an earlier version, any merged statistical data from your prior export is carried over to the new version.

Other Database Options

If you are using the SQL Server, Oracle, or IBM DB2 database option, your user tracking data is stored in tables in your selected database.

If you use Kofax Capture with any of the above-mentioned databases, you should be familiar with that database system and how to access it from your client tools. If necessary, contact your system administrator for details.

The user tracking statistics are stored in the server and database you specified when switching to or setting up your database (SQL Server, Oracle, or IBM DB2) for use with Kofax Capture. The structure for these tables are identical to those used with the standard Kofax Capture database. To delete unwanted statistics records, create your own SQL statements or execute the predefined stored procedure called "ClearStats."

StatsBatch Table

The StatsBatch table is used to store records that list batch statistics. A new record is created each time a user creates a batch.

The columns for the StatsBatch table are listed here. A description of each column follows the list.

StatsBatch Table

Column		Type	Size	Valid on Create	Default	Req'd	Indexed	Dup
ExternalBatchID ¹	PK1	Number	Long integer	Y		Y	Y	N
BatchName		Text	128	Y		Y	N	Y
CreationStationID		Text	12	Y		Y	N	Y
CreationUserID ²		Text	128	Y		Y	N	Y
CreationUserName ³		Text	80	Y		Y	N	Y

Column		Type	Size	Valid on Create	Default	Req'd	Indexed	Dup
BatchClass		Text	32	Y		Y	N	Y
BatchClassDescription		Text	80	Y		Y	N	Y
BatchReferenceID		Text	38	Y		Y	N	N
TransferID		Text	38	Y		Y	Y	N
BatchGUID		Text	38	Y		Y	N	N

¹ ExternalBatchID is the primary key for the Batch table.

² For linked users, the CreationUserID contain the user's domain name as well as the user ID.

³ For linked operating system users, the CreationUserName contains the user's full name.

ExternalBatchID

Unique incremental value assigned to each batch that is created at a Kofax Capture site.

BatchName

Name assigned to the batch when it is created.

CreationStationID

Identifies the Kofax Capture station where the batch is created. The Station ID is assigned during the installation process.

CreationUserID

If the User Profiles feature is enabled, this is the Kofax Capture login ID for the user who creates the batch. If the feature is not enabled, this is the Windows login name for the user who creates the batch. If a Windows login name is not required, the value is listed as "Unknown".

CreationUserName

If the User Profiles feature is enabled, this is the user name assigned in the profile of the user who creates the batch. If the feature is not enabled, this is the Windows login name for the user who creates the batch. If a Windows login name is not required, the value is listed as "Unknown".

BatchClass

Name of the batch class on which the batch is based.

BatchClassDescription

Description of the batch class on which the batch is based.

BatchReferenceID

Reserved for use with the Kofax Capture Advanced Reports product.

TransferID

Reserved for use with the Kofax Capture Advanced Reports product.

BatchGUID

Reserved for use with the Kofax Capture Advanced Reports product.

StatsBatchModule Table

The StatsBatchModule table is used to store records relating to batch processing events in Kofax Capture processing modules.

Note the following:

- A StatsBatchModule table record is created when any Kofax Capture batch is created or opened. The initial values are updated when a batch is closed or deleted. Therefore, the StatsBatchModule table values for a batch in progress differ from those for a batch that is closed or deleted.
- The Valid on Create column indicates which database records are valid after a batch is opened. If the Valid on Create item is not set to Yes, the record is not valid until the batch is closed or deleted.

The columns for the StatsBatchModule table are listed here. A description of each column follows the list.

StatusBatchModule Table

Column		Type	Size	Valid on Create	Default	Req'd	Indexed	Dup
BatchModuleID ¹	PK ¹	GUID		Y		Y	Y	Y
ExternalBatchID ²	FK ²	Number	Long integer	Y	0	Y	N	Y
BatchDescription		Text	80	N		N	N	Y
ModuleLaunchID ³	FK ³	GUID		Y	0	Y	N	Y
ModuleCloseUniqueID		Text	250	N		N	N	Y
ModuleName		Text	32	N		N	N	Y
StartDateTime		Date/Time		Y	NOW()	Y	N	Y
EndDateTime		Date/Time		N	NULL	N	N	Y
BatchStatus		Number	Integer	N	0	N	N	Y
Priority		Number	Integer	N	0	N	N	Y
ExpectedPages		Number	Long integer	N	0	N	N	Y
ExpectedDocs		Number	Long integer	N	0	N	N	Y
Deleted		Yes/No		N	0	N	N	Y
PagesPerDocument		Number	Long integer	N	0	N	N	Y
PagesScanned ⁴		Number	Long integer	N	0	N	N	Y

Column		Type	Size	Valid on Create	Default	Req'd	Indexed	Dup
PagesDeleted ⁴		Number	Long integer	N	0	N	N	Y
DocumentsCreated ⁴		Number	Long integer	N	0	N	N	Y
DocumentsDeleted ⁴		Number	Long integer	N	0	N	N	Y
ChangedFormTypes ⁴		Number	Long integer	N	0	N	N	Y
PagesReplaced ⁴		Number	Long integer	N	0	N	N	Y
ErrorCode								
ErrorText		Text	255	N		N	Y	Y
Orphaned		Yes/No		Y	N	Y	Y	Y
TransferID		Text	38	Y		Y	Y	N
BatchGUID		Text	38	Y		Y	N	N

¹ BatchModuleID is the primary key in the BatchModule table.

² ExternalBatchID is a foreign key in the BatchModule table, and it is the primary key in the Batch table.

³ ModuleLaunchID is a foreign key in the BatchModule table, and it is the primary key in the ModuleLaunch table.

⁴ Custom modules that perform these operations are responsible for updating the statistics attributes. If they fail to update the attributes, the values in these columns will contain zeros for those custom modules. The custom module sets these values in the Batch ACDataElement.

BatchModuleID

Unique identifier for the record in the table.

ExternalBatchID

Unique incremental value assigned to each batch that is created at a Kofax Capture site. Foreign key to associated record in the Batch table.

BatchDescription

Description of the batch, assigned when the batch was created.

ModuleLaunchID

Unique value assigned to each Kofax Capture processing module. Foreign key to associated record in the ModuleLaunch table.

ModuleCloseUniqueID

Unique identifier for the next Kofax Capture module where the batch is processed. If that module has the same literal name as another module, this identifier distinguishes one module from the other.

ModuleName

Literal name of the next Kofax Capture module where the batch is processed.

StartDateTime

Date and time when the batch was created or opened.

EndDateTime

Date and time when the batch was closed or deleted.

BatchStatus

Status assigned to the batch, as follows:

2 - Ready

4 - In Progress

8 - Suspended

32 - Error

64 - Completed

128 - Reserved

Priority

Priority level assigned to the batch. Priority values range from 1 to 10, with 1 being the highest priority. The priority determines the order in which the batch is processed at each module.

ExpectedPages

Number of pages expected in the batch.

ExpectedDocs

Number of documents expected in the batch.

Deleted

Set to True if the batch was deleted during the current processing session.

PagesPerDocument

Number of pages per document. Valid only if fixed page separation is in effect.

PagesScanned

Number of pages scanned during the current processing session.

PagesDeleted

Number of pages deleted during the current processing session.

DocumentsCreated

Number of documents created during the current processing session.

DocumentsDeleted

Number of documents deleted during the current processing session.

ChangedFormTypes

Number of form types changed from a valid form type to something else during the current processing session. Used to track invalid form identification results.

PagesReplaced

Number of pages replaced during the current processing session.

ErrorCode

Reserved.

ErrorText

Text of any error message generated during the current processing session.

Orphaned

Relates to a batch that is created or opened, but not completed, due to an unexpected system failure or interruption.

TransferID

Reserved for use with the Kofax Capture Advanced Reports product.

BatchGUID

Reserved for use with the Kofax Capture Advanced Reports product.

StatsFormType Table

The StatsFormType table file is used to store records relating to each form type used in a batch class. The records are created when a batch is closed.

Note the following:

- All columns are valid upon creation.
- There are two special FormType names: "Loose Pages" and "None". Loose pages do not belong to a document. None refers to documents that have not been assigned a form type.
- The data for keystroke counts, CompletedDocs, and CompletedPages are collected on a per session basis. Therefore, totals from previous sessions are not automatically added to these values.
- The records for Documents, RejectedDocs, Pages, and RejectedPages relate to batch totals.

The columns for the StatsFormType table are listed here. A description of each column follows the list.

StatsFormType Table

Column		Type	Size	Valid on Create	Default	Req'd	Indexed	Dup
FormTypeEntryID ¹	PK1	GUID		Y		Y	Y	N
BatchModuleID ²	FK2	GUID		Y	0	Y	Y	Y
FormTypeName		Text	32	Y		Y	Y	Y
DocClassName		Text	32	Y		Y	N	Y
Documents		Number	Long integer	Y	0	Y	N	Y
RejectedDocs		Number	Long integer	Y	0	Y	N	Y
Pages		Number	Long integer	Y	0	Y	N	Y
RejectedPages		Number	Long integer	Y	0	Y	N	Y
KS_Manual ³		Number	Long integer	Y	0	Y	N	Y
KS_OCRRepair ³		Number	Long integer	Y	0	Y	N	Y
KS_ICRRepair ³		Number	Long integer	Y	0	Y	N	Y
KS_BCRepair ³		Number	Long integer	Y	0	Y	N	Y
KS_OMRRepair ³		Number	Long integer	Y	0	Y	N	Y
CompletedDocs ³		Number	Long integer	Y	0	Y	N	Y
CompletedPages ³		Number	Long integer	Y	0	Y	N	Y
TransferID		Text	38	Y		Y	Y	N

¹ FormTypeEntryID is the Primary Key for the FormType table.

² BatchModuleID is a foreign key in the FormType table, and it is the primary key in the BatchModule table.

³ Custom modules that perform these operations are responsible for updating the data. If they fail to do this, the values in these columns will contain zeros for those custom modules. The custom module sets these values in the Document ACDataElement.

FormTypeEntryID

Unique value to identify each form type record created.

BatchModuleID

Unique identifier that indicates the Kofax Capture module associated with the batch for which a form type record was created. Foreign key to associated record in the BatchModule table.

FormTypeName

Name of the form type. If the entry is "Loose," it relates to pages that do not belong to a document. If the entry is "None," it relates to documents that have not been assigned a form type.

DocClassName

Name of the document class associated with the form type. This is empty when the FormTypeName is Loose or Empty.

Documents

Number of documents using this form type in the batch.

RejectedDocs

Number of rejected documents using this form type in the batch.

Pages

Number of pages using this form type in the batch.

Rejected Pages

Number of rejected pages using this form type in the batch.

KS_Manual

For this form type, the number of keystrokes entered in fields that are not associated with an automatic recognition profile.

KS_OCRRepair

For this form type, the number of keystrokes entered in fields that exist in zones associated with OCR processing.

KS_ICRRepair

For this form type, the number of keystrokes entered in fields that exist in zones associated with High Performance Zonal processing.

KS_BCRRepair

For this form type, the number of keystrokes entered in fields that exist in zones associated with bar code processing.

KS_OMRRepair

For this form type, the number of keystrokes entered in fields that exist in zones associated with OMR processing.

CompletedDocs

For this form type, the number of documents that have completed processing in the batch.

CompletedPages

For this form type, the number of pages that have been reviewed in the Quality Control module. Reviewed pages are tracked if "Require review of scanned pages" is selected in the Quality Control module properties for the batch class.

TransferID

Reserved.

StatsModuleLaunch Table

The StatsModuleLaunch table is used to store records relating to Kofax Capture module usage. A record is created each time a user opens a module. Exception: Activity for the Administration module is not tracked in the StatsModuleLaunch table.

Important Do not attempt to modify or delete incomplete records in the StatsBatchModule table or the StatsModuleLaunch table. An incomplete record is one for which the EndDateTime column is not null, or the Orphaned column is set to Yes.

Note the following:

- A record is created each time a Kofax Capture module (except Administration) is opened.
- The Valid on Create column indicates which database columns are valid after a module is opened. All other columns contain default values.
- The record is updated each time a Kofax Capture module is closed. At that point, all other columns contain default values.
- Do not modify or delete an incomplete record. An incomplete record is one for which the EndDateTime column is not null, or the Orphaned column is set to Yes.

The columns for the StatsModuleLaunch table are listed here. A description of each column follows the list.

StatsModuleLaunch Table

Column		Type	Size	Valid on Create	Default	Req'd	Indexed	Dup
ModuleLaunchID ¹	PK1	GUID		Y		Y	Y	N
StartDateTime		Date/Time		Y	NOW()	Y	N	Y
EndDateTime		Date/Time		N	NULL	N	N	Y
ModuleUniqueID		Text	250	Y		Y	N	Y
ModuleName		Text	32	Y		Y	N	Y
UserID ²		Text	128	Y		Y	N	Y
UserName ³		Text	80	Y		Y	N	Y
StationID		Text	32	Y		Y	N	Y
SiteName		Text	32	Y		Y	N	Y
SiteID		Number	Integer	Y	0	Y	N	Y

Column	Type	Size	Valid on Create	Default	Req'd	Indexed	Dup
InProcessTID	Text	38	Y		Y	Y	N
Orphaned	Yes/No		Y		Y	Y	N
CompletedTID	Text	38	Y		Y	Y	N

¹ ModuleLaunchID is the primary key for the ModuleLaunch table.

² For linked operating system users, the UserID contains the user's domain name as well as the user ID.

³ For linked operating system users, the UserName contains the user's full name.

ModuleLaunchID

Unique value assigned to each Kofax Capture processing module record.

StartDateTime

Date and time when the module was launched.

EndDateTime

Date and time when the module was closed.

ModuleUniqueID

Unique identifier for the Kofax Capture module that was launched. If that module has the same literal name as another module, this identifier distinguishes one module from the other.

ModuleName

Literal name of the Kofax Capture module that was launched.

UserID

If the User Profiles feature is enabled, this is the Kofax Capture login ID for the user who launched the module. If the feature is not enabled, this is the Windows login name for the user who launched the module.

UserName

If the User Profiles feature is enabled, this is the user name assigned to the profile of the user who launched the module. If the feature is not enabled, this is the Windows login name for the user who launched the module.

StationID

Identifies the Kofax Capture station where the module was launched. The Station ID is assigned during the installation process.

SiteName

Text string that identifies the Kofax Capture installation site where the module was launched. The SiteName is initially configured during the installation process and can be changed using the Database Utility.

SiteID

Integer that identifies the Kofax Capture installation site where the module was launched. The Site ID is assigned during the installation process.

InProcessTID

Reserved.

Orphaned

Reserved.

CompletedTID

Reserved.

StatsAdministrative Table

The StatsAdministrative table is used to store records relating to Administration module usage. Also, a record is created in this table each time a user logs in or out of any Kofax Capture module, including the Administration module or a custom module.

The columns for the StatsAdministrative table are listed here. A description of each column follows the list.

StatsAdministrative Table

Column	Type	Size	Req'd	Indexed
ActionID	Text	38	Y	Y
ActionKey	Number	Integer	Y	
ActionDateTime	Date/Time		Y	
ModuleName	Text	32	N	
ModuleUniqueID	Text	250	N	
UserID ¹	Text	128	N	
UserName ²	Text	80	N	
WindowsUserID	Text	128	N	
WindowsUserName	Text	80	N	
StationID	Text	32	N	
MachineName	Text	32	N	
MachineAddress	Text	32	N	
SiteID	Number	Integer	N	
SiteName	Text	32	N	

Column	Type	Size	Req'd	Indexed
Param1	Text	255	N	
Param2	Text	255	N	
Param3	Text	255	N	
Param4	Text	255	N	
TransferID	Text	38	N	Y

¹ For linked operating system users, the UserID contains the user's domain name as well as the user ID.

² For linked operating system users, the UserName contains the user's full name.

ActionID

Audit action key.

ActionKey

Audit action name.

ActionDateTime

Date and time when the action is executed.

ModuleName

Name of module in which action is executed.

ModuleUniqueID

Unique ID of the module in which action is executed.

UserID

If the User Profiles feature is enabled, this is the Kofax Capture login ID for the user who launched the module. If the feature is not enabled, this is the Windows login name for the user who launched the module.

UserName

If the User Profiles feature is enabled, this is the user name assigned to the profile of the user who launched the module. If the feature is not enabled, this is the Windows login name for the user who launched the module.

WindowsUserID

Windows User ID.

WindowsUserName

Windows User name.

StationID

Identifies the Kofax Capture station where the module was launched. The Station ID is assigned during the installation process.

MachineName

Machine name.

MachineAddress

Machine IP address.

SiteID

Integer that identifies the Kofax Capture installation site where the module was launched. The Site ID is assigned during the installation process.

SiteName

Text string that identifies the Kofax Capture installation site where the module was launched. The SiteName is initially configured during the installation process and can be changed using the Database Utility.

Param1

First action parameter.

Param2

Second action parameter.

Param3

Third action parameter.

Param4

Fourth action parameter.

TransferID

Reserved for use with KCN Server.

StatsAuditKey Table

The StatsAuditKey table is used to store records associated with audit event names and actions.

The columns for the StatsAuditKey table are listed here. A description of each column follows the list.

StatsAuditKey Table

Column	Type	Size	Req'd	Indexed
AuditKeyID	Number	Integer	Y	Y
AuditText	Text	80	Y	

AuditKeyID

Audit action key.

AuditText

Audit action name.

User Profiles Feature

From the Administration module, you can enable the User Profiles feature to manage Kofax Capture access and activity on a user-by-user basis. This is accomplished by setting up accounts or "profiles" for each Kofax Capture user. Each user profile defines a login ID for the user and specifies the modules and batch classes to which the user is allowed access. The profile also defines the administrative functions to which the user has rights. Additionally, the administrator can set up group profiles to assign access rights to multiple users.

Upon installation, Kofax Capture automatically sets up a user profile called "Admin" for the administrator. The Admin profile is used to add and edit additional user profiles and group profiles. The administrator can edit the Admin profile, but it cannot be removed. Other administrator users can access the Admin profile and make limited changes to it. By default, the Admin profile does not have a password assigned to it.

Note You have the option of assigning the username and password for the Admin account during installation. For details, see "Updating Default Administrator Account During Installation" in the *Kofax Capture Installation Guide*. As another option, you can use the User Profile Properties window in the Administration module to update the username or password for the Admin account after installation. For details, click Help on the User Profile Properties window.

User profiles and group profiles include assignments for the following:

- User login ID and optional password (user profiles only)
- Access to batch classes (including independent verification)
- Access to Kofax Capture modules
- Group profile membership
- Access to administrative functions and utilities
- Permission to delete batches, documents, folders, and pages in standard interactive modules (Batch Manager, Scan, Quality Control, Validation, and Verification).

The implementation of user profiles is an optional feature that is enabled from the User Profiles window.

User vs. Group Profiles

To take advantage of any of the Kofax Capture user management features, you must first enable the User Profiles feature. You can turn this feature on and off as required. If you disable the User Profiles feature, and later enable it again, all your previous settings are restored and enforced. In Kofax Capture, users or groups can be given profiles that regulate access to the modules and batch classes. The profile also defines access to various administrative utilities.

Note If you enable profiles, you may be asked for a password when starting Kofax Capture modules. Kofax Capture cannot recover or reset these passwords. If you forget your password, you need to contact Support personnel.

A user profile is a collection of permission and assignment settings that are assigned to an individual Kofax Capture user. A group profile is a collection of permission and assignment settings that are assigned to a group. A group may consist of any number of Kofax Capture users, and users can be members of any number of groups.

Groups can be assigned the same types of access rights as users, and all members inherit the group's rights. Because these rights are inherited, you can quickly change the settings for all the members in a group simply by editing the group profile. For large groups, this simplifies the maintenance of user rights and ensures consistency.

You can also link Kofax Capture to your operating system users and groups.

Note An individual user of Kofax Capture has all the permissions granted by the user profile plus those in all the assigned group profiles.

Enabling the User Profiles Feature

When you initially install Kofax Capture, the User Profiles feature is disabled, and access to the Administration module is not restricted.

When the User Profiles feature is disabled, users are not required to log in when they launch a Kofax Capture module. As a result, no restrictions are placed on their access to batch classes, modules, or Kofax Capture administrative functions.

With user profiles enabled, all access rights defined in user profiles and group profiles become effective. As a result, users may be prompted for a user ID and password when they start a Kofax Capture module. When they enter the valid information, they are granted access to the module, provided the module is included in their user profile or group profile assignments.

When you enable the User Profiles feature, you may be prompted with a Kofax Capture - Login window the next time you start a module. By default, the "Admin" user ID appears in the Login window with no password.

Once you have specified a password for any user with administrative rights, you cannot enable the User Profiles feature without first specifying the User ID and password of a user that has access rights to the Administration module. This helps prevent unauthorized users from enabling the feature and inadvertently locking all users out of virtually all Kofax Capture modules.

Important If you set a password for the Admin user and later forget the password (and the Admin user is the only user with rights to the Administration module), you won't be able to turn off User Profiles because you won't be able to start the Administration module. Because there is no way to recover or reset the password without accessing the Administration module, you must remove and then reinstall Kofax Capture (which resets the Admin password to <blank>). Also, you lose your batch classes and any batches that were in progress when you removed the product.

1. Start the Administration module.

2. On the **Tools** tab, in the **Users & Groups** group, click **Profiles**.
The "Kofax Capture Administration - User Profiles" window appears.
3. Select the **Enable User Profiles** check box and click **Save**.
If an Administrator password has been created, the **Enable User Profiles** window appears.
If prompted, you must provide the Administrator password.
4. The User Profiles feature goes into effect for the entire Kofax Capture system.
The check box must be selected to access the other options on the **User Profiles** window.
5. On the **User Profiles** tab, set up a user profile for each user who requires access to Kofax Capture.
See [Adding a User Profile](#).
6. Set up a group profile for each set of multiple users who require similar permissions and assignments. See [Adding a Group Profile](#).
7. From the "**Default user group for new batch classes**" list, select the group profile that should have access to each new batch class created in the Kofax Capture Administration module. You can select "(None)".
8. On the **Lockout** tab, set lockout restrictions. See [User Profiles window - Lockout tab](#).
9. Click **Save**.

Note As soon as you click **Save**, all profile assignments associated with the other Kofax Capture modules go into effect. Any assignments associated with the Kofax Capture Administration module become effective when you close the module.

10. Click Administration.

Turning off the User Profiles Feature

If you turn off user profiles, all existing user and group profile assignments are ignored. If you subsequently enable user profiles again, your previous settings are restored.

1. Start the Administration module.
2. On the **Home** tab, in the **Batch Class** group, click **User Profiles**.
The **User Profiles** window appears.
3. Clear the **Enable User Profiles** check box to turn off the User Profiles feature.
4. Click **Save**.

Note As soon as you click **Save**, all user profile assignments associated with other Kofax Capture modules become inactive. Assignments associated with the Kofax Capture Administration module become inactive when you close the module.

5. Click **Close**.

Default Profiles

When you enable the User Profiles feature for the first time, two default profiles are already in place: the "Admin" user profile and the "(Everyone)" group profile. You cannot remove these profiles, but you can modify them. For example, the Admin profile does not have a password assigned to it, and you may want to add a password to the Admin profile. You can also change the username for the Admin profile. For details about updating the Admin profile, click Help on the User Profile Properties window.

The Admin profile is intended to be used by the Kofax Capture administrator, who typically is responsible for setting up and maintaining profiles. By default, every new user profile is automatically assigned to the "(Everyone)" group. As a result, each new user inherits the rights that are assigned to the "(Everyone)" group, in addition to the rights assigned in the user profile.

For example, a user whose user profile does not allow access to the Scan module might still be able to use it. This would occur if the user is a member of a group profile, such as "(Everyone)", for which access to the Scan module is allowed.

By default, the "(Everyone)" group is allowed access to every batch class and every Kofax Capture module. You can use the Group Profile Properties window - Members tab to restrict the batch class and module assignments for the "(Everyone)" group.

Changing the Login Password

Although the administrator usually assigns a password when a user profile is created, the user can change the password from the Kofax Capture – Change Password window. Furthermore, users with access to the Kofax Capture Administration module and user profile management can edit any Kofax Capture user password from the User Profile Properties window. If this is a concern, you may want to limit access to the Administration module.

Note If you forget the password, you have to uninstall and then reinstall Kofax Capture (which resets the Admin password back to <blank>). Also, you will lose your batch classes and any batches that were in progress at the time you uninstalled Kofax Capture.

You have the option of assigning the username and password for the Admin account during installation. For details, see "Updating Default Administrator Account During Installation" in the *Kofax Capture Installation Guide*. As another option, you can use the User Profile Properties window in the Administration module to update the username or password for the Admin account after installation. For details, click Help on the User Profile Properties window.

When the user launches a module, the password can be changed by selecting Change Password from the Kofax Capture - Login window. A user can change the password multiple times.

1. Launch a Kofax Capture module (other than the unattended modules) while the User Profiles feature is enabled.
2. In the **Kofax Capture - Login** window, enter the current user ID.
3. Click **Change Password**.
The **Kofax Capture - Change Password** window appears.
4. Enter the old password or leave it blank if there is no current password.
5. Enter a new case-sensitive password from 4 to 14 characters.
6. Enter the new password again in the **Confirm Password** text box.
7. Click **OK**.
Kofax Capture sets the new password.

Single Sign On

Kofax Capture's Single Sign On feature is automatically enabled whenever user profiles are enabled, and at least one of your profiles is linked to an operating system user or group. You can have any combination of linked groups and users, including Kofax Capture only groups and users. Kofax Capture groups and

users (groups and users that are not linked to the operating system) do not take advantage of the Single Sign On feature, and are required to log in.

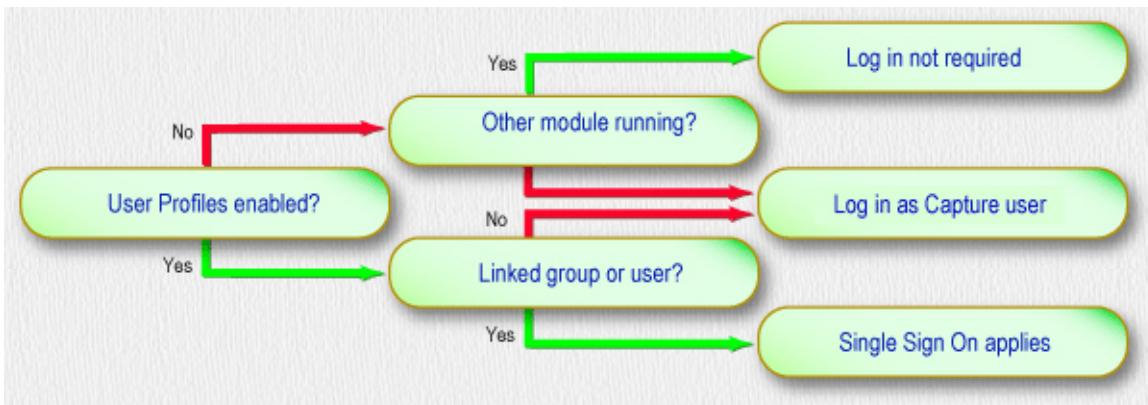
With this feature, once you have logged in to the operating system, Kofax Capture automatically employs your security settings each time you launch a Kofax Capture module. This means, if you have the appropriate access rights, you do not need to log in to each module as you launch it.

If a linked user does not have access rights to a particular module, access is denied. Furthermore, if Kofax Capture cannot locate a linked group or user profile, the user is required to manually log in.

If the User Profiles feature is enabled, but you are not a linked operating system user or a member of a linked operating system group, you must manually log in as a Kofax Capture user.

Note Kofax Capture XML Import Connector does not support the Single Sign On feature, or linked users.

The following chart shows the various login combinations.



Various Login Combinations

Note Batch class access rights and batch editing rights for linked users or groups behave in the same manner as for Kofax Capture users or groups.

Account lockout for non-linked users

In most cases, users are authenticated as Kofax Capture linked users. But in some situations non-linked users may also have access to the modules. To comply with security requirements, you can configure account lockout threshold (invalid logon attempts) and lockout duration for such users.

The following behavior applies for non-linked users when this feature is enabled:

- When the user exceeds the configured number of invalid logon attempts, the following message appears: "User account locked after exceeding maximum number of failed logon attempts. Please wait for the lockout period (<number> minutes) to elapse, and then try again. "
- The number of invalid logons for an account is reset after a successful logon or after the account is unlocked by the system or operator.

1. Start the Administration module.

2. On the **Tools** tab, in the **Users & Groups** group, click **Profiles**.
The "Kofax Capture Administration - User Profiles" window appears.
3. Select the **Enable User Profiles** check box.
4. On the **Lockout** tab, select the **Enable account lockout** check box.
The check box must be selected to access the other options for this feature.
If you clear the **Enable account lockout** check box, a confirmation message appears. If the feature is disabled, all the non-linked users may log on to the system without any warning.
5. Configure the following settings for the **Account Lockout Policy**.
 - **Account lockout threshold (invalid logon attempts)**: The default value is 3.
 - **Account lockout duration (in minutes)**: The default value is 30.

Locked users

The Locked Users panel contains a list of users that are locked at the central or remote sites. The users must wait for the configured lockout duration period to get unlocked automatically or you can manually unlock selected users.

1. Select the required user from the list. If required, click **Refresh** to update the list.
2. Click **Unlock**.

Note If the user is locked at a remote site, it may take some time to wait until the next Remote Synchronization Agent (RSA) updates the lockout information at the central site.

Centralized User Management

In Kofax Capture, you can manage your user and group profiles locally (from within Kofax Capture), centrally (using operating system tools or utilities), or using a combination of both methods. These choices allow you to manage your users and groups in the most effective or efficient manner that meets your needs.

As you work with your user and group profiles, you need to determine whether local user or centralized user management method works best for you.

Local User Management

If your users and groups are unique to your Kofax Capture system, and will never be visible to applications outside of Kofax Capture, you should create and manage these users and groups exclusively within the Kofax Capture Administration module. This is "Local User Management", and is best suited for smaller installations, or for customers who need to isolate their Kofax Capture users and groups in a controlled environment.

Centralized User Management

If there is no particular need for such isolation, you can create and manage your users and groups using the features and utilities provided by your operating system.

You can link Kofax Capture to your operating system users and groups using the Centralized User Management feature. Once this link has been established, Kofax Capture will automatically stay synchronized with your operating system user and group accounts. This allows you to escape the tedium of replicating and updating dozens or hundreds of users across two working environments.

In addition, by linking already existing operating system users or groups to Kofax Capture, your users can employ a single password for both Kofax Capture and the operating system.

Centralized User Management is best suited to large organizations with many users or groups, or to customers who do not want to maintain multiple passwords or multiple lists of users or groups. We suggest you link only groups. This simplifies your maintenance tasks, and makes it easier to give large numbers of users the same profile settings.

Centralized User Management Link Verification

If you have linked Kofax Capture to your operating system users or groups, you will need to synchronize with your operating system. Synchronization with the operating system is automatically performed each time you open the User Profiles window, and is maintained according to the following rules:

- If there are any previously linked operating system users or groups that have been deleted from the operating system, those users or groups are also automatically removed from Kofax Capture. For each operating system user or group removed, an entry is written to the Kofax Capture error log at the next synchronization.
- If you have a domain server (with operating system users or groups that are linked to Kofax Capture) that is not connected to the Kofax Capture system, a message will inform you that these users and groups are not accessible. Furthermore, the "not currently connected" icon displays next to their names in the User Profiles window.
- If any previously linked operating system users or groups have been renamed in the operating system, the changes are automatically updated by Kofax Capture.

Important Each time you make changes to the operating system users or groups, you might want to open the User Profiles window to ensure complete synchronization between Kofax Capture and the operating system. If you don't, the Kofax Capture user tracking logs may reflect outdated User IDs.

Logging in with Scripts

If you are using the Centralized User Management feature, an import script can log in using the `ImportSession.Login` function with an empty user ID and password. If the logged in user does not have access rights, the function will issue an error message indicating that the application does not have access rights.

Custom modules can accomplish that same thing by using the Login Object in the Kofax Capture Document Access Application Hierarchy.

If the User Profiles feature is enabled, but the logged in user is not a linked operating system user or a member of a linked operating system group, a valid Kofax Capture user ID and password must be passed to Kofax Capture from within the script.

User Profile Management

Administrators can allow or restrict user and group access to user profiles.

If "Allow Administration module access" is not selected but "Allow user profile management" is selected, the user launching the Administration module goes directly to the User Profiles window. If "Allow

Administration module access" is selected and "Allow user profile management" is not selected, the user goes directly to the Administration module with no access to user profiles.

1. On the **User Profiles** tab, select the user profile that you want to modify and click **Edit**.
2. On the **General** tab, select or clear the "Allow user profile management" check box.
3. Click **OK**.

Selecting Default Groups for New Batch Classes

From the User Profiles window, you select a group profile that will automatically be assigned to each new batch class created in the Kofax Capture Administration module. By default, the selection is "(Everyone)".

1. Start the Administration module.
2. On the **Home** tab, in the **Batch Class** group, click **User Profiles**.
The **User Profiles** window appears.
3. Select the **Enable User Profiles** check box, if necessary.
4. In the **Default** user group for new batch classes field, select the group profile to automatically assign to each new user profile.
5. Click **Save**.
As soon as you click **Save**, all profile assignments associated with all the Kofax Capture modules, except the Administration module, go into effect. Any assignments associated with the Administration module become effective when you close the Administration module.
6. Click **Close**.

Link Domain Users or Groups

Domain users and groups (centralized management) can be linked to Kofax Capture user profiles. When linked, Kofax Capture uses the network login to validate the user, thus eliminating the need for a separate login when starting the program.

Note Linked domain user IDs are displayed as: <domain>\<user ID>. For example, the user "JDoe" on the "Kofax" domain would be displayed as Kofax\JDoe throughout Kofax Capture. Likewise, linked groups are displayed as: <domain>\<group name>.

The following procedures assume that you have sufficient administrative privileges to see all the users and groups in your domain.

1. If necessary, create users or groups with access to the domain.
2. Start the Administration module.
3. On the **Tools** tab, in the **Users & Groups** group, click **Profiles**.
The User Profiles window appears.
4. From the **User Profiles** window, click **Link** to open the Microsoft Windows standard Select Users or Groups window.
5. Use the Select Users or Groups window to select the domain users or groups.
Refer to the documentation provided by Microsoft for more information about using this window.
6. Click **OK**.

Unlinking Users or Groups

To unlink domain users or groups

1. Start the Administration module.
2. On the **User Profiles** window, select the user or group you wish to unlink.
3. Click **Delete**. Deleting this link does not affect domain user or group accounts.

Adding a Group Profile

Use this procedure to add a group profile.

Note By default, the group profile called "Everyone" is built-in, and you cannot remove it.

1. On the **User Profiles** window, place your cursor in the **Groups** list and do one of the following:
 - Click **New**.
 - Right-click to display the context menu, and select **New**.
The **Group Profile Properties** window appears.
2. Click the **General** tab and make the following selections:
 - a. Enter a name up to 32 characters for the group in the **Name** field. The name is required.
 - b. Enter up to 80 characters in the **Description** field.
 - c. Select **Time out after inactivity in minute(s)** if you want group members to be logged out of Kofax Capture automatically after a specified period of inactivity. Then set the number of minutes that should elapse before the automatic logout occurs. The maximum value is 1440 minutes (24 hours). The default setting of 3 minutes for a new profile is inherited from the

Everyone group; if you change the default setting, it overrides the value set for the Everyone group.

Before the automatic logout occurs, a reminder message appears. If user activity is resumed before the specified time out interval, the working session is extended and the automatic logout does not occur.

If a user belongs to multiple groups, the maximum timeout value specified for any of the groups is applied.

Note The timeout setting for a user profile overrides the timeout setting for any group profile that includes the same user.

The timeout setting applies to any Kofax Capture module that the user is running, along with the Separator Sheet Utility, Report Viewer, XML Import Connector, and the Database Utility. The timeout setting does not affect modules running as services or the Kofax License Utility.

Note The timeout setting for a user profile overrides the timeout setting in any group profile that includes the same user.

- d. Select **Allow Administration module access** to give the group members access to the Kofax Capture Administration module.
- e. Select **Allow user profile management** to manage user and group access to user profiles.
- f. Select **Allow admin utility usage** to give the group members access to various administrative utilities such as the Database Utility.
- g. Select **Allow batch editing in Validation and Verification** to allow the group members to edit batches in the Validation and Verification modules.

Note Selecting this option only gives editing rights to the group. To actually enable batch editing for the Validation and/or Verification modules, you must also enable the "**Allow batch editing**" option for those modules on the **Batch Class Properties - Queues** tab.

- h. Select **Allow Batch Manager to edit batches that were granted access rights by a Custom Workflow Agent** to allow the group to edit batches in Batch Manager as described.
- i. Select **Allow Report Viewer module access** to allow the group to access the Report Viewer. The Administrator is permitted to access the Report Viewer module by default.
- j. Select **Allow selecting separation method at scan time** to allow the group to use the **Create Batch** window to select a separation method that overrides the one set for the batch class definition. The list of available separation methods on the **Create Batch** window includes only those that can be applied at scan time.

If this check box is not selected, the separation profile selections are not available to the group from the **Create Batch** window, and the separation method associated with the batch class definition is applied.

- k. Select **Allow modification of RSA compression settings** to allow access to the **Image Compression** and **XML Compression** settings on the **Remote Site** tab in Batch Manager.

3. From the **Available** list, select each batch class to which you want the group to have access.
4. Use the following buttons as appropriate:
 - **Add**: Add the selected item to the **Assigned** list.
 - **Add All**: Add all the items to the **Assigned** list.
 - **Remove**: Remove the selected item from the **Assigned** list.
 - **Remove All**: Remove all the items from the **Assigned** list.
5. Click **OK**.

Assigning Kofax Capture Modules to Groups

Use the Assigned Modules tab on the Group Profile Properties window to specify the Kofax Capture modules to which the group should have access. The modules are listed in the Available modules list. To assign group access to a module, you must move the module name to the Assigned modules list.

1. From the **User Profiles** window, select the group profile that you want to modify and do one of the following:
 - Click **Edit**.
 - Right-click to display the context menu, and select **Edit**.

The **Group Profile Properties** window appears.

2. Click the **Assigned Modules** tab.
3. From the **Available** list, select each module to which you want the group to have access.
4. Use the following buttons as appropriate:
 - **Add**: Add the selected item to the **Assigned** list.
 - **Add All**: Add all the items to the **Assigned** list.
 - **Remove**: Remove the selected item from the **Assigned** list.
 - **Remove All**: Remove all the items from the **Assigned** list.
5. Click **OK**.

Assigning Members to a Group

Use the Members tab on the Group Profile Properties window to assign one or more users to a group. The Available list includes the name for each user profile. To assign a user to a group, you must move the user ID to the Assigned list.

1. From the **User Profiles** window, select the group profile that you want to modify and do one of the following:
 - Click **Edit**.
 - Right-click to display the context menu, and select **Edit**.

The **Group Profile Properties** window appears.

2. Click the **Members** tab.
3. From the **Available** list, select each user ID you want to add to the group.

Note Each user ID on the list represents a user profile.

4. Use the following buttons as appropriate:
 - **Add**: Add the selected item to the **Assigned** list.
 - **Add All**: Add all the items to the **Assigned** list.
 - **Remove**: Remove the selected item from the **Assigned** list.
 - **Remove All**: Remove all the items from the **Assigned** list.

Note The "(Everyone)" group is not listed in the **Assigned** list.

5. Click **OK**.

Editing a Group Profile

Use this procedure to update an existing group profile.

1. On the **User Profiles** window, select the group profile you want to modify and do one of the following:
 - Click **Edit**.
 - Right-click to display the context menu, and select **Edit**.The **Group Profile Properties** window appears.
2. As appropriate, review and update the selections on the **General**, **Assigned batch classes**, **Assigned modules**, and **Group Members** tabs.
3. Click **Apply** to save your selections without closing the window.
4. Click **OK**.

Copying a Group Profile

Use this procedure to duplicate an existing group profile.

1. On the **User Profiles** window, select the group profile you want to copy and do one of the following:
 - Click **Copy**.
 - Right-click to display the context menu, and select **Copy**.The **Group Profile Properties** window appears, listing the same batch class, module, and group assignments as the profile you copied.
2. On the **General** tab, assign a unique name for the group profile.
3. Select the appropriate options for the new group profile.
4. Review the selections on the **Assigned Batch Classes**, **Assigned Modules**, and **Members** tabs, and update them as appropriate for the new group.
5. Click **OK**.

Deleting a Group Profile

Use this procedure to delete a group profile. You cannot delete the default "(Everyone)" group profile.

1. On the **User Profiles** window, select the group profile that you want to remove.
2. Do one of the following:
 - Click **Delete**.
 - Right-click to display the context menu, and select **Delete**.

3. Click **Yes**.

The group name for the profile is also removed from all user profiles to which it was assigned.

4. Click **Close**.

Adding a User Profile

Use the User Profile Properties window to add a user profile.

Note By default, the user profile called "Admin" is built-in, and you cannot remove it.

1. On the **User Profiles** window, place your cursor in the **Users** list and do one of the following:

- Click **New**.
- Right-click to display the context menu, and select **New**.

The **User Profile Properties** window appears.

2. On the **General** tab, make the following selections:

- a. Enter the Kofax Capture user login name in the **User ID** field. The field length must be from 3 to 85 alphanumeric characters (or 3 to 128 for non-linked users). Unicode characters, commas and periods are accepted. The entry is not case-sensitive.
- b. Enter up to 32 characters for the name of the user in the **Name** field.
- c. Enter a description (such as "Scan Operator") up to 80 characters. The entry is not required.
- d. Optionally enter a password for the user in the **Password** field. The field length must be from 4 to 14 alphanumeric characters, and the entry is case-sensitive. Unicode characters are accepted, along with the following special characters: Comma, period, exclamation point, ampersand, pound sign, dollar sign, percentage sign, slash, and question mark. The entry is not required.
- e. Enter the password again, if applicable.
- f. Select **Time out after inactivity in minute(s)** if you want the user to be logged out of Kofax Capture automatically after a specified period of inactivity. Then set the number of minutes that should elapse before the automatic logout occurs. The maximum value is 1440 minutes (24

hours). The default setting of 3 minutes for a new profile is inherited from the Everyone group; if you change the default setting, it overrides the value set for the Everyone group.

Before the automatic logout occurs, a reminder message appears. If user activity is resumed before the specified time out interval, the working session is extended and the automatic logout does not occur.

The timeout setting applies to any Kofax Capture module that the user is running, along with the Separator Sheet Utility, Report Viewer, XML Import Connector, and the Database Utility. The timeout setting does not affect modules running as services or the Kofax License Utility.

Note The timeout setting for a user profile overrides the timeout setting in any group profile that includes the same user.

- g. Select **Allow Administration module access** to give the user access to the Administration module.
- h. Select **Allow user profile management** to give the user the ability to add or user profiles.
- i. Select **Allow admin utility usage** to give the user access to various administrative utilities, such as the Database Utility.
- j. Select **Allow batch editing in Validation and Verification** to allow the user to edit batches in the Validation and Verification modules.

Note Selecting this option only gives editing rights to the user. To actually enable batch editing for the Validation and/or Verification modules, you must also enable the "**Allow batch editing**" option for those modules from the **Queues** tab in the **Batch Class Properties** window.

- k. Select **Allow Batch Manager to edit batches that were granted access rights by a Custom Workflow Agent** to allow the user to edit batches in Batch Manager as described.
- l. Select **Allow Report Viewer module access** to allow the user to access the Report Viewer. The Administrator is permitted to access the Report Viewer module by default.
- m. Select **Allow selecting separation method at scan time** to allow the scan operator to use the **Create Batch** window to select a separation method that overrides the one set for the batch class definition. The list of available separation methods on the **Create Batch** window includes only those that can be applied at scan time.
If this check box is not selected, the separation profile selections are not available to the scan operator on the **Create Batch** window, and the separation method associated with the batch class definition is applied.
- n. Select **Allow modification of RSA compression settings** to allow access to the **Image Compression** and **XML Compression** settings on the **Remote Site** tab in Batch Manager.

If this check box is not selected, the settings are not available in Batch Manager. These compression settings are available only on a remote site.

- o. Select **Allow RSA to run interactively** to run the Remote Synchronization Agent (RSA) interactively at remote sites. If this check box is not selected, the RSA is run only as a service, and the **Activate RSA** button in Batch Manager is not available.
- p. Select **Allow modification of Scanner Profiles** to give a user access to scanner profile and scan source settings. If this check box is not selected, the scanner profile and source settings in the Administration, Scan, Quality Control, or custom scan modules are not available for editing.
- q. Select **Allow Batch Manager to edit batch queue and status** to allow the user to modify the batch queue or status from the Batch Manager module.
- r. Select **Allow deletion of** and then select one of the options from the combo box:
 - **Batches, folders, documents and pages** (default)
 - **Folders, documents and pages**
 - **Documents and pages**
 - **Pages only**

For this option to come into effect for the Validation and Verification modules, select **Allow batch editing in Validation and Verification**.

Note Selecting this option only gives editing rights to the group. To actually enable batch editing for the Validation and/or Verification modules, you must also enable the **Allow batch editing** option for those modules on the [Batch Class Properties Window - Queues Tab](#).

If this option is not selected, the **Delete** option is not active and grayed out in all user interfaces for batches, documents, folders, and pages. In the scenario when the user still has this option available (for example, using [custom panels](#)) and attempts to delete a batch, document, folder or pages, an error message is displayed and the action is not performed.

By default, this option is selected for the "Everyone" group.

3. Select the batch classes to which you want the user to have access. You can do this later.
 - a. Click the **Assigned Batch Classes** tab.
 - b. From the **Available** list, select the batch classes, and select the appropriate action (add or remove).
4. Select the modules to which the user has access.
 - a. Click the **Assigned Modules** tab.
 - b. On the **Available** list, select the modules, and select the appropriate action (add or remove).
5. Select the groups to which you want the user to belong. You can do this later.
 - a. Click the **Group Members** tab.
 - b. On the **Available** list, select each group that you want to add, and select the appropriate action (add or remove).

Note Each group name on the list represents a group profile. For details on setting up group profiles, see [Adding a Group Profile](#).

6. Click **Close**.

Assigning Batch Classes to Users

When setting up a user profile, use the Assigned Batch Classes tab on the User Profile Properties window to specify the batch classes to which the user should have access. The batch classes are listed in the Available list. To give a user access to a batch class, you must move the batch class name from the Available list to the Assigned list.

Tip To view the list of users/groups currently assigned to a batch class, right-click on a batch class, and then select **Assigned User Profiles**.

1. From the **User Profiles** window, select the user profile that you want to modify and do one of the following:
 - Click **Edit**.
 - Right-click to display the context menu, and select **Edit**.

The **User Profile Properties** window appears.

2. Click the **Assigned Batch Classes** tab.
3. From the **Available** list, select each batch class to which you want the user to have access.
4. Use the following buttons as appropriate:
 - **Add**: Add the selected item to the **Assigned** list.
 - **Add All**: Add all the items to the **Assigned** list.
 - **Remove**: Remove the selected item from the **Assigned** list.
 - **Remove All**: Remove all the items from the **Assigned** list.
5. Click **OK**.

Assigning Kofax Capture Modules to Users

Use the Assigned Modules tab on the User Profile Properties window to specify the Kofax Capture modules to which the user should have access. To give a user access to a module, you must move the module name from the Available list to the Assigned list.

1. From the **User Profiles** window, select the user profile that you want to modify and do one of the following:
 - Click **Edit**.
 - Right-click to display the context menu, and select **Edit**.

The **User Profile Properties** window appears.

2. Click the **Assigned Modules** tab.
3. From the **Available** list, select each module to which you want the user to have access.
4. Use the following buttons as appropriate:
 - **Add**: Add the selected item to the **Assigned** list.
 - **Add All**: Add all the items to the **Assigned** list.
 - **Remove**: Remove the selected item from the **Assigned** list.
 - **Remove All**: Remove all the items from the **Assigned** list.
5. Click **OK**.

Assigning a User to One or More Groups

Use the Group Members tab on the User Profile Properties window to assign a user to one or more groups. The Available list includes the name for each group profile (except the "(Everyone)" group). To assign a user to a group, you must move the group name to the Assigned list.

1. On the **User Profiles** window, select the user profile to modify and do one of the following:
 - Click **Edit**.
 - Right-click to display the context menu, and select **Edit**.

The **User Profile Properties** window appears.

2. Click the **Group Members** tab.
3. On the **Available** list, select each group you want to the user to join.

Note Each name on the list represents a group profile.

4. Use the following buttons as appropriate:
 - **Add**: Add the selected item to the **Assigned** list.
 - **Add All**: Add all the items to the **Assigned** list.
 - **Remove**: Remove the selected item from the **Assigned** list.
 - **Remove All**: Remove all the items from the **Assigned** list.

Note The "(Everyone)" group is not listed in the **Assigned** list.

5. Click **OK**.

Editing a User Profile

Use this procedure to update an existing user profile.

1. On the **User Profiles** window, select the user profile to modify and do one of the following:
 - Click **Edit**.
 - Right-click to display the context menu, and select **Edit**.

The **User Profile Properties** window appears.

2. As appropriate, review and update the selections on the **General**, **Assigned Batch Classes**, **Assigned Modules**, and **Group Members** tabs.
3. Click **OK**.

Copying a User Profile

Use this procedure to duplicate an existing user profile.

1. From the **User Profiles** window, select the user profile that you want to copy and do one of the following:
 - Click **Copy**.
 - Right-click to display the context menu, and select **Copy**.

The **User Profile Properties** window appears, listing the same batch class, module, and group assignments as the profile you copied.

2. From the **General** tab, assign a unique user ID (the user name, description, and password are optional). Then select the appropriate options for the new user profile.
3. Review the selections on the **Assigned Batch Classes**, **Assigned Modules**, and **Group Members** tabs, and update them as appropriate for the new user profile.
4. Click **Close**.

Deleting a User Profile

Use this procedure to delete a user profile. You cannot delete the default "Admin" user profile.

1. On the **User Profiles** window, select the user profile that you want to remove.
2. Do one of the following:
 - Click **Delete**.
 - Right-click to display the context menu, and select **Delete**.
3. Click **Yes**.
The user ID for the profile is also removed from all groups to which it was assigned.
4. Click **Close**.

Checking Batch Class Assignments

Check the user profile / group profile assignments for a specific batch class from the Assigned Profiles window.

Note You can also assign access to a batch class with the User Profile Properties window or the Group Profile Properties window.

1. Start the Administration module. From the **Batch Contents** tree view, select the name of the batch class for which you want to look up the user/group assignments.
2. Right-click and select **Assigned User Profiles**.
The **Assigned Profiles** window appears.
3. Click the **Users** tab to view the list of users currently assigned to work on the batch class.
4. Click the **Groups** tab to view the list of groups currently assigned to work on the batch class.
5. Use the button controls to update the list of currently assigned users and/or groups for the batch class.
6. Click **Apply** to save the changes without closing the window.
7. Click **OK** to save the changes and close the window.

Setting An Automatic Timeout

You can set a Kofax Capture user or group to automatically sign out after a certain period of inactivity, based on the "Time out after inactivity" setting on the User Profile Properties or Group Profile Properties window. For example, if you set the timeout interval to 60 minutes, the user is automatically signed out if no activity is detected for 60 minutes.

Before the automatic logout occurs, a reminder message appears. If user activity is resumed before the specified time out interval, the working session is extended and the automatic logout does not occur.

A message appears before the timeout goes into effect, so the user has an opportunity to cancel the timeout.

The timeout setting applies to any Kofax Capture module the user is running, along with the Separator Sheet Utility, Report Viewer, XML Import Connector, and the Database Utility. The timeout setting does not affect modules running as services, the Scanner Configuration Utility or the Kofax License Utility.

For details, see the Help for the User Profile Properties and Group Profile Properties windows in the Administration module.

Document Separation

Document separation is the process of distinguishing one document from another at scan time or during import. Batches are made up of stacks of paper pages. The stack may contain single page documents, multipage documents, or a combination of both. The images must be separated back into documents, either automatically or manually, as the batch is scanned or imported. Once the document has been separated, then form identification associates the document with its form type.

Patch Code Separation

With Kofax Capture, you can use patch codes for different types of processing. For example, in addition to controlling how the endorser/annotation counter is reset, you can use patch codes on separator sheets to separate documents and/or batches. You can use the same or different patch code types for different types of processing.

For each type of processing, you must specify a left offset value. Kofax Capture searches for patch codes in a horizontal direction on an image, and the left offset provides a starting point for the search. If you specify different left offsets for the different types of processing, Kofax Capture automatically sets the left offset to 0. This allows Kofax Capture to search anywhere in the horizontal direction for the patch code.

Note Not all scanners support the patch code options provided by Kofax Capture. Refer to the documentation that came with your scanner for more information about your scanner.

Defining a Custom Document Separation and Form Identification Profile

You can define a custom document separation and form identification profile on the Custom Separation and Form Identification Profiles window.

When you display the window from the Ribbon in the Administration module, you can define one or more custom profiles to be available for selection when you define your batch classes.

When you display the window from the Create Batch Class or Batch Class Properties windows, you can define one or more custom profiles and select one of them for the current batch class.

Kofax Capture provides a set of Kofax-defined separation and form identification profiles which combine default settings for the most common separation and form identification combinations. Some have image cleanup profiles and recognition profiles associated with them.

1. On the **Tools** tab, in the **Separation & Identification** group, click **Profiles**.

2. Select the name of a separation and form identification profile from the list. The other options on the window change to indicate the settings defined for that profile.
3. Select a method for document separation. You can select one of the following:
 - **Kofax Manual**
 - **Kofax Fixed Pages**
 - **Kofax Patch Code Separators**
 - **Kofax Bar Code Separators**
 - **Kofax Separator Sheets**
 - **Kofax Page Recognition** (for form identification)

Note Single document processing may increase the number of documents processed in an hour, but it is only available when document separation occurs automatically in the Scan module.

4. If you selected "**Kofax Patch Code Separators**" in step 2, select additional settings as follows:
 - a. Select a recognition profile from the list of profiles. If none of the profiles is appropriate for your needs, click the **Edit** button.
The **Recognition Profiles** window appears, and you can define a custom profile.
 - b. On the **Name** list, select **Kofax Patch Code**.
 - c. Select an image cleanup profile from the list. If none of the profiles is appropriate for your needs, click the **Edit** button.
The **Image Cleanup Profiles** window appears, and you can define a custom profile. Click **Save As** to assign a name to the image cleanup profile, and then click **Close**.
 - d. Click **Save As** to save your recognition profile. Assign a name and click **OK**.
5. If you selected "**Bar code**" in step 2, select additional settings as follows:
 - a. Select a recognition profile from the list of profiles. If none of the profiles is appropriate for your needs, click the **Edit** button.
The **Recognition Profiles** window appears, and you can define a custom profile.
 - b. Select one of the bar code recognition profiles.
 - c. Select an image cleanup profile from the list. If none of the profiles is appropriate for your needs, click the **Edit** button.
The **Image Cleanup Profiles** window appears, and you can define a custom profile. Click **Save As** to assign a name to the image cleanup profile, and then click **Close**.
 - d. Click **Save As** to save your recognition profile. Assign a name and click **OK**.
6. Select a method for form identification. You can choose one of the following:
 - Manual identification
 - Separation bar code
 - Kofax separator sheets
 - Page recognition

Note Not all form identification options are available with all document separation options. The options that are not available are grayed.

7. If you selected "**Kofax Page Recognition**" in step 6, select additional settings as follows:
 - a. Select a recognition profile from the list of profiles. If none of the profiles is appropriate for your needs, click the **Edit** button.
The **Recognition Profiles** window appears, and you can define a custom profile.
 - b. Select an image cleanup profile from the list. If none of the profiles is appropriate for your needs, click the **Edit** button.
The **Image Cleanup Profiles** window appears, and you can define a custom profile. Click **Save As** to assign a name to the image cleanup profile, and then click **Close**.
 - c. Click **Save As** to save your recognition profile. Assign a name and click **OK**.
 - d. Use the **Confidence** slider to set a recognition confidence value.
You can select any value from 0 to 100, with 0 being the lowest confidence and 100 being the highest.
 - e. Use the **Difference** slider to set a recognition difference value.
You can select any value from 0 to 100, with 0 being the lowest difference and 100 being the highest.
8. Click **Save As** to save the settings as a new separation and form identification profile without closing the window.
9. Click **Save** to save the settings without closing the window.
10. Click **Close** to close the window.

Identifying Document Separator Zones

Use a separator zone to separate your images into documents. This is useful if the first page of all the forms in a batch contains fixed data at a fixed location. If the fixed data is of a type that can be read automatically (for example, using OCR, bar code recognition, patch code recognition, or other types of recognition), you can use a separator zone as a document separator. The page with the separator zone is considered the first page of the document.

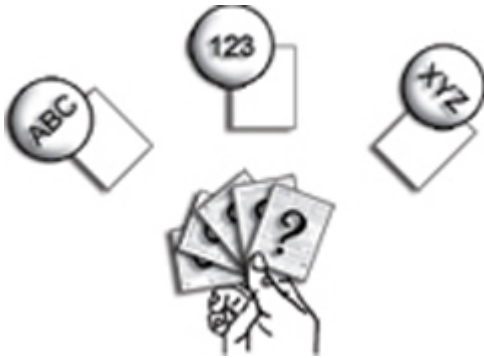
1. Scan or import a sample document (at least the first page) for every form type in the batch class.
2. On the sample page, draw the separator zone and specify the type of recognition to be used to process the zone.

For example, if the first page of your document contains a company logo that is all text, you can draw a separator zone around the logo text and optionally specify the text as search text.

3. Specify an OCR recognition profile for processing the zone.

Using Manual Separation

Manual separation puts you in complete control of the document separation and form identification process. With this method, you typically use the Scan module to select the appropriate document and form type for each page of the batch.



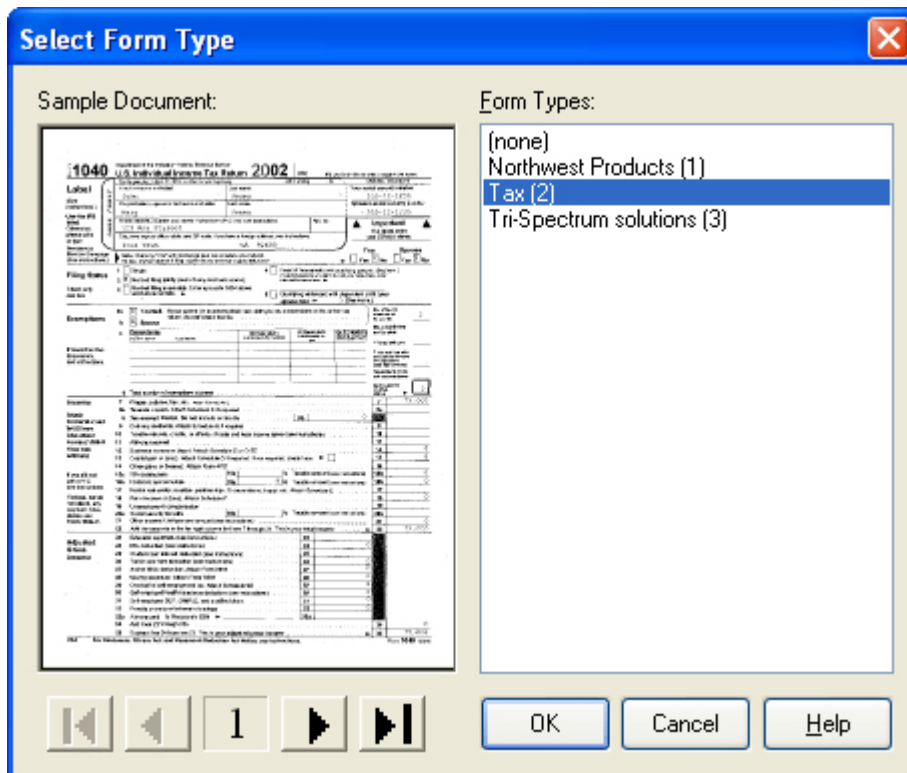
Manual Separation Method

Some custom modules require that you select manual separation as the method of document separation. This is especially true if the custom module skips the Scan module or replaces the Recognition Server module. See your custom module provider for information about configuring a batch class for document separation and form identification.

Because manual separation does not occur automatically in the Scan module, single document processing is not available when selected.

1. Configure a batch class for manual separation.
2. In the Scan module, create a batch using a batch class that uses manual separation.
Manual separation normally occurs in the Scan module. Images that are not manually separated are sent to the Quality Control module with the message, "No loose pages allowed," and you have to complete manual separation in the Quality Control module.
3. Scan your documents.
4. Look at the **Batch Contents** panel and notice that no documents are listed. Instead the pages are listed as numbered images.

5. Right-click Image 1 and click **"Create Document"** to open the **Select Form Type** window.



Select Form Type Window

If the batch class contains only one form type, the window does not appear. Instead, when **"Create Document"** is clicked, the image is automatically placed in a document identified with that single form type.

6. The "Form Types" area shows all the forms in the batch class. Select the form type that matches Image 1 and click **OK**. This creates a new document of that form type and adds Image 1 to it.
7. If more than one image belongs in the document, click and drag the image to add it to the correct document.
8. Repeat Steps 6 through 8 for every image in the batch until every image is part of an identified document.
9. Once manual separation is complete, close the batch and continue processing it through the workflow.

Using Fixed Page Separation

Fixed page document separation divides all the images of the batch into documents at scan time by counting the images and creating a new document every set number of images. For example, if every document in the batch class has exactly two pages, then you could set fixed page separation to two pages. At scan time, a new document would be created every two pages.



Fixed Page Separation

When single document processing is enabled, fixed page separation converts each separated document into an individual batch, then automatically closes the batch before separating the next document.

1. Configure a batch class for fixed page separation.
2. Prepare a stack of documents to be scanned.

If a page is missing or out of order at scan time, the order of subsequent pages may be incorrect for the rest of the documents. For example, if fixed page separation is set to two pages and a page 1 is missing somewhere in the batch, every document after that will start with page 2 and end with page 1, thus spoiling the rest of the batch.

3. Create a batch that uses fixed page separation.
4. Scan your documents.
5. Look at the **Batch Contents** panel. Notice that each page is in a document, and that each document has been associated with the only form type in the batch class.

The batch class for this example only has one form type. Fixed page separation will automatically identify each document in this case. If there had been more than one form type in the batch class, the images would have been separated into documents, but the form type for the documents would have been left blank (see [Single Form Type Form Identification](#)).

6. Continue processing the batch through the workflow.

The default behavior for fixed page separation with blank pages is to count the blank pages before separation. To ignore blank pages during separation, add the `IgnoreBlankPage` element to the `ACConfig.xml` file. This ignores the blank page and includes the next non-blank page.

Insert the following line in the `ACConfig.xml` file under the `<ACConfig>` element:

```
<IgnoreBlankPages>1</IgnoreBlankPages>
```







Using Patch Code Separation

Patch code document separation divides all the images of the batch into documents at scan time by analyzing each page of the batch looking for a patch code separator sheet. When a patch code separator sheet is detected, the scan engine adds the subsequent pages to a new document. By default, the patch code separator sheet itself is automatically deleted from the batch after document separation, but this can be changed with custom options.



Patch Code Separation

This method of separation is easily confused with separator sheet separation. The patch code separation method separates indiscriminately, based on any of the six patch code types, and has limited form identification abilities. On the other hand, separator sheet separation is much more configurable.

 Patch I	 Patch II
 Patch III	 Patch IV
 Patch VI	 Patch T

When single document processing is selected, patch code separation converts each separated document into an individual batch, then automatically closes the batch before separating the next document.

1. Configure a batch class for patch code separation.
2. Start the Separator Sheet Utility.
3. Select **Document Separator** as the Separator Sheet Type.
4. Select the **Batch Class Name** for which you wish to print a patch code separator sheet.
5. Select a **Patch Code Type** and the document separator is ready to print.

Important It does not matter which patch code type you select, since the default Kofax patch code profile will separate images into documents with any of the six patch code types. However, do not select a patch code type that is already reserved for batch separation. Doing so results in errors during batch class publication.

6. Click **Print** to print the selected patch code separator sheet and make copies as needed.
7. Prepare a stack of documents to be scanned and place a patch code separator sheet between each document.
8. Create a batch that uses patch code separation.
9. Scan your documents.
If the batch class has one form type, patch code separation automatically identifies each document in this case. If there had been more than one form type in the batch class, the images would have been separated into documents, but the form type for the documents would have been left blank.
10. Close the batch and continue processing it through the workflow.

Using Bar Code Separation

Bar code separation divides all the images of the batch into documents at scan time by analyzing each page of the batch looking for a separator sheet with a bar code on it. When a bar code separator sheet is detected, the scan engine adds the subsequent pages to a new document. By default, the bar code separator sheet itself is automatically deleted from the batch after document separation. Also, bar code separation treats any page containing a horizontal Code 39 bar code as a separator sheet, which means that pages containing a Code 39 bar code are deleted. You can use custom options to change these settings.



Bar Code Separation

Note Code 39 bar codes within documents may cause unwanted document separation.

What is encoded in the bar code is irrelevant. The mere presence of a Code 39 bar code triggers document separation — other bar code types do not trigger document separation. To separate based on the value of the bar code, see [Using Separator Zone Separation](#) or [Using Form Identification Zone Separation](#).

When single document processing is selected, bar code separation converts each separated document into an individual batch, and then automatically closes the batch before separating the next document.

1. Configure a batch class for bar code separation.
2. Print a bar code separator sheet for each document in the batch. A bar code separator sheet can be any sheet of paper that contains a horizontal Code 39 bar code.

Make sure the orientation of the Code 39 bar code is horizontal across the separator sheet. Vertical or diagonal bar codes are not recognized.

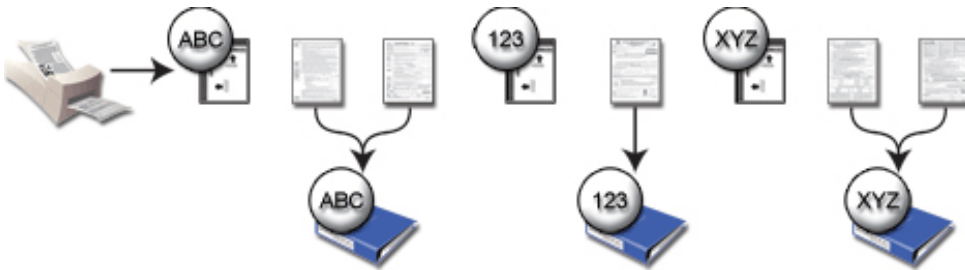
3. Prepare a stack of documents to be scanned and place a bar code separator sheet between each document.
4. Create a batch that uses bar code separation.
5. Scan your documents.

The batch class for this example only has one form type. Bar code separation automatically identifies each document in this case. If more than one form type existed in the batch class, the images would be separated into documents, but the form type for the documents would be left blank.

6. Continue processing the batch through the workflow.

Using Separator Sheet Separation

Separator sheet document separation divides all the images of the batch into documents at scan time by analyzing each page of the batch looking for a separator sheet. When a separator sheet is detected, the scan engine adds the subsequent pages to a new document and, at the same time, identifies the new document's form type. Separator sheet separation is similar to patch code separation, except that with this method the separator sheet performs two functions. It both separates pages into documents and uses the bar code to identify the form type. This makes this method the most reliable and powerful of all the separation and form identification methods.



Separator Sheet Separation

When single document processing is selected, separator sheet separation converts each separated document into an individual batch, and then automatically closes the batch before separating the next document.

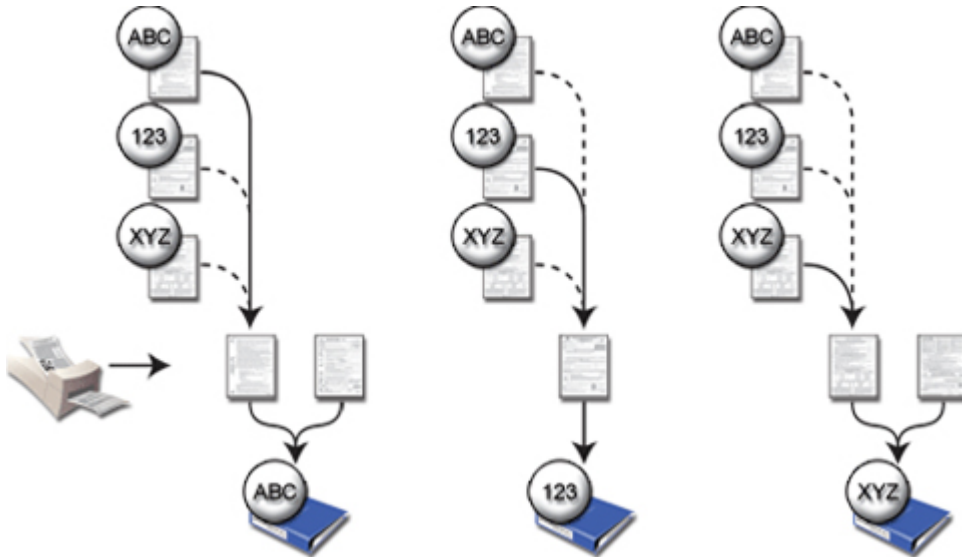
1. Configure a batch class for separator sheet separation.
2. In the Separator Sheet Utility, select "**Document Separator**" as the Separator Sheet Type.
3. Select the **Batch Class Name** for which you wish to print a separator sheet.
4. Select a **Patch Code Type**.

Note It does not matter which patch code type you select, since the default Kofax separator sheets profile separates images into documents with any of the six patch code types. However, do not select a patch code type already reserved for batch separation. Doing so causes errors during batch class publication.

5. Select a **Form Type** and the separator sheet is ready to print.
6. Click **Print** to print the selected separator sheet. Print one separator sheet of this form type for each document to be scanned. If necessary, change the **Form Type** and click **Print** again to print a separator sheet for a different form type.
7. Prepare a stack of documents to be scanned and place the correct separator sheet between each document. Make sure the form type bar code printed on the separator sheet matches the next document in the stack of documents.
8. Create a batch that uses separator sheet separation.
9. Scan your documents.
10. Look at the **Batch Contents** panel and notice that each page belongs to a document, and that each document has been associated with the corresponding form type.
11. Continue processing the batch through the workflow.

Using Page Recognition Separation

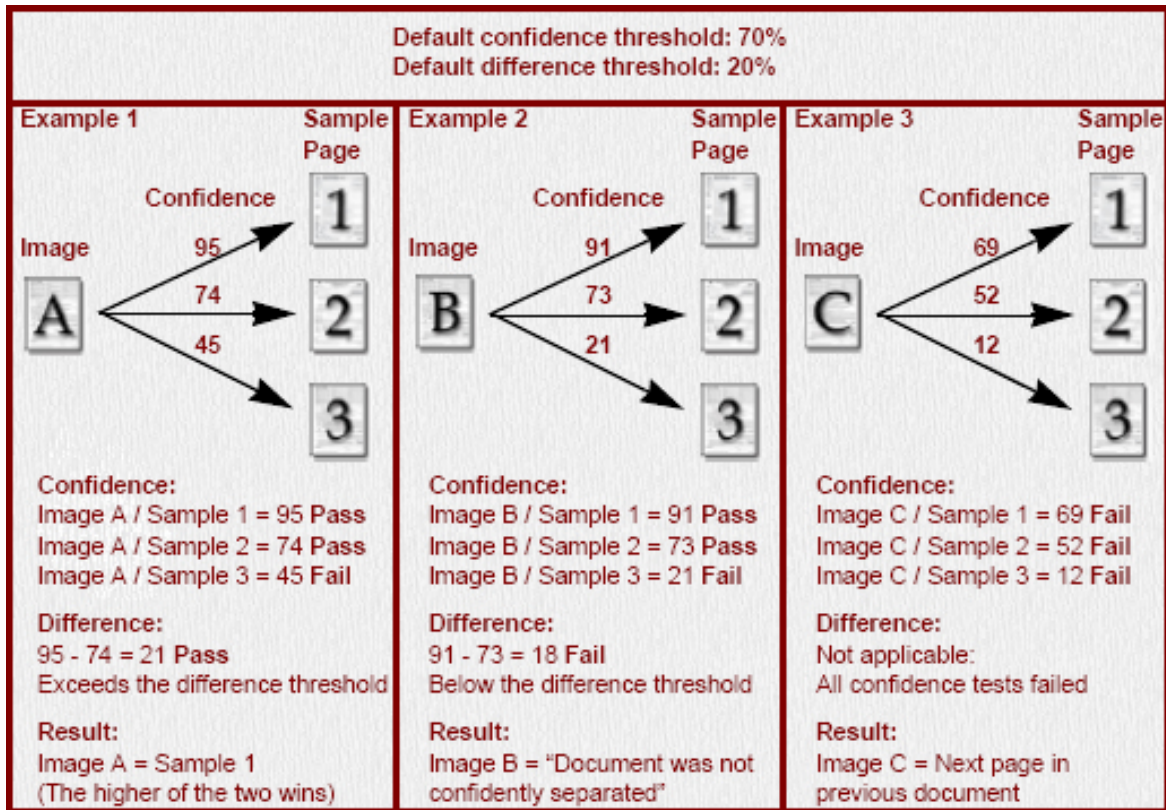
Page recognition document separation divides all the images of the batch into documents in the Recognition Server module by comparing each scanned image to the first pages of the form types in the batch class. When a scanned page matches the first page of a form type, that image is added as the first page in a new document of that form type. Subsequent pages are added to this new document until a new first page match is found.



Page Recognition Separation

The matching process is based on two thresholds: confidence and difference.

- **Confidence.** Recognition Server compares each scanned image to the first page of each form type in the batch class. It then calculates the percentage by which they match. The result is Kofax Capture's level of confidence that the two images match. The confidence threshold is the minimum acceptable level of confidence in which separation and form identification will occur.
 - If more than one comparison yields a passing confidence level, the match with the higher confidence is chosen. On the other hand, if every confidence ranking falls below the confidence threshold, the image is added as the next page in the previously created document.
 - However, if the confidence level falls below the threshold, but there is no document to add it to (for example, the image is the first in the batch), the image is sent to the Quality Control module where you have to manually separate and identify the image.
- **Difference.** This measures the similarity of two images by comparing the differences in confidence. The two highest confidence levels are compared. If the difference between the two is greater than the difference threshold, then the match with the greater confidence level is chosen, assuming it is greater than the confidence threshold.
 - If the difference between the two falls beneath the difference threshold, then the image is considered too similar to confidently separate and identify. In this case, the image is sent to the Quality Control module where you will have to manually separate and identify the image.



Confidence Threshold Table

Because page recognition separation occurs in the Recognition Server module and not in the Scan module, single document processing is not available when selected.

1. Configure a batch class for page recognition separation.
2. Prepare a stack of documents to be scanned.
3. Create a batch that uses page recognition separation.
4. Scan your documents.
5. Look at the **Batch Contents** panel. Notice that no documents are listed. Instead, just the pages are listed as numbered images.

Page recognition separation occurs in the Recognition Server module instead of the Scan module as the images are being processed.

6. Close the batch and start Recognition Server which will automatically process the batch.

The error "Document was not confidently separated" indicates that Recognition Server could not confidently separate your images. To prevent this error in the future, create a custom page recognition profile and adjust the confidence settings.

If Recognition Server was able to confidently separate the batch images, then processing continues to the next module in the batch class queue.

However, if there was an error in Recognition Server, then Batch Manager sends it to the Quality Control module where you have to manually separate and identify the unrecognized images.

7. Continue processing the batch through the workflow.

Using Separator Zone Separation

Separator zone document separation compares a specific zone on each scanned image with the same specific zone on the first sample page of each form type in the batch class. Every time a match is found, document separation occurs, and the image becomes the first page of a new document.



Separator Zone Separation

The separator zone is drawn on the first sample page of a form type. If other form types exist in the batch class, this zone is replicated on the first page of every other form type in the batch class. The specific information used to identify the zone can be a single specific piece of data collected from any recognition profile. For example, it could be the word "Northwest" captured using the Kofax Advanced OCR Zonal recognition profile, or it could be a bar code with the value "13579" using the Kofax 3 of 9 Bar Code recognition profile.

No matter which recognition profile you select, the data must be the same on the first page of each sample page in the batch class. If there is more than one form type in the batch class, separator zone separation separates the documents without identifying the form type. However, if the batch class only has one form type, each new document is identified as that form type.

Because separator zone separation does not occur in the Scan module, single document processing is not available when selected.

Configuring an Existing Batch Class

1. Confirm that Recognition Server is included in your batch class.
2. Begin configuring a custom separation and form identification method.
Separator zone separation is not a Kofax default option. It is only available through the use of a custom profile.
3. In the Document Separation area, select **"Use separator zone,"** and in the Identification area, select **"Manual identification."**

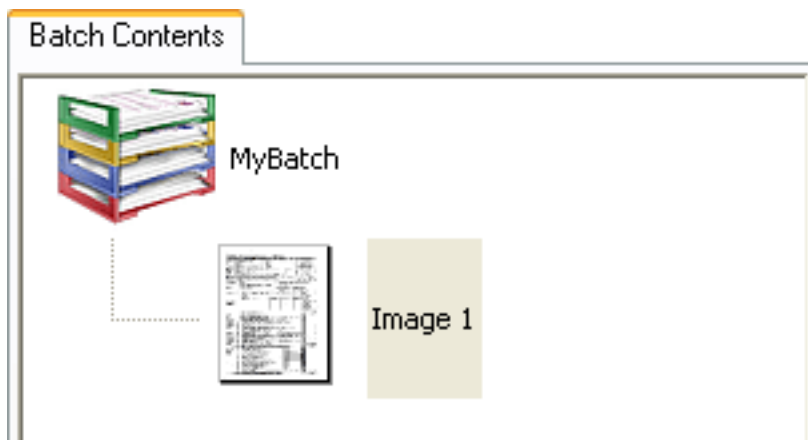
If, in the **Identification** area, you select **Page recognition** instead of **Document separation** you would have a combination of two separation methods — separator zone and page recognition separation. For now, we are focusing on separator zone separation. Experiment with combining the various methods of document separation and form identification.

4. Click **Save As** and enter a name for the new profile and then click **Close** to return to the **Batch Class Properties** window where the new custom profile is selected.
5. Click **OK** to save your settings and close the **Batch Class Properties** window.

6. On the **Definitions** panel, select the **Batch class** tab.
7. Click to expand your batch class, document class, and then expand the first form type. Select the first sample page of the form type and it appear in the page panel on the right.
8. On the **Insert** tab, in the **Zones** group, click **Separator**. Draw a separator zone around something that is common to the first page of every form type in the batch class.
The **Create Separator Zone** window appears.
9. Select and configure the appropriate recognition profile.
10. Click **OK** to set the separator zone.
11. Repeat steps 7 to 10 with each form type in the batch class.
12. Publish the changed batch class to make the changes available for processing.

Processing a Batch with Separator Zone Separation

1. Prepare a stack of documents to be scanned.
2. Create a batch that uses separator zone separation.
3. Scan your documents.
4. Look at the **Batch Contents** pane and notice that no documents are listed. Instead, just the pages are listed as numbered images.



Scanning Completed with Separator Zone Separation

Separator zone separation occurs in Recognition Server as the images are being processed instead of the Scan module.

5. Close the batch and start Recognition Server, which automatically processes the waiting images.
If Recognition Server is able to confidently separate the batch images, processing continues with the next module in the batch class queue.
If there was an error in Recognition Server, Batch Manager sends it to the Quality Control module, where you have to manually separate and identify the unrecognized images.
6. Continue processing the batch through the workflow.

Using Form Identification Zone Separation

Form identification zone document separation is not the same as form identification. Form identification zone separation compares specific zones on each scanned image with the same zones on the first sample page of each form type in the batch class. Every time a match is found, document separation occurs and the new document is identified with the matching form type. On the other hand, form identification is the process of matching documents with form types.



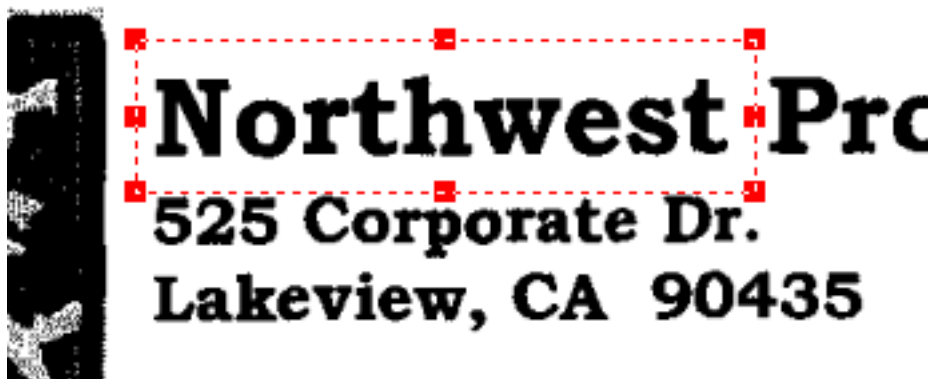
Form Identification Zone Separation

The form identification zone is drawn on the first sample page of each form type. The specific information the zone is set to recognize can be a single specific piece of data collected from any recognition profile. Because form identification zone separation does not occur in the Scan module, single document processing is not available when selected.

Configuring an Existing Batch Class for Form Identification Zone Separation

1. Confirm that Recognition Server is included in your batch class.
2. Begin configuring a custom separation and form identification method.
Separator zone separation is not a Kofax default option. It is only available through the use of a custom profile.
3. In the **Document Separation** area, select "**Use page recognition for form identification**," and in the Identification area, select **Page recognition**.
4. Set both **Confidence** and **Difference** to 0%. This effectively turns off page recognition and forces separation and identification to depend entirely on the form identification zones on the first page of each form type in the batch class.
5. Click **Save As**, type an appropriate name for the new profile, and then click **Close** to return to the **Batch Class Properties** window where the new custom profile is selected.
6. Click **OK** to save your settings and close the **Batch Class Properties** window.
7. On the **Definitions** panel, select the **Batch class** tab, click to expand your batch class, and then expand the first form type of your document class.
8. Select the first sample page of the form type.
The sample page appears in the **page panel** on the right.
9. On the **Insert** tab, in the **Zones** group, click **Form**.

10. Draw a form identification zone around something unique and identifiable on the first page of the form type.
The **Create Form Identification Zone** window appears.
11. Select and configure a recognition profile.
The configuration options for the form identification zone change according to the recognition profile you select.
12. Click **OK** to set the form identification zone.



Form ID Zone Selected

13. Repeat steps 8 to 12 with each form type in the batch class.
You can create more than one form identification zone on the first page of a form type. Multiple zones can improve the accuracy of this method, but adding zones decreases the overall processing speed.
14. Publish the changed batch class to make the changes available for processing.

Processing a Batch with Form Identification Zone separation

1. Prepare a stack of documents to be scanned.
2. Create a batch that uses form identification zone separation.
3. Scan your documents.
4. Look at the **Batch Contents** panel. Notice that no documents are listed. Instead, just the pages are listed as numbered images.
Form identification zone separation occurs in the Recognition Server module, instead of the Scan module, as the images are being processed.
5. Close the batch and start the Recognition Server module, which automatically processes the waiting images.
If Recognition Server was able to confidently separate the batch images, then processing continues to the next module in the batch class queue.
If an error occurs in Recognition Server, then Batch Manager sends it to the Quality Control module, where you have to manually separate and identify the unrecognized images.
6. Continue processing the batch through the workflow.

Editing a Separator Zone

Use the Separator Zone Properties window to edit a separator zone.

1. With the sample page displayed, right-click the separator zone to edit and click **Properties**.
2. On the **Separator Zone Properties** window, edit the properties.
3. Click **Apply** to save the changes without closing the window.
4. Click **Test** to apply your settings to this zone and check the results. The sample page must be displayed from the **Batch class tree view** tab to use QuickZones to verify your recognition and cleanup settings.
5. Click **OK** to save the changes and close the window.
 - Once you select the zone, you can resize it.
 - You can edit a separator zone from a sample page displayed from the **Document class tree view** tab. However, the sample page must be displayed from the **Batch Class tree view** tab when creating separator zones.

Document Separation Troubleshooting

The following table lists resolutions to the most common problems found while using the different separation methods.

Troubleshooting Document Separation

Method	Problem	Resolution
Manual	Why do I get a "No loose pages allowed" error?	"No loose pages allowed" is a common problem related to manual separation, because each image in the batch must be separated and identified in the Scan module before further processing can occur. When a new batch class is created, manual separation is the default separation method. Most production batch classes should not use this separation method. Review your separation needs, and select a more appropriate method for your batch class.
Fixed Page	Using XML Import Connector to import into a batch class that has been configured to use fixed page separation yields a "No loose pages allowed" error in subsequent modules.	This error occurs because the imported images were not converted into Kofax Capture documents in the Scan module. To allow separation and form identification to occur at import time, include the following attribute in the Batch element of your XML: <code>EnableAutomaticSeparationAndFormID="1"</code>
Patch Code	When I scan in color or grayscale mode, separation doesn't occur.	For this separation method, the Scan module only recognizes and separates black and white images. It treats color and grayscale images as if they were blank. However, Recognition Server does complete the separation process.

Method	Problem	Resolution
	<p>The patch code separator sheet is automatically deleted by the Scan module. I need to keep it in the document for further processing.</p>	<p>In the Custom Separation and Form Identification Profile window, clear the Found on stand-alone separator sheet check box, and in the export connector setup screen, select Skip first page.</p>
	<p>My patch code separator sheets are not being read at scan time when scanning in landscape mode and rotating the images.</p>	<p>Depending on your scanner model, rotation may occur after the attempt has been made to read the patch code separator sheet. In this case, patch code separation does not work unless there a patch code separator sheet exists in the orientation of the scan before rotation. To correct this problem, be sure to use a patch code separator sheet with the patch code in the orientation you intend to scan.</p>
	<p>Sometimes, separation occurs at the wrong time. It behaves as if my page was a separator sheet.</p>	<p>It is possible that Kofax Capture is misinterpreting portions of your documents as a patch code. Patch II and Patch IV are the most common patch code types to be misinterpreted. To avoid this confusion, create a custom patch code profile that specifies the intended patch code. In this case, do not choose Patch II or Patch IV.</p>
<p>Bar Code</p>	<p>The bar code separator sheet is automatically deleted by the Scan module. I need to keep it in the document for further processing.</p>	<p>In the Custom Separation and Form Identification Profile window, clear the Found on stand-alone separator sheet check box, and in the export connector setup screen, select the option Skip first page.</p>
	<p>When I scan in color or grayscale mode, separation doesn't occur.</p>	<p>For this separation method, the Scan module only recognizes and separates black and white images. It treats color and grayscale images as if they were blank. However, Recognition Server completes the separation process.</p>
	<p>I need to separate documents based on the value of the first, or only, bar code on a page.</p>	<p>Use separator zone separation rather than bar code separation.</p>
	<p>I need to capture the value of the bar code used to separate the documents. Can I use page-level bar code recognition with the same bar code used to separate the documents? If so, what are the requirements to make this happen?</p>	<p>Use form identification zone separation rather than bar code separation.</p>

Method	Problem	Resolution
	My bar code separator sheets are not being read at scan time when scanning in landscape mode and rotating the images.	<p>Yes. Both separation and page-level bar code recognition can happen on the same bar code. As a result, you can separate and populate an index field with the bar code value at scan time.</p> <p>There are several requirements to make this happen in the Scan module (if separation fails in the Scan module, then, if included in the batch class, the Recognition Server module separates the documents instead):</p> <ul style="list-style-type: none"> • There must be only one form type in the batch class. • There must be only one bar code recognition profile. This means that the page-level bar code recognition profile must be the same as the custom separation and form identification profile. • There must not be any recognition scripts in the batch class. • There must not be any zonal processing (for example, no index zones set to "auto recognition").
Separator Sheet	When I scan in color or grayscale mode, separation doesn't occur.	For this separation method, the Scan module only recognizes and separates black and white images. It treats color and grayscale images as if they were blank. However, Recognition Server does complete the separation process.
	The separator sheet is automatically deleted by the Scan module. I need to keep it in the document for further processing.	In the Custom Separation and Form Identification Profile window, clear the Found on stand-alone separator sheet check box, and in the export connector setup screen, select the skip first page setting.
	My separator sheets are not being read at scan time when scanning in landscape mode and rotating the images.	Depending on the model of the scanner you are using, rotation may occur after the attempt has been made to read the bar code separator sheet. In this case, bar code separation does not work unless a bar code exists in the orientation of the scan before rotation. To correct this problem, be sure to use a bar code separator sheet with the bar code in the orientation you intend to scan.
	When printing separator sheets with the Separator Sheet Utility, the landscape patch code or bar code is not printed.	The problem is not with the Separator Sheet Utility; instead, it is caused by the current printer or printer drivers. Either update your printer drivers or use a different printer.
Page Recognition	My images are sent to the Quality Control module with the note, "Document was not confidently separated."	<p>Either the images did not pass the confidence threshold or the difference threshold. Adjust one or both of the thresholds and try again.</p> <p>If, after several attempts, you continue to get this message, you may need to consider using a different separation and identification method.</p>
	Why can't separator zones be added to the second sample page of a form type?	Separator zones must display on the first page of a form type. It is likely that if you need a separator zone on a page other than the first, you probably need to create another form type.

Method	Problem	Resolution
Separator Zone and Form Identification Zone	Why can't separator zones or form identification zones be added to the second sample page of a form type?	Separator zones and form identification zones must display on the first page of a form type. It is likely that if you need them on a page other than the first, you probably need to create another form type.
	I have a clearly defined and reliable separator zone or form identification zone. Why is my form identification failing?	Check your Separation and Form Identification profile to make sure both Confidence and Difference are set to 0%. Many times when using these zones, the forms are too similar to use page recognition reliably. Setting Confidence and Difference to 0% bypasses page recognition and lets separation and identification occur based solely on the separator zone or form identification zone.

Table Behavior on Windows

Some of the windows in Kofax Capture contain a table for entering certain types of data. To navigate in the table, use any of the following:

- Mouse to move anywhere in the table
- Click to select a cell
- Tab key to move from column to column within a row
- Up and Down arrow keys to move from row to row within a column
- Home and End keys to move to the top or bottom row of the table

To add a new field type, click **New Field Type**. The Create Field Type window appears.

To select a value for columns with a list of choices, use your mouse to select from the list.

To sort the table, click the column header to sort the table by the values in that column. (Note that some tables cannot be sorted.)

To reorder rows in the table, click the row and drag it to a position.

To use table fields, create a new row and select (TABLE) as the field type. You can then add or remove rows to the (TABLE) with the table row buttons at the lower-left of the window.

On some windows (such as the Create Batch Class, Create Document Class, Batch Class Properties, and Document Class Properties), you can drag rows to reorder them.

Tip As an alternative to the New Index Field button shown in the illustration, you can right-click in the table and do one of the following: select "Insert" from the context menu or press the Insert key on the standard keyboard or the numeric keypad. If you do so with a field selected, the new field is inserted above the selected one. It is added with the same attributes as the selected field.

As an alternative to the Delete Index Field button shown in the illustration, you can right-click in the table and do one of the following: select Delete from the context menu or press the Delete key on the standard keyboard or the numeric keypad.

The tables are made up of rows and columns

Some columns will have a drop-down list of choices. You can use your mouse to make a selection from the list.

You can click on a columns header to sort the table by the values in that column

Some columns will allow you to enter a value.

These buttons allow you to add or remove table rows.

Click New Field Type to open the Create Field Type dialog box.

Click New Index Field to add a row to the table.

Click Delete Index Field to delete a row from the table.

Name	Display Label	Field Type	Default	Required	Verify	Hidden	Sticky	Total
Customer Name		Alphanumeric		True	False	False	False	False
Source Number		Alphanumeric		True	False	False	False	False
Ship To First Name		Alphanumeric...		True	False	False	False	False
Ship To Last Name		Alphanumeric...		True	False	False	False	False
Check/MO		Boolean_1	0	False	False	True	False	False
PO		Boolean_1	0	False	False	True	False	False
Visa		Boolean_1	0	False	False	True	False	False
Master Card		Boolean_1	0	False	False	True	False	False
Amer Express		Boolean_1	0	False	False	True	False	False
PO Number		Parts List		False	False	False	False	False
Parts List		(TABLE)						
Part Number		Alphanumeric...		False	False	False	False	False
Status		Alphanumeric...		False	False	False	False	False
Credit Card Number		Alphanumeric...		False	False	False	False	False
Mailers		Alphanumeric...		False	False	False	False	False

Table Properties

Deleting a Row in a Table

1. Click the row to remove.
2. Do one of the following:
 - Click **Delete Index Field**.
 - Right-click and select **Delete** from the context menu.
 - Press the **Delete** key from the standard keyboard or the numeric keypad.

Adding a Row to a Table

1. Click **New Index Field**. Right-click and then click **Insert** on the context menu. The row contains default values for all of the columns.
2. Select the row below the intended new row position.
3. Right-click and select **Insert** on the context menu. A new row is added directly above the original row. The new row will contain the same values as the row directly below it.
4. Select the row below the intended new row position.

5. Press **Insert** from the standard keyboard or the numeric keypad.
A new row is added directly above the original row. The new row contains the same values as the row directly below it.

Working with Multiple System Administrators

By default, multiple system administrators can run the Administration module on multiple workstations for each Kofax Capture installation. If you try to edit an item (batch class, document class, and so forth) that is already being edited by another system administrator, you may receive an error message or a message asking you to try editing the item later. If you receive no message and are able to edit an item concurrently with another system administrator, the last changes saved remain in effect.

Running the Administration Module with One Administrator

1. Ensure that all system administrators have closed the Administration module.
2. In the `KfsDB` element of the `ACConfig.xml` file, add the following line:
`<AllowMultipleAdmins>0</AllowMultipleAdmins>`

Running the Administration Module with Multiple Administrators

1. Close the Administration module.
2. In the `KfsDB` element of the `ACConfig.xml` file, add the following line:
`<AllowMultipleAdmins>1</AllowMultipleAdmins>`

Chapter 3

The Batch Manager Module

This module can be used to check the status or control the flow of batches in the Kofax Capture system. In addition, batches can be created, deleted, or routed to another processing module.

You can filter the list of batches to restrict the list of batches. The filter criteria can be saved as a profile for each Windows user, based on the Windows logon; if user profiles are enabled, you can save the filter criteria per user. For details, see "Filtering Batches" in the online help.

From Batch Manager, you can also create a history log file (*Bat_yymm.txt*) that records events that occur while a batch is in progress. For details, see the Batch Manager help.

Uploading Batches with Batch Manager

You can manually upload batches in Batch Manager (if the batch is ready for the Kofax Capture Network Server module).

1. Open the Batch Manager module at the remote site.
2. Select a batch that is "ready" for the KCN Server module.
3. On the **Home** tab, in the **Batch** group, click **Process Batch**.
The batch begins to upload and the **Batch Processing** window appears.

Recalling a Batch

From the central site, you can recall a batch that has been transferred to a remote site. If you recall a batch, work on that batch at the remote site is lost. If a remote site is in the middle of uploading a batch when it is recalled, work done at the remote site is still lost. In addition, the batch is deleted at the remote site when the next synchronization takes place. However, if the site profile is set to retain images at the remote site, the image files are not deleted.

You might choose to recall a batch, for example, if it cannot be processed at a remote site for some reason (such as network or staffing constraints). Once a batch has been recalled, all subsequent processing remains at the central site regardless of the original routing rules applied to the batch class. After being recalled to the central site, the batch goes to the module it would have gone to at the remote site, had the recall not occurred.

A workflow agent can still control routing for a recalled batch. It is up to the workflow agent designer to decide if recalled batches should be routed away from the central site. For example, the workflow agent can check to see if a batch has been recalled, and choose to route the batch to a specific remote site as determined by rules within the agent.

When a recalled batch is deleted from the remote site at the next synchronization, the following message is logged in the Kofax Capture error log (`ERR_YYMM.txt`) and the ACIC log (`ACIC_YYMM.txt` at the remote site):

```
The batch "<name>" has been deleted from the remote site due to a recall.
```

If a recalled batch is locked at the remote site during the next synchronization, a warning message is recorded in the logs. The batch is not deleted until it is unlocked, and a subsequent synchronization occurs. Normally, if someone at a remote site deletes a batch, that batch is also deleted at the central site during the next synchronization. However, if that deleted batch has already been recalled to the central site, the recall takes precedence and the batch is not deleted at the central site.

1. At the central site, open Batch Manager.
2. Select the batch (or batches) you want to recall.
3. On the **Home** tab, in the **Batch** group, click **Recall Remote**.

Note You can only select this menu item if the batch status is "In Progress (<Site Name> – Ready to download)", "In Progress (<Site Name> – Downloading)", or "In Progress (<Site Name> — Downloaded)."

A confirmation window appears.

4. Select **Yes** to confirm the recall.

The designated batches are recalled to the central site.

Converting a Kofax Capture Site to a Remote Site

To use a Kofax Capture installation as a Kofax Capture Network Server remote site, you must first convert it to a Kofax Capture Network Server remote site and activate the RSA.

Each configuration (client/server or standalone) must have at least one RSA activated, although more than one workstation in a client/server configuration can run the RSA.

Converting a remote site causes:

- The Administration module to become unavailable at the remote site.
- Batch classes to be deleted at the remote site.
- Batch classes, licensing information, and other settings to be downloaded from the central site.
- Additional Kofax Capture Network Server options to be available from the remote site's Batch Manager module.
- The Remote Synchronization Agent (if activated) to be started and added to your Startup group. Also, the RSA icon is present in your Windows system tray. The RSA can also be installed as a service.

Batch class creation and management must occur at the central site.

1. Open the Batch Manager module at the remote site.
2. On the **Remote Site** tab, in the **RSA** group, click **Convert to Remote Site**.

Note If you select No, you can upload batches through the Batch Manager module. You can activate the RSA on the remote site at a later time.

Activating RSA on a Remote Station

When you convert a site to a remote site, you are prompted to confirm activating the RSA on the remote site. If you choose not to activate the RSA when the site is converted to a remote site, you can activate the RSA at a later time.

For automatic polling, you need at least one client running the RSA at a remote site.

Note If you change the site name, the change is not reflected in the RSA Status display until the RSA is stopped and restarted.

Activating the RSA

If the User Profiles feature is enabled, you can activate the RSA only if "Allow RSA to run interactively" is enabled for your profile.

1. On the remote installation, open the Batch Manager module.
2. On the **Remote Site** tab, in the **RSA** group, click **Activate RSA**.
A confirmation message appears.
3. Click **Yes** to confirm.
The RSA icon appears in the Windows system tray, the Remote Synchronization Agent is added to the **Startup** group, and the RSA is started.

Note If you perform an automatic installation of Kofax Capture, you can set the `RSAURL` attribute to the full URL of the Web server in the initialization file to automatically activate the RSA on a remote workstation.

Closing or Stopping the RSA

1. Right-click the RSA icon in the system tray.
2. On the context menu, click **Close**.

Restarting the RSA

To restart the RSA, do one of the following:

- Restart your computer.
- On Windows XP computers: Select Start **Programs** > **Startup** > **Remote Synchronization Agent**.

Switching Central Sites (Web Server URLs)

The Web Server URL window is used to specify the central site's Web server URL. You might need to switch URLs, if the Web server experiences a problem. The instructions below assume you are using the same Kofax Capture server at your central site with the old and new Web server.

Note If the new Web server points to a different Kofax Capture server, ensure that no batches are in process, before switching central sites.

1. At the remote site, close any Kofax Capture modules that may be running (except the RSA and Batch Manager).
2. If necessary, open Batch Manager at the remote site.
3. On the **Remote Site** tab, in the **RSA** group, click **Web Server URL**.
The **Web Server URL** window displays the previously entered Web server URL.
4. In place of the old Web server URL, type the URL of the new Web server. If the Web site requires SSL, you must specify the URL with "https" instead of "http."
5. Click **OK**.
If the URL cannot be validated, an error message appears. If this occurs, check the spelling of the Web server URL.
If the specified Web server URL is validated, and all pending statistics and pending batches have been uploaded to the old central site, a warning appears, prompting you to confirm switching central sites.
A message also appears, stating that new batch classes and licensing will be downloaded, and batch classes and licensing from the old site will be discarded.
6. When prompted, click **Yes** to confirm changing the URL.
7. Close all Kofax Capture modules at the remote site (so that you have completely logged off Kofax Capture), and restart them as required.

To track user statistics, you have to ensure that user tracking is configured at the Kofax Capture central site server.

Chapter 4

The Scan Module

The Scan module is used to prepare, create, or edit batches of documents. Scan is typically the first queue in the Kofax Capture processing workflow.

Scan Module Overview

Use the Scan module to create, open, suspend, delete, or close a batch. You can edit the contents of a batch before it is sent to the next module in the processing workflow.

The Scan module is typically monitored and used by a scan operator, whose basic tasks include:

- **Batch preparation:** Before scanning, the operator manually prepares a batch of paper documents, adds separator sheets (if required), counts the number of pages in the batch (if required), and loads the batch into the scanner.
- **Batch creation:** The operator creates the batch by selecting the type of batch to create (the batch class) and then scanning or importing documents and pages. The document images are stored in a temporary folder for further processing by Kofax Capture.
- **Batch editing:** Once the batch is created, the operator can visually check documents or pages, and edit them as necessary. Editing functions include replacing, reordering, or rejecting documents and pages. Entire documents or individual pages can be rotated and saved in the rotated state.

When the batch is ready for further processing, the scan operator can close the batch to send it to the next processing module. If any of the documents or pages is rejected, the batch is sent to the Quality Control module.

Scan operators also have access to batch fields (optionally defined for a batch class), scanner properties, and endorser properties. They might also enter certain types of information for a batch, such as a batch total (optionally defined for a batch class) or the total number of pages in a batch.

Setting Up the Scan Module

When you set preferences for the Scan module, specify whether to scan documents or import images, perform permanent image cleanup on the entire batch, or endorse pages as they are scanned.

1. In the Administration module, on the **Batch Class Properties** window, click the **Queues** tab.
2. On the **Selected Queues** list, select **Scan** and then click **Properties**.
The **Scan Properties** window appears.
3. On the **General** tab, select a capture mode: **Scan** or **Import**.
The selection becomes the default mode for any batch created, based on the current batch class.

4. Select an image cleanup profile from the list. If none of the profiles is appropriate, click **Edit** to create a custom image cleanup profile.
The settings are applied to all documents in the batch.
5. Select one or both optional features for use with Kofax Capture, if your scanner supports them. The features cannot be used with Kofax Capture unless you select the appropriate check box.
 - Select **Patch code reader** if your scanner is equipped with a patch code reader.
 - Select **Bar code reader** if your scanner is equipped with a bar code reader.
6. To endorse and/or annotate your pages, click the **Endorsing** tab and select preferences.

Note Not all scanners support the endorser/annotation feature. Of those that do, some only support a subset of the options on the **Endorsing** tab. Before making selections, make sure you understand the capabilities of your scanner. Since scanners are selected in the Scan module, Kofax Capture cannot validate your selections in the Administration module.

- a. Enter the **Prefix text** for the endorser/annotation text. Alternatively, click the **Values** button and select a Kofax Value to use as your string. The same prefix is used for the endorser string imprinted on the documents and the annotations added to the images.
 - b. Select the number of **Counter digits** for the automatic counter.
The value of the counter is appended to the prefix string for the endorser/annotation text.
 - c. Enter the **Text Offsets** for the endorser/annotation text.
 - d. Enter the **Font Settings** for **Type** and **Orientation**.
 - e. Enter the **Counter Patch Code Control** settings.
 - f. Enter the **Counter Increment** settings.
 - g. Enter the **Counter Reset** settings.
7. On the **Batch Class Properties - Advanced** tab, optionally select preferences that affect processing in the Scan module. For details about individual settings, click **Help**.
 8. Click **OK** to save your settings.

The Auto-Import Feature

The Auto-Import feature allows the Scan module to create batches by reading batch information (such as the paths to images stored on disk, index data, and more) from special-purpose auto import files. Auto-Import is implemented as a command line option, and it is designed to allow another application to gather batch information, store the information in a special-purpose file, and then launch the Scan module to create the batches from the information in that file. As soon as Scan is finished auto importing the batch, an "auto import is complete" message is sent back to the calling application and that instance of Scan is shut down. The batches are then ready for processing within Kofax Capture.

For example, you might have an application that polls a system folder for incoming faxes. When a fax comes in, the application stores information about the images in a file. When a certain number of faxes come in, or a certain amount of time has passed, the application launches the Scan module to create the batch. Once the batch is created, it can be routed to other Kofax Capture processing queues as defined by the batch class.

The Auto-Import feature is one method for automatically creating a batch. You can use the XML Import Connector module to use XML to import documents into a batch.

Note The XML Import Connector module is deprecated and will be removed in a future release.

Import Image Files and Index Data

To auto import image files and index data, you must have an auto import ASCII text file and an optional .ini file. The ASCII text file must contain the index data and the paths/file names of the files to import. You can store additional batch information (such as the batch name, batch description, and priority) in the optional .ini file.

Image File Information and Index Data (ASCII Text File)

The auto-import ASCII text file must have the following entries. (They are shown below on separate lines to make them easier to read. In the text file, all information for a particular image file must be on the same line.)

```
"batch class name",
"index field name", "associated index field value",
"index field name", "associated index field value",
. . .
"index field name", "associated index field value",
"path and file name of the document image"
```

For example:

```
"Medical Forms", "Plan Num", "JM3891", "Name", "Lee", "x:\reldocs\5.tif"
"Medical Forms", "Plan Num", "PB7930", "Name", "Smith", "x:\reldocs\6.tif"
```

Parsing Logic

When parsing the auto-import ASCII text file format, Kofax Capture does the following:

- Looks for the initial quotation mark
- Looks for the first comma following the next quotation mark
- Uses the value between the initial quotation mark and the last quotation mark encountered before the comma, and ignores data outside the set of quotation marks

In the following examples, the underlined text represents the values that Kofax Capture uses.

```
"index field name", "associated index field value",
```

Embedded quotation marks or embedded commas are supported.

```
"index field name", "associated index "field" value",
"index field name", "associated, index field value",
```

Avoid a format that uses an embedded comma followed by an embedded quotation mark, as shown below.

```
"index field name", "associated"index field,"value",
```

Associated Batch Information (.ini File)

By default, batches created with the Auto-Import feature use the default batch name, description, and priority level. (The defaults are date/time for the batch name, no description, and 5 for priority level.) If you do not want to use the default values, you can provide an .ini file containing the values.

If you have an .ini file, it must have the same name as its associated text file. For example, if the name of your text file is medforms.txt, the name of your .ini file must be medforms.ini. Both files must exist in the same folder.

The format for the .ini file is shown below.

```
[Options]
BatchName0=
Description0=
Priority0=
. . .
BatchNamen=
Descriptionn=
Priorityn=
For example:
[Options]
BatchName0=Import00-98/12/12
Description0=Patient medical forms
Priority0=4
BatchName1=Import01-98/12/12
Description1=Patient medical forms
Priority1=
```

Note Any parameter left blank is set to the default value. For example, "Priority1=" from the preceding example would set the priority of the batch to 5.

Run Auto-Import for Image Files and Index Data

You can launch the Scan module to import image files and index data with the following command:

```
SCAN -i:Path\TxtFileName -w:hWnd -m:MsgID
```

Where:

`-i:Path\TxtFileName`

This is the path and file name of the text file that contains the index data and the locations and names of the image files to import.

`-w:hWnd`

This is the window handle of the application to receive the "auto-import is complete" message. Specify this parameter in decimal format, rather than hexadecimal.

`-m:MsgID (optional)`

When the auto-import process is complete, the Scan module sends a message to the window identified by the `-w` parameter. The `messageID` number must be specified in order for the message to be returned. Specify this parameter in decimal format, rather than hexadecimal. Windows requires that this number be greater than 1024.

During the auto-import operation, the Scan module sequentially reads the entries in the text file and imports all images into the same batch until a different batch class name is encountered. For example, if the first 50 image files specified in the text file have the same batch class name, all 50 files are placed in the first batch. If the next 25 image files have a different batch class name, they are placed in a second batch, and so on. If a blank line is encountered in the text file, a new batch is started.

Import Image Files Only

To auto-import image files only, you need an `auto-import.ini` file that contains the names of the files to import, along with other information required for the operation. You might want to use this method if the requirements of your application are such that index data is not needed.

Image File Information Only - No Index Data (.ini File)

The `auto-import.ini` file for image file information must have the format shown in the following example.

```
[Options]
BatchName=Import00-98/12/12
Description=Patient History Forms
BatchClass=Patient Forms
Priority=7
PagesPerDoc=1 -or- PagesPerDoc="auto"
hWnd=1111
MsgID=1074
LogFile=C:\IMP.txt
File0=F:\FAX\001.tif
File1=F:\FAX\002.tif
Filen=F:\FAX\00n.tif
```

For the files to import, the total path and file name must be fewer than 127 characters.

The .ini file with the batch class name specified in the `DocumentClass=` key is `DocumentClass=Patient Forms`, where "Patient Forms" in the preceding example is the batch class name.

New Kofax Capture users are encouraged to use the `BatchClass=` key. If the file happens to include both the `DocumentClass=` key and the `BatchClass=` key, Kofax Capture uses the `BatchClass=` key and ignores the other one.

Also note the following:

- The `Priority` entry overrides the default priority defined for the batch class. For example, if the priority for the document class is 5 and the priority specified in the auto-import file is 10, 10 is used for that batch. If no `Priority` entry is specified, Kofax Capture uses 5 as the default.
- The `Priority` entry also supports an entry of Low (9), Normal (5), or Urgent (2).
- The `PagesPerDoc` entry overrides the default value defined for the batch class. If you do not include a `PagesPerDoc` entry, your batch contains the same number of documents as you have files in your list (one document per file). Each document contains the same number of pages as its associated file. If the `PagesPerDoc` entry is "auto", then Auto-Import uses the separation method defined for the batch class in the Administration module.
- The list of files (`File0=`, `File1=`, and so on) must be sequential. For example, if you have five files to import, they must be listed in the .ini file as `File0=`, `File1=`, `File2=`, `File3=`, and `File4=`. If your list skips a number (for example, your list goes from file `File0=` to `File2=`), processing ends after `File0` is imported.
- The `LogFile` entry is used to specify a path and file name for the log file. If not specified, the default name (AUTOIMPO.LOG) is used. See [Auto-Import Log File](#) for details about the log file entries. Required entries are the following:
 - `BatchClass=` or `DocumentClass=`
 - Image file names
- The `hWnd=` entry and the `MsgID=` entry, if specified, must use decimal format, rather than hexadecimal format.

Because Kofax Capture is a 32-bit application, the specified window handle must refer to a valid 32-bit window handle. If a 16-bit application is used to specify a window handle, the messages are not returned successfully to the application.

Run Auto-Import for Image Files Only

You can launch the Scan module to import image files only with the following command:

```
SCAN -i:Path\INIFileName
```

Where:

```
-i:Path\INIFileName
```

This is the path and file name of the .ini file that contains the locations and names of the image files to import.

Auto-Import Issues

When using the Auto-Import feature, be aware of the following:

- The Auto-Import process stops if it detects the following:
 - Batch class for which batch totaling is in effect
 - Batch class defined with batch fields
 - Batch class with multiple form types that use index values
- Auto-Import does not validate index values. The assumption is that an index queue is defined to process the values and allow for translation of invalid index values to valid values.

Auto-Import Log File

During an auto-import operation, the Scan module writes entries to a log file. The entries describe the results of the operation.

Information is logged to the log file in the following format:

```
START: batch name , start date , start time
Name of first file imported
Name of second file imported
. . .
Name of last file imported
END: end date , end time , error number , index of last file imported , error message
```

The name of the log file is AUTOIMPO.log, and it is stored in the same folder as the auto import text file. When importing image files only, you have the option of overriding the default log file name.

When an error occurs, a non-zero constant and an error message are logged to the file. When the auto import process is successful, a code of 0 (zero) is logged.

Chapter 5

The Quality Control Module

Batches can be sent to Quality Control in two ways:

- As part of the batch processing workflow defined for a batch class
- As exception cases

Quality Control Module Overview

If you select the Quality Control module as one of the processing modules for a batch class, all batches based on that batch class are routed through the Quality Control module. This provides a way to monitor the quality of all batches in the system. To make this happen, you must select Quality Control as one of your processing modules for a batch class.

If you select the Quality Control module for use only with exception cases, batches containing documents or pages rejected from any module are routed automatically through the Quality Control module.

The Quality Control module is typically monitored by a scan or quality control operator, whose basic tasks include:

- **Quality assurance:** The operator visually checks the integrity of a batch. The operator checks the quality of the images and ensures the forms have been correctly identified. If necessary, the operator can edit the batch.
- **Batch editing:** The operator visually checks documents or pages, and edits them as necessary. Editing functions include replacing, reordering, or rejecting documents and pages. Entire documents or individual pages can be rotated and saved in the rotated state.

The quality control operator can change the form type assigned to a document.

When the batch is ready for further processing, the quality control operator can close the batch to send it to the next processing module.

Tip For more information about Quality Control, refer to the online Help available from the Quality Control module.

Setting Up the Quality Control Module

When setting up the Quality Control module, specify how the operator should review and verify pages.

1. In the Administration module, on the **Batch Class Properties** window, click the **Queues** tab.
2. On the **Selected Queues** list, select **Quality Control** and then click **Properties**.

The **Quality Control Properties** window appears.

3. Select each check box as applicable:
 - **Require review of scanned pages:** Requires the quality control operator to visually review each page in the batch before closing it.
 - **Require verification of form type:** Requires the quality control operator to verify that forms in the batch are correctly identified.
 - **Skip after Rescan:** Skips the Quality Control module after documents are rescanned as a result of Quality Control (rescan).
4. Click **OK** to save your settings.

Chapter 6

The Recognition Server and OCR Full Text Modules

This chapter gives an overview of the Recognition Server and OCR Full Text modules.

Recognition Server Module Overview

The Recognition Server module separates batches into documents, identifies form types, performs image cleanup, and extracts index data from images. It is required for any batch that uses automatic form identification, automatic document separation, automatic image cleanup, or automatic validation.

The Recognition Server module is an unattended module. Batches are processed in this module, and then automatically passed to the next module specified for the batch.

While batches are processed at this module, the results of the processing appear on the main screen.

This module requires no additional setup.

Note Single document processing is not available when document separation does not occur automatically in the Scan module.

OCR Full Text Module Overview

This module performs Optical Character Recognition (OCR) on an entire document and stores the results in a specified output format such as Microsoft Word or ASCII. The output format is specified in the document class associated with the document. The folder where the files are exported is specified in the export connector associated with a document class/ batch class.

OCR Full Text is an unattended module that requires no additional setup. While batches are processed at this module, the results of the processing appear on the main screen.

OCR Full Text Processing

OCR Full Text is used to capture an entire page and save the results as a text or word processing file. It is usually used in conjunction with full text search engines.

You enable OCR Full Text processing from the Create Document Class window or the Document Class Properties window.

The settings for OCR Full Text processing are defined within an OCR Recognition profile.

OCR Full Text Log File

The results of processing a batch at the OCR Full Text module can be tracked in a log file. This log file can be useful for reviewing how the batch was processed. When this feature is selected, the log file is created in your Kofax Capture installation folder:

```
\IMAGES\\LOG\OCR.txt
```

where <BatchNumber> is the number of a batch. A separate log file is available for each batch.

The log files are temporary; they are automatically deleted when the batch is exported. You can review the log file for a batch as long as the batch is available to Kofax Capture. You can copy the file to a different folder to review it after the batch is exported.

The Logging feature is available on the Tools menu.

Using Kofax Advanced OCR Full Text

This procedure shows how to set up your batch classes to use the Kofax Advanced OCR Full Text engine.

The following procedure assumes that your document and batch classes already exist. If not, you can make these selections while creating new classes.

1. Open the **Batch Class Properties** window.
 - a. Click the **Queues** tab.
 - b. Add **OCR Full Text** and other required modules.
 - c. Click **OK**.
2. Open the **Document Class Properties** window.
 - a. Click the **OCR** tab.
 - b. Select **Enable OCR full text**.
 - c. Select a dictionary file.
 - d. In the **Recognition Profile** drop-down list, select **Kofax Advanced OCR Full Text**.
 - e. Select **Skip first page of each document**.
 - f. Click **OK**.
3. Open the **Export Connector** window.
 - a. Select the **Kofax Capture Text** export connector.
 - b. Click the **Document Storage** tab.
 - c. Select **Export OCR full text files**.
 - d. Select an export folder.
 - e. Click **OK**.
 - f. Click **Close**.
4. Publish the batch class.

Chapter 7

The Validation and Verification Modules

From the Validation module, operators manually enter or select field data for each document in a batch. They also validate data captured with an automatic recognition method (such as OCR, bar code recognition, etc.). Validation is typically monitored and used by a validation operator, whose basic tasks include manual data entry, data validation, or batch editing.

Note that validation also occurs through validation scripts associated with the batch class. The default validation scripts provide validation limited to the length of the field and the type of data in the field. Custom validation scripts can also be used to perform additional validation. Refer to the *Kofax Capture Developer's Guide* for more information about custom scripts.

The Verification module is used to verify data a second time after the data is processed through the Validation module. Verification occurs for any field with the Verify attribute set to True on the Document Class Properties window.

Validation Module

From this module, validation operators manually enter or select index field data for each document in a batch. They also validate index field data captured with an automatic validation method (such as OCR, bar code recognition, etc.).

The **Validation** module is typically monitored and used by a validation operator, whose basic tasks include:

- Manual validation: For manual index fields, the operator manually enters or selects index field data.
- Data validation: For automatic index fields, the operator visually checks that the data is correctly captured. If not, the operator can enter or select the correct data.
- Batch editing: The operator can visually check documents or pages, and edit them as necessary. Editing functions include replacing, reordering, or rejecting documents and pages. Entire documents or individual pages can be rotated and saved in the rotated state.

Data is also validated by a validation script for the document class. The default scripts provide minimal validation, such as checking for the specified length of the data. Additional validation can be performed with custom scripts.

When the batch is ready for further processing, the validation operator can close the batch to send it to the next processing module.

Setting Up the Validation Module

When you set up the Validation module, specify whether the validation operator is allowed to edit the batch.

1. In the Administration module, on the **Batch Class Properties** window, click the **Queues** tab.
2. On the **Selected Queues** list, select **Validation** and then click **Properties**.
The Validation Properties window appears.
3. Select the **Allow batch editing** check box.
When selected, the validation operator is able to edit the batch.
4. Click **OK** to save your settings.

Verification Module

In this module, verification operators re-enter or visually verify data previously processed by the Verification module. This occurs for any index field tagged with the "verify" attribute in the document class definition.

The **Verification module** is typically monitored by a validation or verification operator, whose main tasks include:

- **Verification:** The operator verifies the data entered or verified by the validation operator:
 - If double-key data entry is specified, the verification operator enters or selects data for the index fields. Then, the index data is compared to the data entered or selected by the validation operator. If the data entered by the verification operator is the same as the data entered by the validation operator, the document is considered correctly validated.
 - If double-key data entry is not specified, the verification operator can visually check the data entered or selected by the validation operator. If necessary, the verification operator can change the data.
- **Batch editing:** The operator can visually check documents or pages, and edit them as necessary. Editing functions include replacing, reordering, or rejecting documents and pages. Entire documents or individual pages can be rotated and saved in the rotated state.

Data is also validated by a validation script for the document class. The default scripts provide minimal validation, such as checking for the specified length of the data. Additional validation can be performed through custom scripts.

When the batch is ready for further processing, the verification operator can close the batch to send it to the next processing module. If any documents in the batch are rejected, the batch is sent to the Quality Control module.

Setting Up the Verification Module

When you set up the Verification module, specify preferences for verifying index data for documents.

1. In the Administration module, on the **Batch Class Properties** window, click the **Queues** tab.
2. On the **Selected Queues** list, select **Verification** and then click **Properties**.
The Verification Properties window appears.

3. Select each check box as applicable, and then click **OK**.
 - **Allow batch editing**: Allows the verification operator to change the form type for a document, and to create or delete pages and documents in the batch.
 - **Blind data entry**: Hides values entered by the validation operator.
 - **Use independent verification**: Prevents the operator who validated the batch from performing the verification.

Chapter 8

The PDF Generator Module

PDF Generator is an unattended module that processes an entire document and stores the results in the PDF format you specify (PDF Image Only or PDF Image Under Text).

Note Both output types create a single PDF file per document. It is not possible to create a separate PDF output file for each page of a document.

Set the PDF format type in the Document Class Properties or the Create Document Class windows. If you set the output type to PDF without including PDF Generator as a queue in the processing workflow, a warning message appears when you publish the batch class.

eDocuments

The PDF Generator module treats eDocuments as blank pages. Additionally, each eDocument is treated as if it were a single page. This is consistent with eDocument treatment in other Kofax Capture modules, such as OCR Full Text.

Licensing

The PDF Generator module is included with Kofax Capture, and if you intend to exclusively process Kofax PDF Image Only files, no additional licenses are required. However, if you intend to output Kofax PDF Image Under Text files, you must obtain an upgrade.

Kofax PDF Compression

Kofax PDF Compression is an optional setting that directs the Kofax Capture PDF Generator module to create compressed PDF documents. This option can be used in combination with all Kofax PDF output types. PDF/A generates PDF 1.4. All other Kofax PDF output types generate PDF 1.4 or later, depending on the settings.

Compressed PDFs, in most cases, reduce file size, provide faster transmission speeds over networks, and occupy less space on storage devices.

Compression Formats

Kofax PDF Compression automatically selects the compression format based on PDF choice (standard PDF or PDF/A) and the input image type. The following table shows PDF and image type combinations and the resulting compression format.

Compression Formats

Image Type and PDF Type	Compression Format
Black & white image	CCITT4/JBIG2
Color or grayscale image and PDF/A	Combination of JPG-JPEG and CCITT4/JBIG2
Color or grayscale image and standard PDF	Combination of JPG-JPEG/JPEG 2000 and CCITT4/JBIG2

Chapter 9

The Export Module

Export is typically the final module in the Kofax Capture workflow. The Export module copies images to permanent storage and writes index data to a database or back-end document management system. Several standard export connectors are available for export to the following:

- ODBC-compliant databases
- Microsoft Access databases
- ASCII text files

Add your own custom export connectors to export your images and index data per specific requirements.

If your batch contains color image files, Export handles them according to the following rules:

- Only the color version of the image is exported (not the bitonal version).
- If color image cleanup is specified for the batch, but has not yet been performed, the Export module performs the cleanup before exporting the document. No messages are displayed in such cases, but system performance may be affected.

Export is an unattended module. Batches sent to the Export module are automatically processed.

Setting Up the Export Module

When you set up the default Export module, you can specify timing settings for exporting batches.

Note With Kofax Capture, you can customize the export process. The information here applies only to the default Export capabilities. If your Export module has been customized, refer to the documentation that came with your application.

1. In the Administration module, on the **Batch Class Properties** window, click the **Queues** tab.
2. On the **Selected Queues** list, select **Export** and then click **Properties**.
The **Export Properties** window appears.
3. Select a timing option for the export of batches.
 - If you select "**All Immediate**," the batch is set for export when it is sent to the Export module. Batches at the Export module are exported by priority level. Batches of the same priority level are exported on a first in, first out basis.
 - If you select "**Timed**," the batch is exported based on the start/stop settings that you specify.

4. For timed batches, select the start/stop settings:
 - a. Select a priority.
 - b. Select a start time.
 - c. Select a stop time.
5. Select the batch export order.

"Export batch by document order" causes all the documents to be processed in order. This is the default setting.

"Export batch by assigned export connector" causes all the connectors to be processed in order.
6. Select the type of **Error Recovery** to use.

When selected, all batch processing is terminated whenever an error occurs, and the entire batch is marked as un-exported. If not checked, fatal errors and non-fatal errors are handled differently. Fatal errors are handled as if this check box is selected. For non-fatal errors, the document causing the error is rejected and ignored for the rest of the batch processing, and processing continues for the remaining documents in the batch.
7. Click **OK** to save your settings.

Chapter 10

Disaster Recovery

This chapter provides information about configuring and using the Kofax Capture Disaster Recovery feature, which is intended for system administrators who manage the disaster recovery features for a Kofax Capture Enterprise installation.

Disaster recovery is the process of regaining access to the data, hardware and software necessary to resume critical business operations after a natural disaster or catastrophe occurs. In a large Kofax enterprise installation that includes multiple sites, servers, and personnel centers in various geographical locations, a thorough business recovery plan is imperative.

A business recovery plan is a start-to-finish solutions approach to disaster recovery for your site. Although the Disaster Recovery feature provides a partial solution, it cannot fill the void for hardware and software configurations that are unique to your site, nor can it provide specific training for your personnel.

Your business recovery plan should include a training section for your personnel so they know what to do in various situations. For example, if a central site becomes inoperable, normal duties will cease for a large number of people who could potentially be deployed to work on solutions.

Interruption of Critical Functions

The Kofax Capture Disaster Recovery feature addresses the infrastructure needed to prepare for business continuity and data recovery.

Business Continuity

Business Continuity refers to the recovery and restoration of interrupted critical functions. For a Kofax Capture enterprise site, Business Continuity requires a backup central site. When a disaster strikes and causes the primary site to go down, remote sites are automatically routed to the alternate central site, personnel perform appropriate tasks per their training, and batches continue to be seamlessly uploaded. This case requires no special action because it is transparent.

Data Recovery

Data Recovery implies that data is safely backed up and can be restored. For a Kofax Capture enterprise site, this requires the batch backup feature to be selected, batches and batch classes to be replicated to another secure location, and that administrative data is exported on a regular basis. When a site goes down, it can easily be restored to the last backup point.

Note The Disaster Recovery feature ensures recovery of batches created at remote sites, but provides no recovery solution for batches created at a central site.

Features

Use the Kofax Capture Disaster Recovery feature to do the following:

- Back up, replicate, and restore batches and batch classes
- Specify batch upload behavior for optimal use of multiple central sites
- Manage the availability of central sites with easy-to-use utilities
- Share licensing across a Kofax Capture Enterprise installation
- Customize how administrative data is copied to alternate central sites
- Easily send custom module configuration data to an entire installation
- Customize load balancing among central sites using workflow agents
- Export and import administrative data

Note The SQL Server AlwaysOn Availability Groups feature for high availability and disaster recovery is supported.

Setting Up for Disaster Recovery

You can make configuration settings that affect several areas: the entire enterprise, central sites, alternate central sites, and customization. The following sections explain each configuration.

Enterprise Setup

Disaster Recovery setup at the enterprise level includes the following:

Shared and Backup Licensing Support for Disaster Recovery

Because a Disaster Recovery configuration has at least two central sites, it employs a shared license scheme that requires minor configuration adjustments.

Backing Up, Replicating, and Restoring Batches

The Disaster Recovery configuration provides several features intended to secure your batches and batch classes in the event of a central site failure. First, it provides a mechanism to automatically back up batches and their associated batch classes to a user-specified location. Once automatic batch backup is configured, you can schedule third-party replication software to transparently copy batch information to a secure location. In the case of a disaster, your critical business data is securely backed up. Once the down central site is active again, you can execute an easy-to-use command line utility to restore any batches that may have been lost.

Central Site Setup

Setting up your central sites for a Kofax Capture Disaster Recovery configuration includes the following:

- Creating a list of all the central sites and their URLs that are part of your Kofax Capture Disaster Recovery configuration. For more information, see [Creating a List of Central Sites](#).
- Specifying batch upload behavior. You can configure a primary site so that remote sites automatically select a central site for load balancing or upload batches using a priority list of central sites. To specify

batch upload behavior and to optionally create a priority list of central sites, use the KCN Server Remote Site Profiles Window - Business Continuity tab. You can also specify batch upload behavior using a workflow agent.

Alternate Site Setup

The Kofax Capture Disaster Recovery configuration provides several optional methods to modify the way batches are processed. For example, when you export administrative data from one system and import it to another, you can substitute new values for the configuration settings. You might use this feature to develop and test using one path for images, and then move to a production configuration using another path for images. You could also use this method to specify a new path for images in a disaster recovery scenario. There are comparable substitution mechanisms provided for image files, custom data, and export connector setup data. For more information, see [Data and Path Substitution](#).

Customization

The Kofax Capture Disaster Recovery configuration also provides several customization options, as outlined below.

Transferring Custom Module Configuration Data

You can place custom module configuration data in a designated folder at the central site. As a result, a KCN Server automatically sends the configuration data to remote sites when they synchronize and to alternate central sites when a batch of another central site is uploaded. This allows administrators to easily send custom module configuration data to the entire installation. For more information, see [Transferring Custom Module Configuration Data](#).

Customizing Workflow Agents

You can create a workflow agent using the Kofax Capture Optimized Custom Module API to customize the current load balancing or priority scheme. For example, based on a set of business rules, you might want to override the current priority list and route batches to a different central site from what is currently specified. For more information, see the *Kofax Capture Developer's Guide*.

Operations

After enabling and configuring your Kofax Capture Disaster Recovery configuration, you can manage the use and availability of each central site as explained below.

Switching to a New Primary Central Site

You can switch any remote site to a new primary central site by running the KCN Server Site Switch command line utility. You might want to temporarily switch remote sites to another primary central site to perform routine maintenance at a particular central site. In another case, a central site might be down, and to preserve business continuity, you can switch all remote sites to use another central site as a primary. For more information about this utility, see [Switching to a New Primary Central Site](#).

Removing a Central Site

You can delete a central site by running the KCN Remove Central Site command utility. After switching any remote sites that are using a particular central site, you might want to delete that central site from

the KCN Server central site list. You can perform this operation to remove a particular central site for an undetermined period of time. For more information about the utility, see [Deleting a Central Site](#).

Exporting and Importing Administrative Data

You can export and import administrative data such as batch classes, KCNS profiles, and user profiles. This allows you to save periodic snapshots of administrative data. You can use administrative data export and import in to duplicate administrative settings when restoring or switching primary sites or to transfer administrative settings from a development site to a production site. For more information, see [Exporting and Importing Administrative Data](#) and [Administrative Data Export and Import Recommendations](#).

Tracking Batch Class Versions

At the central site, you can use the Versions feature to update and track the published batch class versions that are in use at each remote site. For more information about the Versions feature, see the Administration module help.

Backup and Shared License Server Support

This section explains how licensing is activated and configured in a Kofax Capture Disaster Recovery configuration.

Backup License Server Support for Disaster Recovery

To manage all licensing requests, Kofax Capture supports multiple license servers: a primary and one or more backups. When multiple license servers are available, each license server requires its own activation code and license configuration. A remote site backup license server gets a license from the central site. If you selected the hardware key option, each license server also requires its own hardware key.

Note For information about the backup license server for remote sites, see "Activating the Remote Backup License Server" in the *Installation Guide*.

In any configuration, if the primary license server fails, the system automatically switches to the backup license server. The system can use this backup license server until it runs out of volume. When the primary system is restored, Kofax Capture automatically switches to it again for licensing. A backup license is included with Kofax Capture Enterprise.

With a disaster recovery configuration, you can activate the backup license server at an alternate site. That way, in a disaster situation or during routine maintenance, if the system at the central site providing primary licensing becomes unreachable, a system at an alternate central site with backup licensing can continue the licensing function, allowing uninterrupted workflow.

For example, your business might require a system that includes two central sites that process 2M pages a year with 20 remote sites (with one station license at each site). Regardless of how the site is configured for batch uploading, all remote sites would initially obtain licensing from the primary licensing server at a central site. If, for some reason, the primary licensing server becomes unavailable, licensing would automatically switch to the backup licensing server at an alternate central site.

Note The backup license server is intended for use as a short-term solution until the primary license server is up and running again. The backup server offers limited page volume licensing, which is suitable as an interim solution but not for long-term purposes. Therefore, the backup license server must be configured for temporary use only in the event of a license server failure.

Setting Up Shared License Server Support for Disaster Recovery

In a Disaster Recovery system configuration, licensing must be shared among all central sites. For example, suppose your system configuration contains two central sites. Set up your configuration using the following general steps:

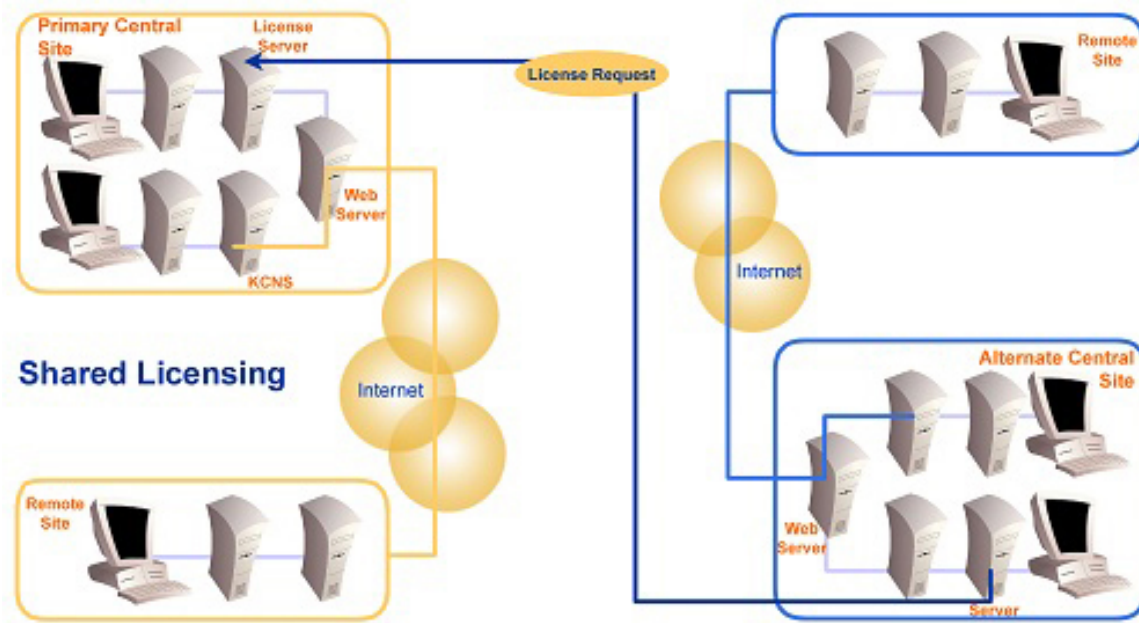
1. Install both central sites. If you selected the hardware key licensing option, attach hardware keys.
2. Activate your licenses. The activation process establishes licensing information for the central sites as well as all remote sites (based on assigned remote site profiles).
 - a. Activate the primary license wherever you plan to run the primary license server.
 - b. Activate a backup license at the alternate central site. The backup server can also be activated on the server or any workstation at the site.
3. When activation is complete, set up shared licensing by configuring all central sites to use the primary license server.
4. Finally, install the remote sites. Remote sites receive their licensing based on the rules you have established in the **KCN Server Remote Site Profiles** window.

Note The license server on a standalone installation cannot be shared.

Configuration

You can configure a shared license by updating the ACConfig.xml file. For a client/server installation, this file is located in <ServerPath>\Config. Check with your administrator for the exact location of this file.

The following shows a typical section of the licensing portion of the ACConfig.xml file.



Licensing for a Disaster Recovery Configuration

```
<Licensing>
  <Service Key="Licensing\Licensing Service"
    Host="System_on_CS_1"/>
  <Service Key="Licensing\Licensing Service"
    Host="System_on_CS_2"/>
</Licensing>
```

The terms "System_on_CS_1" and "System_on_CS_2" reflect the fact that a license server may be activated on any workstation or server at the central site.

The following examples show how to configure a shared license. It explains how to edit the ACConfig.xml file and which license server to use.

Two Central Sites - Configuration

The following illustrates a sample configuration with two central sites.

Before Editing ACConfig.xml

Central Site	ACConfig.xml File	License Server
1 (Primary)	<Licensing> <Service Key="Licensing\Licensing Service" Host="System_on_CS_1"/> </Licensing>	Primary
2 (Alternate)	<Licensing> <Service Key="Licensing\Licensing Service" Host="System_on_CS_2"/> </Licensing>	Backup

Note the changes in the following table.

After Editing ACConfig.xml

Central Site	ACConfig.xml File	License Server
1 (Primary)	<pre><Licensing> <Service Key="Licensing\Licensing Service" Host="System_on_CS_1"/> <Service Key="Licensing \Licensing Service" Host="System_on_CS_2"/> </Licensing></pre>	Primary
2 (Alternate)	<pre><Licensing> <Service Key="Licensing\Licensing Service" Host="System_on_CS_1"/> <Service Key="Licensing \Licensing Service" Host="System_on_CS_2"/> </Licensing></pre>	Backup

Note The text that changed in each ACConfig.xml file is bold.

Four Central Sites - Configuration

In a four central site configuration, a license server is required on only two of the four central sites. The following illustrates a sample configuration.

Before Editing ACConfig.xml

Central Site	ACConfig.xml File	License Server
1 (Primary)	<pre><Licensing> <Service Key="Licensing\Licensing Service" Host="System_on_CS_1"/> </Licensing></pre>	Primary
2 (Alternate)	<pre><Licensing> <Service Key="Licensing\Licensing Service" Host="System_on_CS_2"/> </Licensing></pre>	Backup
3 (Alternate)	<pre><Licensing> <Service Key="Licensing\Licensing Service" Host="Central_Site_3"/> </Licensing></pre>	None
4 (Alternate)	<pre><Licensing> <Service Key="Licensing\Licensing Service" Host="Central_Site_4"/> </Licensing></pre>	None

Note the changes in the following table.

After Editing ACConfig.xml

Central Site	ACConfig.xml File	License Server
1 (Primary)	<pre><Licensing> <Service Key="Licensing\Licensing Service" Host="System_on_CS_1"/> <Service Key="Licensing \Licensing Service" Host="System_on_CS_2"/> </Licensing></pre>	Primary
2 (Alternate)	<pre><Licensing> <Service Key="Licensing \Licensing Service" Host="System_on_CS_1"/> <Service Key="Licensing\Licensing Service" Host="System_on_CS_2"/> </Licensing></pre>	Backup
3 (Alternate)	<pre><Licensing> <Service Key="Licensing \Licensing Service" Host="System_on_CS_1"/> <Service Key="Licensing \Licensing Service" Host="System_on_CS_2"/> </Licensing></pre>	None
4 (Alternate)	<pre><Licensing> <Service Key="Licensing \Licensing Service" Host="System_on_CS_1"/> <Service Key="Licensing \Licensing Service" Host="System_on_CS_2"/> </Licensing></pre>	None

Note The text that changed in each ACConfig.xml file is bold.

In addition to editing the ACConfig.xml file, we recommend that you disable the license servers on central sites 3 and 4. For details, see the *Installation Guide*.

Optional Advanced Settings

The following shows a section of the licensing portion of the ACConfig.xml file that uses several advanced features.

```
<Licensing ServerTimeout="30">
  <Service Key="Licensing\Licensing Service"
    Host="System_on_CS_1"
    Protocol="http" />
```

</Licensing>

The ServerTimeout parameter specifies the number of seconds that a site tries to connect to a license server to obtain licensing before it times out. In this case, the site would try for 30 seconds before it times out. The licenses are listed in priority order. If a site cannot connect to a license server within the server time-out period, it tries the next one on the list. After trying the last server on the list, it begins again at the first server in the list.

Network Considerations

License sharing occurs among all client stations directly attached to the central site and specified license servers. In order to communicate, the license server requires TCP port 2424 or 3581. You must allow this port at all central sites.

Remote sites require only HTTP or HTTPS to communicate with central sites. You do not need to open TCP port 2424 or 3581 to enable communications and license sharing among remote sites and central sites (only among the central sites themselves).

Site Administrator Activity

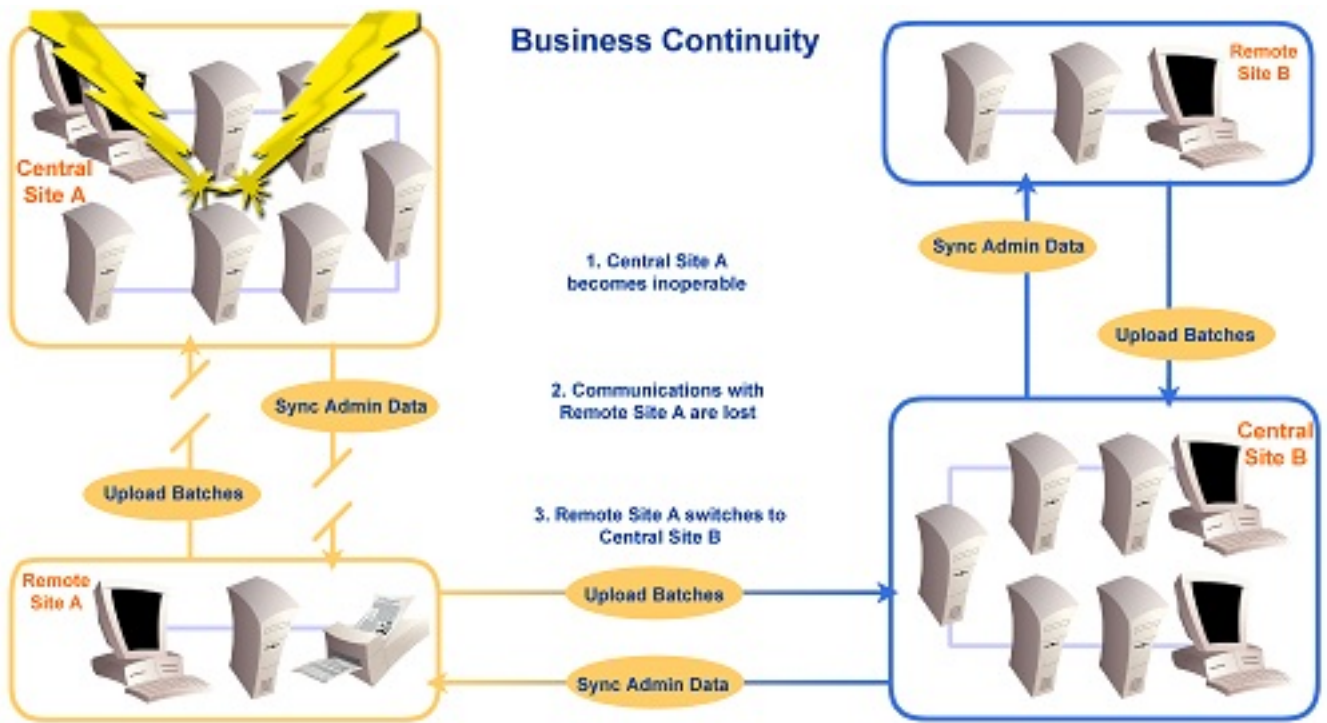
As a site administrator, you are responsible for the following areas: initial setup, routine maintenance, and manual intervention in the case of a down system.

For the initial setup, a site administrator must configure shared and backup licenses, set up a backup location for batches and batch classes, configure a replication scheme, create a list of central sites, and specify upload behavior. The administrator can also optionally export administrative data, transfer custom module configuration data, and create custom workflow agents.

Routine maintenance might include exporting administrative data at regular intervals, monitoring batch upload activity and balancing, and monitoring batch replication activity.

Manual intervention might include adding a central site, switching remote sites to another central site, restoring batches and batch classes to a restored site, importing administrative data to a restored site, and possibly deleting a central site.

For business continuity, the system automatically switches batch uploads to alternate central sites depending on defined upload behavior.



Business Continuity

Backing Up, Replicating, and Restoring Batches

The Disaster Recovery configuration provides several features to secure your batches in the event of a central site failure. First, it provides a mechanism that allows you to automatically back up batches and their associated batch classes to a user-specified location. Once automatic batch backup is configured, you can schedule replication software to transparently move batch files to a secure location. In the case of a disaster, your critical business data is now securely backed up. You can restore any batches that may have been lost to an alternate central site or to the down central site when it is active again. The following sections describe how to implement each part of this process.

Setting Up Automatic Batch Backup

This section explains how to set up a Disaster Recovery configuration for automatic batch backup. Once this is set up, you can replicate the backed up files and, in the event of a disaster, restore any lost batches or batch classes.

Enabling and Configuring Batch Backup

To enable and configure automatic batch backup, add the following element to the `ACConfig.XML` file:

```
<Replication Path="Backup Path" DelayTimeInMinutes="Delay Time">
  <ExcludedBatchClass>Excluded Batch Class</ExcludedBatchClass>
</Replication>
```

Example

```
<Replication Path="//MyComputer\Backup\" DelayTimeInMinutes="720">  
<ExcludedBatchClass>Order Form</ExcludedBatchClass>  
<ExcludedBatchClass>Invoices</ExcludedBatchClass>  
</Replication>
```

Use the following parameters to configure automatic batch backup.

Replication Path

The Replication Path specifies a backup location. When you select the automatic batch backup feature, the system creates a copy of each batch in the specified folder. This makes it ready for replication by a third-party software package. If the published batch class used by a batch has not already been replicated, a copy of the batch class is also copied to the specified backup location.

Note Deleting batch classes in the backup location is not recommended because you might inadvertently delete a batch class that is needed by a backed up batch.

When batches and batch classes are placed in the specified backup location, they are separated into a batch folder and a batch class folder:

```
<Specified backup location>\Batches\  
<Specified backup location>\BatchClasses\  
</Specified backup location>
```

Access to these folders must be granted to the user that is running the KCN Service. Failure to grant this permission prevents batches from being backed up and possibly delays overall batch insertion time.

DelayTimeInMinutes

The DelayTimeInMinutes parameter defines the time between when a batch is successfully inserted (and backed up) and when the remote site receives notification that the batch can safely be deleted. This delay gives your third-party replication software time to replicate batches before they are automatically deleted from the remote site. During this time, the status of batches at remote sites is In "Progress (Replicating - <CentralSiteName>)."

When setting the delay time, leave a reasonable margin. For example, a time that is too short, such as one hour (60), may not leave enough time to safely replicate batches. On the other hand, a time that is too long, such as 24 hours (1440) might overload the disk with batches waiting for replication. It may also cause a large percentage of duplicate batches in a disaster recovery situation if remote sites re-send batches that were already restored. A delay time of 12 hours (720) might be a good starting point, and then adjust it up or down based on the actual replication time.

Batches remain at the remote site until the first time the remote site synchronizes with the central site after the delay time has expired, or the batch is exported or deleted at the central site.

A batch is only backed up the first time it is uploaded to the central site; it is not backed up again on subsequent uploads. Backed up batches in the specified backup location are deleted only when a batch is exported or deleted from the central site.

Batch classes are never deleted from the specified backup location.

ExcludedBatchClass

By default, all batch classes are backed up to the specified backup location. You can exclude any batch class from the backup and replication process using the `ExcludedBatchClass` parameter. Batch classes in this list and the batches that use them are not placed in the specified backup location.

Multiple Versions of Batch Classes

The batch backup feature backs up all versions of published batch classes that are uploaded from remote sites.

Errors

If an error occurs during the backup process, the batch is not deleted from the remote site and an entry is logged to the error file. In this case, the batch is sent back to the remote site and must be uploaded again once the error has been corrected.

Backup Requires Remote Site Upgrade

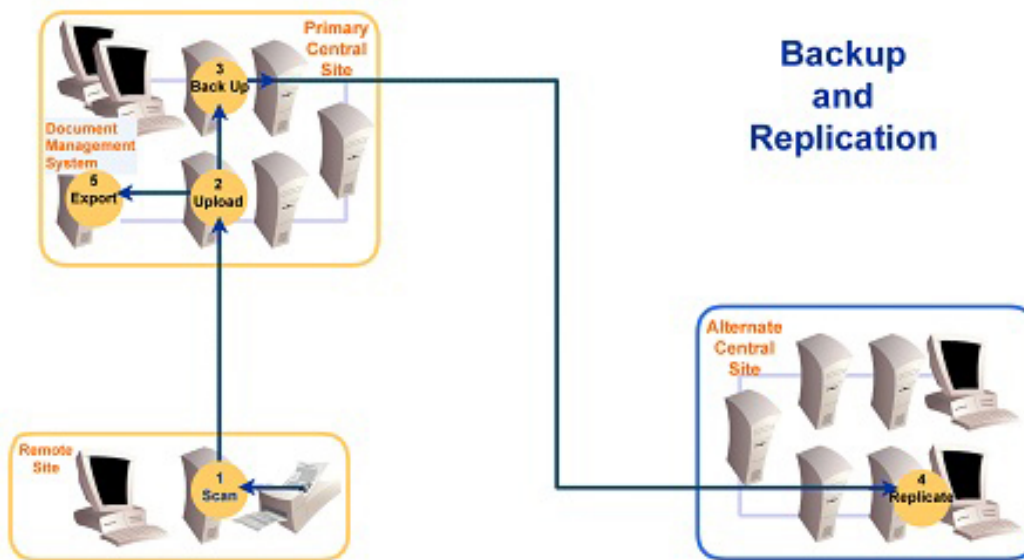
The batch backup feature requires that remote sites be upgraded to the latest version of Kofax Capture.

Replication

Once you have configured automatic batch backup as outlined in the previous section, you are ready to transfer data to an off-site location on a scheduled basis. This requires that you purchase and configure a third-party replication application of your choice.

The replication software that you purchase should be a Windows server, file-based, file replication software application that replicates files over a WAN. Use the instructions that came with your third-party software to install and configure your software on a remote server.

When you configure your third-party replication software, specify the replication path. The replication path is the local folder where Kofax makes copies of batches and published batch classes. This is the path that you specified in the `ACConfig.XML` file in the section titled [Setting Up Automatic Batch Backup](#).



Backup and Replication

Restoring Batches Using the KcnsRestoreBatches Command Line Utility

The KCN Server Restore Batches utility, `KcnsRestoreBatches.exe`, is a standalone command line utility that restores batches from a specified location. You can find this utility in the Kofax Capture `bin` folder.

Notes:

- All error messages are written to the error log.
- If the utility encounters a batch that has already been restored, it is skipped.
- You can restore batches to Kofax Capture without KCNS installed and enabled.
- If you restore a batch to a central site that is not connected to the remote site that the batch requires for routing, the central site still routes the batch with the assumption that the required remote site will eventually be connected.
- Only one instance of the utility may be run at a time.
- The utility cannot be run on a remote site.
- If the batch routing rules in a batch require routing to a remote site, an installed and enabled KCN service must exist at the site where the batch is restored. Without a KCN service, this type of batch is not "Ready to download." Note that a batch cannot be recalled unless it is ready to download.

Command Line Parameters

You can specify the path where batches have been backed up and login credentials when required. You can also remove backed up batches that have been successfully inserted. Specify parameters with a forward slash (/) or a hyphen (-).

`/path [path]`

This parameter is required to specify the location from which to restore batches. Follow the /path parameter with a valid path, as in the following example:

```
KcnsRestoreBatches /path "\\mysystem\batchbackup"
```

/u [username]

If you run the utility at a site where User Profiles is selected, you must be assigned the "Allow Administration module access" right. Use the /u parameter along with the /p parameter to specify a user name and password. See the example for the /p parameter.

/p [password]

If you run the utility on a central site where User Profiles is selected, an administrator login is required. Use the /p parameter along with the /u parameter to specify a user name and password. The following example specifies a valid user, steven, and his password, Vq4Rc8t2x.

```
KcnsRestoreBatches /path "\\mysystem\batchbackup"
/u steven /p Vq4Rc8t2x
```

/d

By default, the utility moves restored batches that have been successfully inserted into a subfolder so it does not attempt to restore them again. If you would rather delete the backed up batches, include the /d parameter.

/?

The "?" parameter displays the correct usage of the KcnsRestoreBatches utility to the console. It defines each of the supported command line parameters and provides an example for formatting the command line. For example, you can use the following to display information about correct usage:

```
KcnsRestoreBatches /?
```

Error Codes

The Kofax Capture Restore Batches command utility returns the codes listed in the table.

Value	Name	Description
0	Normal	The utility ran successfully and without exception.
1	BadUsage	The path parameter was supplied without an actual path.
2	LoginRequired	User Profiles is selected, but a login was not provided.
3	LoginFailed	Credentials were supplied but could not be validated.
4	UnknownError	An unhandled exception was encountered. Check the error log.
5	IsRemoteSite	The utility was run on a remote site. Therefore, no batches are restored. To successfully restore batches, run the utility on a station other than a remote site.
6	InvalidDirectoryStructure	The utility expected the following subfolder in the path specification: "<Path>\Batches". If this folder is not specified, an invalid directory message is logged and this error code is returned.

Value	Name	Description
7	NormalExitWithErrors	Errors occurred during the batch restoration process. Check the error log for details.
8	CannotValidateUser	The utility was not able to ascertain whether user profile information was needed.

Backing Up and Restoring the Standard Database

This section gives instructions for backing up and restoring the Kofax Capture Standard database for a client/server or standalone installation. The procedures apply to SQL Server Express, the default selection for the Standard database.

Note To back up and restore a SQL Server, Oracle, or IBM DB2 database, follow the instructions from the respective database provider.

The SQL Server Express database contains information about User Tracking and current batches in the system waiting to be processed.

The Standard database backup is not a complete backup of Kofax Capture, which also requires a backup of the server files folder and the designated image folders. The Server Files folder is selected during installation and is typically `C:\ProgramData\Kofax\CaptureSV`. In addition, the temporary image folders defined in the batch classes need to be backed up to preserve the images associated with batches in progress.

Follow the procedures in this section to properly back up and restore your Standard database. Your folder paths may differ from the samples that appear in the procedures, depending on the type of installation ([client/server](#) or [standalone](#)) and other factors.

Standard Database Instance Names

To perform the backup and restore procedures, you need the name of the Standard database instance.

If you are installing Kofax Capture for the first time, the instance name is `KofaxCap2014`.

If you upgraded to Kofax Capture 11.1.0 from a previous version of the product, the instance name may vary:

- If you use an MSI-based deployment method to upgrade to Kofax Capture 11.1.0, the Standard database instance name for the previous version is retained. For example, when upgrading from Kofax Capture 10.0 to 11.1.0, `KofaxCap2008R2` is retained as the Standard instance name.
- If you use the Kofax Capture installation wizard to perform the upgrade to 11.1.0, the Standard database instance name for the previous version is replaced with the name `KofaxCap2014`.

Use the following table to identify your Standard instance name.

Standard Database Instance Names

Kofax Capture Version	Standard Instance Name	Notes
11.1.0	KofaxCap2014	Instance name used for new 11.1.0 installations
10.2	KofaxCap2012	Instance name for new 10.2 installations
10.1	KofaxCapture	Instance name for new 10.1 installations
10.0	KofaxCap2008R2	Instance name for new 10.0 installations
8.0, 9.0	AscentCapture	Instance name for new 8.0 / 9.0 installations

Client/Server Installations

Use the following procedures to back up and restore the Standard database instance for a client/server installation.

In these procedures, <NN> refers to the version of SQL Server Express (if you upgraded to Kofax Capture 11.1.0 from a previous version, <NN> refers to the previous version of SQL Server Express).

Also, the Standard database instance name is represented as <Instance_Name>. To identify the applicable instance name for your installation, see the table in [Standard Database Instance Names](#).

Backing Up the Standard Database

1. Stop the SQL Server service associated with the Standard database instance. Also stop the Kofax Capture service and any unattended module services, as applicable.
2. Copy ACSystem.mdf and ACSystem_log.ldf, which are typically located here:
`C:\ProgramData\Kofax\Capture\Server\DB\MSSQL<NN>.\<Instance_Name>\MSSQL\DATA`
3. Start the SQL Server service associated with the Standard database instance.

Restoring the Standard Database

Be sure to restore the database in conjunction with the rest of the Kofax Capture file structure, to ensure that the restored installation is complete.

1. Stop the SQL Server service associated with the Standard database instance. Also stop the Kofax Capture service and any unattended module services, as applicable.
2. Browse to `C:\ProgramData\Kofax\Capture\Server\DB\MSSQL<NN>.\<Instance_Name>\MSSQL\Data`
3. Rename the original ACSystem.mdf and ACSystem_log.ldf to ACSystem_Orig.mdf and ACSystem_log_Orig.ldf, respectively.
4. Copy your backed up ACSystem.mdf and ACSystem_log.ldf into the folder.
5. Start the SQL Server service associated with the Standard database instance.

Standalone Installation

Use the following procedures to back up and restore the Standard database instance for a standalone installation.

In these procedures, <NN> refers to the version of SQL Server Express (if you upgraded to Kofax Capture 10.2 from a previous version, <NN> refers to the previous version of SQL Server Express).

Also, the Standard database instance name is represented as <Instance_Name>. To identify the applicable instance name for your installation, see the table in [Standard Database Instance Names](#).

Backing Up the Standard Database

1. Stop the SQL Server service associated with the Standard database instance. Also stop the Kofax Capture service and any unattended module services, as applicable.
2. Copy ACSystem.mdf and ACSystem_log.ldf, which are typically located here:
`C:\ProgramData\Kofax\Capture\Server\DB\MSSQL<NN>.\<Instance_Name>\MSSQL\DATA`
3. Start the SQL Server service associated with the Standard database instance.

Restoring the Standard Database

Be sure to restore the database in conjunction with the rest of the Kofax Capture file structure, to ensure that the restored installation is complete.

1. Stop the SQL Server service associated with the Standard database instance. Also stop the Kofax Capture service and any unattended module services, as applicable.
2. Browse to the following:
`C:\ProgramData\Kofax\Capture\Server\DB\MSSQL<NN>.\<Instance_Name>\MSSQL\Data`
3. Rename the original ACSystem.mdf and ACSystem_log.ldf to ACSystem_Orig.mdf and ACSystem_log_Orig.ldf, respectively.
4. Copy your backed up ACSystem.mdf and ACSystem_log.ldf into the folder.
5. Start the SQL Server service associated with the Standard database instance.

Data and Path Substitution

When you export administrative data from one system and import it to another, you can substitute new values for the configuration settings. Substitution is possible in the following areas:

- [Image Path Substitution](#)
- [Export Connector Setup Substitution](#)
- [Custom Data Substitution](#)
- [External Field Substitution](#)

This section explains how to use ACConfig.xml to specify data and path substitution values. As another option, you can specify substitution values using the Data Substitution window that appears during the

process of importing a new batch class into Kofax Capture. All values specified on the Data Substitution window are saved in ACConfig.xml.

If you import a batch class with a name that already exists, the Data Substitution window does not appear, and the substitution settings in ACConfig.xml are automatically applied.

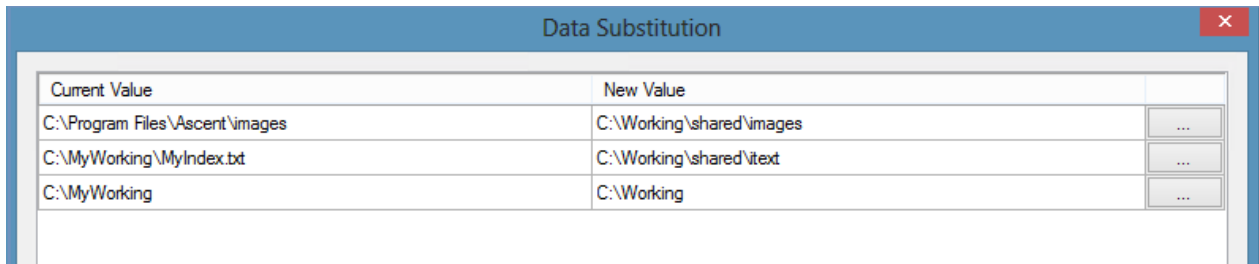


Image Path Substitution

With [ACConfig.xml](#), you can use image path substitution to:

- Develop and test using one path for images, and then move to a production configuration using another path for images.
- Specify a new path for images in a disaster recovery scenario.

Keep the following in mind as you modify ACConfig.xml:

- The path for the index storage path is based on the custom path and file name specified on the Index Storage tab on the Text Export Connector setup window. See [Custom Data Substitution](#).
- Path substitution for the Text Export Connector does not support substitution of macros. If the original path includes a macro, the substitution is successful but the macro becomes a text constant after you import the batch class.

Syntax

Path substitution format in ACConfig.xml:

```
<ACConfig>
  <AdminDataSubstitution>
    <Replace Old="<old path>" New="<new path>"/>
  </AdminDataSubstitution>
</ACConfig>
```

Substitution Location

The system substitutes every entry in ACConfig.xml for the following location.

Substitution Location

Purpose	Object	Property
Image folder for a batch class	BatchClass	ImageFolder

Export Connector Setup Substitution

For text and database export connectors, you can substitute path data and certain custom data.

Note If you modify the export connector's source code that affects this substitution scheme, you may not get the intended results.

Syntax

Data setup substitution format in ACConfig.xml:

```
<ACConfig>
  <AdminDataSubstitution>
    <Replace Old="<old_data_source_name>" New="<new_data_source_name>" />
  </AdminDataSubstitution>
</ACConfig>
```

Substitution Locations

The system substitutes every entry in ACConfig.xml for each of the following locations.

Substitution Locations

Purpose	Object	Property
ODBC source for Database Export Connector	ReleaseSetupData	ConnectionString
Image folder for Export Connector	ReleaseSetupData	ImageFilePath
Full text OCR folder for Export Connector	ReleaseSetupData	TextFilePath
PDF folder for Export Connector	ReleaseSetupData	KofaxPDFPath

Custom Data Substitution

You can also substitute certain custom data, including data in the CustomProperty table, using KCEC-Text.inf or DBRel.inf. KCEC-Text.inf is the setup file used for text export connectors, and DBRel.inf is the setup file used for database export connectors.

To substitute custom data, modify ACConfig.xml and KCEC-Text.inf or DBRel.inf, as applicable.

Syntax

ACConfig.xml

Data substitution format in ACConfig.xml:

```
<ACConfig>
  <AdminDataSubstitution>
    <Replace Old="<Old Value>" New="<New Value>" />
  </AdminDataSubstitution>
</ACConfig>
```

KCEC-Text.inf

```
[Ascent Capture Text]
DataSubstitution="<custom property>"
PathSubstitution="<custom property>"
```

Example

The following example substitutes a value of "False" for a value of "True" found in the EnableKofaxPDFExport property.

ACConfig.xml

```
<ACConfig>
  <AdminDataSubstitution>
    <Replace Old="True" New="False"/>
  </AdminDataSubstitution>
</ACConfig>
```

KCEC-Text.inf

```
[Ascent Capture Text]
DataSubstitution=EnableKofaxPDFExport
```

Note The search and replace is blind. When you configure for a True/False substitution, make sure that you do not unintentionally globally change the wrong settings.

Data Validation

For a CAB insert, the system performs no data validation. For KCNS batch insertion, the system first checks to see if the substitution path exists. If it does not, the insertion will fail.

Remove and Add Export Connector to Apply Edits

For the changes to go into effect, you must use the Export Connector Manager to remove and add the export connector whenever you substitute custom data using KCEC-Text.inf or DBRel.inf.

External Field Substitution

You can substitute the target URL for external field types for SharePoint. To substitute a target URL, modify ACConfig.xml.

Syntax

ACConfig.xml

Data substitution format in ACConfig.xml:

```
<ACConfig>
  <AdminDataSubstitution>
    <Replace Old="http://old-sp-site/subsite1" New="http://new-sp-site/subsite2"/>
  </AdminDataSubstitution>
</ACConfig>
```

Transferring Custom Module Configuration Data

You can place custom module configuration data in a designated folder at the central site and the KCN Server automatically sends the configuration data to remote sites when they synchronize and to alternate central sites when a batch of another central site is uploaded. This allows administrators to easily send custom module configuration data to the entire installation. This feature is for large binary data files, such as images.

To obtain the name of the designated folder that is used for this data, invoke the `CustomDataFolder` method.

For example, you might want to run a custom module on several remote sites that all require the same sample image. In this case, an admin plug-in would pass the custom module name to the `CustomDataFolder` method and it would return a data storage path. After copying the sample image to the designated folder on the central site, the next time published batch class information is transferred to other sites, the sample image and any other data in the designated custom module folder would also be transferred. Consequently, a custom module at any remote site can access the image from the corresponding folder location at its remote site.

The values that each method returns are read-only and determined automatically based on the batch class name and the custom module's ID. You can also create subfolders within the designated folder location and all data included in the subfolders are transferred.

Each object library (Kofax Capture AdminMod and Kofax Capture Document Access) contains two methods that return a custom module folder name. You can use the methods during setup and during runtime. One method returns a global custom data folder location based on the provided module ID. The other method returns a custom data folder name based on the published batch class and the provided module ID.

The following tables show each method per object library and the folder name string that it returns.

Kofax Capture AdminMod (`ACAdMod.dll`)

Method	Returns folder name string
<code>AdminApplication.CustomDataFolder (strModuleID as string)</code>	"<CaptureSV>\PubTypes\Custom\<strModuleID>"
<code>BatchClass.CustomDataFolder (strModuleID as String)</code>	"<CaptureSV>\PubTypes\Custom\<Batch Class Name>\<strModuleID>"

Kofax Capture Document Access (`DBLite.dll`)

Method	Returns folder name string
<code>RuntimeSession.CustomDataFolder (strModuleID as String)</code>	"<CaptureSV>\PubTypes\Custom\<strModuleID>"
<code>Batch.CustomPublishedDataFolder (strModuleID as String)</code>	"<CaptureSV>\PubTypes\Custom\<Batch Class Name>\<strModuleID>"

Note To ensure that your custom module data folder is unique, it is recommended that the value you pass to `strModuleID` be the custom module `ModuleID (<company>.<application>.<module>)` you use when you register the custom module.

Switching to a New Primary Central Site

The KCN Server Site Switch utility, `KcnsSiteSwitch.exe`, is a standalone command line utility that specifies a new primary central site in a Kofax Capture Disaster Recovery configuration. By specifying the URL of the original primary central site, you broadcast to remote sites to discontinue using that site. Then the remote sites switch to use a new primary central site, which is the site from which you are running the KCN Server Site Switch utility.

The central site switch takes place automatically once a remote site is synchronized. If the remote site's existing primary central site URL matches a URL in the site switch list, it makes the switch to the new primary central site.

The KCN Server Site Switch utility is available in the Kofax Capture `bin` folder.

Command Line Parameters

The utility supports several command line parameters. You can specify the URL of the old primary central site, and when required, a user name and password. You can also remove a URL from the site switch list, view all currently specified central site URLs in the site switch list, and display the correct usage. If you specify an invalid or incomplete parameter, the utility defaults to the behavior of the View (`v`) parameter.

You can specify only one command line parameter at a time using a forward slash (`/`) or a hyphen (`-`).

/url [URL]

To specify a primary central site to switch from, you must specify its URL. The URL parameter is followed by a valid URL, as in the following example:

```
KcnsSiteSwitch /url http://mywebserver/kcn
```

Note For WebSphere, the specified URL must be an exact match of the primary central site's web server URL because it is case-sensitive. This restriction does not apply to IIS.

/url [URL] [user] [password]

If you run the utility on a central site where User Profiles is selected, an administrator login is required. The following example specifies a valid user, `robert`, and his password, `MyC8q29x`.

```
KcnsSiteSwitch /url http://mywebserver/kcn robert MyC8q29x
```

/v

The View (`v`) parameter displays all entries in the site switch list, which is a list of URLs specified at the central site where the utility is run.

/r [URL]

The Remove (r) parameter removes a specified URL from the site switch list. Once all affected remote sites have completed switching primary central sites, you may want to remove any URL entries that are no longer relevant by removing them from the list. The following example removes `http://phoenix/kcn` from the site switch list:

```
KcnsSiteSwitch /r http://phoenix/kcn
```

/r [URL] [user] [password]

This parameter removes a specified URL from the site switch list when an administrator login is required. For more information, see the "/r" parameter. The following example removes `http://phoenix/kcn` from the site switch list using a valid user, `john_baker`, and his password, `Z73Nt2x`:

```
KcnsSiteSwitch /r http://phoenix/kcn john_baker Z73Nt2x
```

/?

The "?" parameter displays the correct usage of the KcnsSiteSwitch utility to the console. The following command displays information about correct usage:

```
KcnsSiteSwitch /?
```

Error Codes

The KCN Server Site Switch command utility returns the following codes.

Error Codes

Value	Name	Description
0	Normal	The utility ran successfully and without exception.
1	BadUsage	Invalid parameters were entered.
2	LoginRequired	User Profiles is enabled, but a login was not provided.
3	LoginFailed	Credentials were supplied but could not be validated.
4	SiteNotFound	A site targeted for removal was not on the site list.
5	LicenseError	An enterprise license is required but not found.
6	UnknownError	An unhandled exception was encountered. Check the error log.

Deleting a Central Site

The KCN Remove Central Site command utility, `KcnsRemoveCentralSite.exe`, is a standalone command line utility that deletes a central site (URL) from the KCN Server central site list. Once deleted, the central site is no longer available to remote sites. The utility duplicates the functionality of deleting a central site from the KCN Server Central Site Manager in the Kofax Capture Administration module.

KCN Remove Central Site is controlled completely via command line parameters. You can specify parameters with a forward slash (/) or a hyphen (-).

You can find this utility in the Kofax Capture `bin` folder.

Command Line Parameters

The utility supports several command line parameters. You can specify the URL of the central site to be deleted, and when required, a user name and password. If you specify any invalid or incomplete parameters, you are prompted with the correct usage. You can specify only one command line parameter at a time.

/r [URL]

When you want to delete a central site, you must specify its URL. The "r" parameter is followed by a valid URL, as in the following example:

```
KcnsRemoveCentralSite/r http://<mywebserver>/kcns
```

For WebSphere, the specified URL must be an exact match of the central site's web server URL because it is case-sensitive. This restriction does not apply to IIS.

/r [URL] [user] [password]

An administrator login is required if the utility is run on a central site where User Profiles is active. If the current user is already logged in as an administrator, the credentials are used automatically. Otherwise, a User Profiles username and password must be supplied. The following example switches one primary central site to another using a valid user, `robert_s`, and his password, `MyC8q29x`.

```
KcnsRemoveCentralSite/r http://<mywebserver>/kcns robert_s MyC8q29x
```

/v

Use the "v" parameter to view the <URL> for each of the central sites that are currently available. Central sites shown here can be deleted.

/?

Use the "?" parameter to display the correct usage of the `KcnsRemoveCentralSite` utility to the console. The following command displays information about correct usage.

```
KcnsRemoveCentralSite /?
```

The correct usage also appears when you enter any invalid parameter.

Error Codes

The KCN Remove Central Site command utility returns the following codes.

Error Codes

Value	Name	Description
0	Normal	The utility ran successfully and without exception.
1	BadUsage	Invalid parameters were entered.
2	LoginRequired	User Profiles is selected, but a login was not provided.

Value	Name	Description
3	LoginFailed	Credentials were supplied but could not be validated.
4	SiteNotFound	An alternate site targeted for removal was not on the site list.
5	UnknownError	An unhandled exception was encountered. Check the error log.

Exporting and Importing Administrative Data

You can export and import administrative data such as batch classes, KCNS profiles, and user profiles to save periodic snapshots of administrative data. You can use administrative data to export and import in the following cases:

- To duplicate administrative settings when restoring or switching primary sites
- To transfer administrative settings from a development site to a production site

Administrative data includes:

- Batch classes
- KCNS profiles (includes the Central Site List, Central Site Profile, Remote Site List, and Remote Site Profiles)
- User profiles

Batch Classes

Use this feature to export and import batch class assignments and override settings for user profiles and KCNS profiles (central and remote). When you export a batch class, it also exports the user profiles and KCNS profiles it is assigned to, as well as the class-specific overridden batch routing settings for KCNS profiles.

Exported and Imported Data

The following data is exported and imported with batch classes.

Option	Description
Export	<p>All batch class assignments and override settings with the associated batch class are exported. Optionally, you can exclude a KTM project when the batch class is exported.</p> <p>To exclude a KTM project folder, use the "Include KTM project" setting on the KTM tab on the Export window in the Administration module.</p>
Import	<p>Optionally imports all batch class assignments and override settings for batch classes selected for import. The import process matches batch class assignments and override settings to profiles by name. If a profile is not found, the settings for that profile are not imported.</p>

Transfer Mode

Select one of the following options to specify how duplicate batch classes are handled if the import process encounters a duplicate batch class name.

Transfer Mode Options

Option	Description
Do not import duplicates	Does not import the duplicate batch class and its associated assignments and override settings.
Save duplicates to a new name	Renames the imported duplicate batch class by appending an integer to the name. This is the default. Batch class assignments and overrides apply to the renamed batch class. For example, if both central sites A and B contain a user profile named "John" and the "Order Forms" batch class is exported from A and imported to B, the renamed batch class becomes "OrderForms1" assigned to user John.
Replace duplicates with items imported	Replaces the existing duplicate batch class. The batch class assignments and override settings are updated in the profiles for the batch class.

Importing Batch Class Assignments and Override Settings

To import batch class assignments and override settings for the selected batch classes, select the **Import batch class assignments and override settings for the selected batch classes** check box on the Batch Classes tab.

Importing is Additive Only

When importing batch class assignments, they are only added to the existing assignments. Under no circumstances are assignments ever removed.

KCNS Profiles

Use this feature to export and import KCNS profiles.

Exported and Imported Data

The following table lists the data that can be both exported and then imported.

Exported and Imported Data

Options	Description
KCNS Central Site List	Exported and imported data includes the list of central sites.
KCNS Central Site Profiles	Exported and imported data includes the data in the Batch Routing tab on the KCN Server Central Site Profile window. Note that the information in the Batch Class Override tab is not imported. To import this data, use the "Import batch class assignments and override settings for the selected batch classes" setting on the Batch Classes tab on the Import window.
KCNS Remote Site List	Exported and imported data includes the list of remote sites.

Options	Description
KCNS Remote Site Profiles	<p>Exported and imported data includes most of the information contained in the KCN Server Remote Site Profile window, which includes the following tabs:</p> <p>Batch Routing</p> <p>Assigned Batch Classes (Exported and imported data includes only the "All batch classes" and "Selected batch classes" settings. It does not include the list of assigned batches classes and routing settings.)</p> <p>Station Licensing</p> <p>Volume Licensing</p> <p>Polling</p> <p>Business Continuity</p>

Transfer Mode

Select one of the following options to specify how the import process should handle duplicate KCNS profiles.

Transfer Mode Options

Option	Description
Skip duplicate KCNS profiles	If the import process encounters a duplicate KCNS profile on the target system, it does not import the KCNS profile.
Replace existing KCNS profiles	The existing profile is updated with the settings of the imported profile with the exception of data items described earlier in the "Exported and Imported Data" table.

Batches Routed to a Remote Site Not Ready to Download Without a KCN Service

If the batch routing rules in a batch require routing to a remote site, an installed and enabled KCN service must exist at the site where the batch is imported. Without a KCN service, this type of batch would not be "Ready to download." Note that a batch cannot be recalled unless it is ready to download.

User Profiles

Use this feature to export and import Kofax Capture user profiles.

Exported and Imported Data

The following User Profiles data is exported and imported.

Exported and Imported Data in User Profiles

Option	Description
Export	All (including linked) users and groups are exported.

Option	Description
Import	<p>Only new (including linked) users and new groups are imported. Existing users and groups are never updated. The following information is imported for new users and groups:</p> <p>Users: General tab, Assigned Modules tab, and Group Members tab</p> <p>Group: General tab, Assigned Modules tab, and Members tab</p>

Data Not Exported or Imported

The following User Profiles data is not exported or imported:

- Enable User Profiles check box. This data is excluded to prevent interference with the current processes of existing users.
- "Default user group for new batch classes" setting.
- Assigned batch classes. To import this data, use the "Import batch class assignments and override settings for the selected batch classes" setting on the Batch Classes tab on the Import window.
- All existing users and groups.

Administrative Data Export and Import Recommendations

This section provides important recommendations and procedures for importing and exporting administrative data.

Disaster Recovery

In the case of a disaster, if you have made recent backups of all administrative data, you can easily import all batch classes, KCNS profiles and user profiles to the restored system.

Development to Production Site Data Transfer

In the case of a development, test, and production system, you can develop batch classes, KCNS profiles, and user profiles on a development system and then incrementally transfer the settings to the production system. You can choose to import only the modifications from the most recent update.

Note To successfully export and import administrative data from a development site to a production site, the two sites should contain the same site configuration and site names. Also, before importing data, first synchronize all remote sites with the central site.

Exporting Administrative Data

Use the following recommendations to export administrative data to prepare for a disaster recovery scenario or to transfer administrative data from a development system to a production system.

To export administrative data to prepare for disaster recovery

In the Export window:

- On the Batch Classes tab, add all batch classes to "Selected Batch Classes" for export.
- On the KCNS Profiles tab, select the "Export KCNS profiles" check box to export all KCNS profiles.

- On the User Profiles tab, select the "Export user profiles" check box to export user profiles (All, including linked, users and groups are exported).
- On the KTM tab, select the "Include KTM project" setting to include the Kofax Transformation Modules project folder when files are exported.
If no changes exist in the KTM project folder, you can exclude it by clearing the "Include KTM project" check box.

To export administrative data from a development system

Depending upon your goals, you may export certain types of administrative data that has been updated for production:

- To export specific batch classes: In the Export window, on the Batch Classes tab, add selected batch classes to "Selected Batch Classes" for export.
- To export KCNS profiles: In the Export window, on the KCNS Profiles tab, select the "Export KCNS profiles" check box. Selecting this option always exports all KCNS profiles.
- To export only user profiles: In the Export window, on the User Profiles tab, select the "Export user profiles" check box. The exported data includes all the settings (except assigned batch classes) on the User Profiles window.

Importing Administrative Data

Recommendations

- Importing all data at the same time is recommended because it automatically imports data in the correct order.
- If you import batch classes, KCNS profiles, and user profiles separately, be sure to import batch classes last. This ensures that batch class assignments are available for the already imported KCNS profiles and user profiles.
- If you already imported administrative data without following the recommended order, you can still add batch class rights and assignments.
- To make an exact copy of administrative data from another site, before importing, be sure to delete user profiles on the production (target) system with identical names as user profiles on the development (source) system.
- When you export administrative data from one system and import it to another, you can substitute new values for the configuration settings.

Importing Batch Classes

1. Export batch classes according to the recommendations in [Exporting Administrative Data](#).
2. Start the Administration module.
3. On the **Home** tab, in the **Batch Class** group, click **Import**.
4. Select the file that contains the exported batch classes obtained in Step 1, and click **Open**.
5. When the unpacking process is complete, click **OK**.

6. On the **Import** window, on the **Batch Classes** tab, do the following:
 - Click **Add All**.
 - Select **Replace duplicates with items imported**.
 - Select the **Import batch class assignments and override settings for the selected batch classes** check box.
 - Click **Import**.

If the batch class is being imported for the first time, the **Data Substitution** window displays the current and new values for the imported data. You can use the window to replace paths and other values that are outdated when you import the batch class from one environment to another.

Upon first import, the **Export Credential Management** window also appears. Use the window to update the login credentials used by export connectors, without having to edit them individually if credentials change for a content management system.

Importing KCNS Profiles

1. Export KCNS profiles according to the recommendations in [Exporting Administrative Data](#).
2. Start the Administration module.
3. On the **Home** tab, in the **Batch Class** group, click **Import**.
4. Select the file that contains the exported KCNS profiles obtained in Step 1, and click **Open**.
5. When the unpacking process is complete, click **OK**.
6. On the **Import** window, on the **KCNS Profiles** tab:
 - Select the **Import KCNS profiles** check box to import all KCNS profiles.
 - Select **Replace existing KCNS profiles**.
7. Click **Import**.

Importing an Exact Replica of the Exported User Profiles

1. Export user profiles according to the recommendations in [Exporting Administrative Data](#).
2. Delete all user profiles on the target system.
3. Start the Administration module.
4. On the **Home** tab, in the **Batch Class** group, click **Import**.
5. Select the file that contains the exported user profiles obtained in Step 1, and click **Open**.
6. When the unpacking process is complete, click **OK**.
7. On the **Import** window, on the **User Profiles** tab, select the **"Import user profiles"** check box to import user profiles.

All (including linked) users and groups are imported.

Note If you do not manually delete all user profiles and import new ones from the source system, you can manually update them on the target system. However, if you later import batch classes, they may get assigned to users you did not intend to modify.

Importing Only Exported User Profiles

1. Export user profiles using the recommendations in [Exporting Administrative Data](#).

2. On the target system, delete only the user profiles with names identical to the user profiles on the source system. (If you do not delete them, the import process automatically skips them.)
3. Follow steps 3 through 7 in the previous procedure.

Exporting at Remote Sites

You can export batches at remote sites. Export connector installation and registration for non-Kofax export connectors must be performed at the central and remote sites using the export connector registration utility. However, export connector setup must be performed at the central site.

Note If an export connector is not registered and the remote site is designated for remote export, an error is not returned at the remote site during batch class synchronization.

If Export Fails at a Remote Site

If export fails at a remote site, you have several options:

- Check to see that the export paths exist on the remote site (you set these at a central site and they should be the same at the remote site) and database connections are correct (depending on the script, this may mean that the remote site must reside on the same domain as the central site). If these issues caused the export to fail, you can re-export the batch once they are fixed.
- Use a workflow agent to route the batch to another remote site.
- Recall the batch and export it at the central site.

Notes

- Document IDs are unique per site, so if multiple sites (primary central, alternate central, or remote) export to the same database or merge their data, document IDs may collide. When exporting to a common back end document management system, use Document GUIDs when possible.
- When a remote site exports a batch, if the central site recalls the batch before the remote site synchronizes, the central site can also export the batch. If both sites export to the same back end document management system or merge data, there may be duplicate batches.

Reinstalling an Alternate Central Site

If you reinstall an alternate central site (using the same name but with a new GUID), use the following procedure to make it operational with the current profile settings on the primary central site.

1. Export the current KCNS profiles from the primary central site.
2. Remove the previous alternate central site from the KCNS Server Central Site Manager.
3. Add the reinstalled alternate central site to the KCNS Server Central Site Manager.
4. Import the exported KCNS profiles to the alternate central site with "Replace existing KCNS profiles" selected.

Chapter 11

Kofax Capture Services

With Kofax Capture, you can install and run the Kofax Capture XML Import Connector, Recognition Server, Instant Batch Notification, Kofax PDF Generator, OCR Full Text, RSA, and Export modules as services under Windows. As services, these unattended modules can be configured to run automatically at system boot.

Services are installed from a command prompt (see [Configuring a Kofax Capture Service](#)). After installation, use the Windows Services utility to configure and monitor your Kofax Capture service.

Run Unattended Modules as Services

After completing the Kofax Capture installation, you can run the unattended modules (XML Import Connector, Recognition Server, Kofax PDF Generator, OCR Full Text, or Export) as services. You can run the services on each workstation where they will be implemented, or you can run them on the server.

When using KCN Server, you can also install the Remote Synchronization Agent (RSA) as a service.

To install services, you must be logged in to Windows with administrator rights.

To install the service for a Kofax Capture module, run the installation from a command prompt on the station where you want to run a module as a service as follows:

Workstations

```
"<Kofax Capture installation folder>\Bin\module.exe" -install
```

Servers

```
"<Kofax Capture installation server software folder>\ServLib\Bin\<module.exe>"  
-install
```

Where:

<Kofax Capture installation folder> or <KCN Server installation server software folder> is the path to your Kofax Capture installation.

module.exe is the executable file name for the module you want to install as a service.

Note Running additional services on your server may impact overall system performance, and therefore is not recommended unless you are using a multiprocessor system as your server.

The following executables are available in the Kofax Capture Bin folder.

Executable	Description
acxmlai.exe	XML Import Connector (deprecated)
ocr.exe	OCR Full Text
kfxPdf.exe	Kofax PDF Generator
fp.exe	Recognition Server
release.exe	Export
acirsa.exe	Remote Synchronization Agent (RSA)

The quotation marks enclosing the path are required. For example, to run Recognition Server as a service:

```
"C:\Program Files (x86)\Kofax\CaptureSS\ServerLib\Bin\fp.exe" -install
```

Note If the User Profiles feature is selected, you must install the service with additional command line arguments. See the next section.

To verify that you installed the service correctly, check that the module name appears in the Services utility. Before running the service, you need to configure it. See [Configuring a Kofax Capture Service](#).

Kofax Capture Enterprise users can install multiple instances of a service.

Installing a Kofax Capture Service with User Profiles

If the User Profiles feature is selected, you must provide a user ID when you install a Kofax Capture Service. As a result, the service is launched under the designated user's Kofax Capture login account, and the Kofax Capture login window is bypassed.

Note To install a service, you must be logged in to Windows with administrator rights.

To install a service when the User Profiles feature is selected, use the following syntax:

```
"C:\Program Files (x86)\Kofax\Capture\Bin\" -install -u:"<userID>"  
-p:"<password>"
```

If a Linked User is running Kofax Capture Services, the user ID and password command arguments are not required. Instead, install the Kofax Capture services (for unattended modules) without specifying the User ID and Password command-line arguments. Then, set the "Log on as" account for the service to an appropriate user in the Service properties in the Windows Service Control Manager.

Note Kofax Capture Enterprise users can install multiple instances of a service with user profiles.

If you install a Kofax Capture Service with a user ID and password, and then decide to turn off the User Profiles feature, you must do the following:

1. Remove the Kofax Capture Service before you turn off the User Profiles feature. Be sure to include the command line arguments for user ID and password with the uninstall command.
2. Turn off **User Profiles**.

3. Reinstall the Kofax Capture service without the user ID and password.

To verify that you installed the module correctly, check that the module name appears in the Services utility. Before running the service, you need to configure it. See [Configuring a Kofax Capture Service](#).

Starting the Services Utility

1. Start the Windows Services utility.
2. Look in the Service list for the name of the Kofax Capture module that you installed as a service.

Configuring a Kofax Capture Service

After installing a Kofax Capture Service, use the Services utility to configure a startup type and a logon account type. By default, the startup type selection is "Manual." To configure a Kofax Capture Service to start automatically at system boot, you need to change the startup type to "Automatic."

For the logon account, you must specify a Windows user account that is valid for the workstation where you intend to run the Kofax Capture Service. By default, every Kofax Capture Service uses the LocalSystem account as the default user. We recommend that you change to a standard user account. If you are accessing resources in a network environment, be sure to specify a valid network account. You cannot configure the service without a valid logon account.

1. Start the Windows Services utility.
2. Select the name of the Kofax Capture Service to configure.
3. Open the properties window.
4. At Startup type, select one of the following:
 - Automatic: Automatically starts the service at system boot.
 - Manual: Manually starts the service when the user selects Start from Services utility.
 - Disabled: Turns off the service. Select this option only if you want to turn off the service for a period of time, without removing it.
5. When configuring a Kofax Capture Service, you need to specify a logon account type.
 - a. Select a valid user account and password.
 - b. At "Log on as," select **this account**.
 - c. Enter the user account for the workstation where the service is installed. If the user account is a network user, be sure to use the following format:
`<domain>\<accountname>`
 - d. At Password, enter the password for the user account.
 - e. At Confirm Password, enter the user account password again.
The Kofax Capture Service is ready to be run.

Monitoring Kofax Capture Services

After configuring a Kofax Capture Service, use the Services utility to monitor and manage the service.

- With automatic startup enabled, you can stop a Kofax Capture Service from the Services utility. When the system is restarted, the service is also automatically restarted.
- With manual startup enabled, you can start or stop a Kofax Capture Service from the Services utility. If you start the service and then restart the workstation, the Kofax Capture Service is not automatically restarted.

You can use the Services utility to turn off a service. The service is not restored until you select automatic or manual startup.

Note The Pause/Resume/Continue functions in the Services utility are not available to Kofax Capture Services. For more information about other Services utility options, refer to the Windows online Help or your Microsoft documentation.

With Kofax Capture Services selected, error logs and processing module logs are generated in the standard locations, with one potential exception. In a client/server environment, some errors may prohibit logging to the Kofax Capture installation folder on the server. In that situation, errors are logged in the Kofax Capture installation folder on the client, typically located in `C:\Program Files (x86)\Kofax\Capture`.

Multiple Service Instances

This feature is only available with Kofax Capture Enterprise installations.

Use Multiple Instance Support to run multiple instances of any Kofax Capture service on a single computer. This takes advantage of multi-CPU computers. For example, a Recognition Server station running on a dual CPU computer can have up to eight instances of the service installed, increasing the number of batches the station can process.

For each service, the maximum number of multiple instances allowed is four times the number of physical processors on the computer.

To install multiple instances of a service, just repeat the installation procedure for that service. An ID is automatically appended to the service name for each instance.

For example, to install three instances of the OCR Full Text service, you would repeat the installation command-line sequence three times:

```
"<Kofax Capture installation folder>\Bin\ocr.exe" -install  
"  
"  
"
```

Each multiple instance of the OCR Full Text service is assigned a unique instance ID.

To install multiple services with user profiles, use the same method of repeating the command-line installation.

To remove multiple instances of a service, repeat the removal procedure for that service. For example, to remove three instances of a service, repeat the removal procedure three times. When multiple instances of a service are removed, the instance with the highest numbered instance ID is removed first.

Note When multiple services of the same kind are run on the same computer, a single concurrent Kofax Capture station license and Enterprise license are required. For example, a user would need a single station license to run the OCR Full Text, OCR Full Text:2 and OCR Full Text:3 services.

Remove Services

You can remove services at any time without affecting the standard Kofax Capture installation. If you uninstall the standard Kofax Capture installation, you must remove the services first.

To remove services, use a command-line argument to specify each service to uninstall. For instance, to remove the Recognition Server service, use the following command:

```
"<Kofax Capture installation folder>\Bin\fp.exe" -uninstall
```

If you have multiple instances installed, you must repeat the uninstall command-line sequence for each instance. When multiple instances of a service are removed, the instance with the highest numbered instance ID is removed first.

If the User Profiles feature is selected, be aware of the following:

- When removing a service, you must include the applicable user ID and password arguments with the uninstall command. These arguments are described in [Installing a Kofax Capture Service with User Profiles](#).
- If you install a Kofax Capture Service with arguments for the user ID and password, and then decide to turn off the User Profiles feature, you must do the following:
 - Remove the Kofax Capture Service before you turn off the User Profiles feature. Be sure to include the command-line arguments for user ID and password with the uninstall command.
 - Reinstall the Kofax Capture Service without the command-line arguments for user ID and password, after you turn off the User Profiles feature.

Chapter 12

Using Kofax Capture Network Server

Kofax Capture Network Server (KCN Server) adds Internet and Intranet processing capabilities to Kofax Capture. With this capability, Kofax Capture remote stations can be connected to a central site through the Internet (or Intranet) to assist in the production document and data capture process. You can scan and process batches at the remote site, and then upload them to the central site for further processing and export.

Kofax Capture Network Server eliminates the common and costly practice of shipping documents from remote offices to a central site for processing. It supports remote scanning and processing of documents through the Internet or Intranet.

Using Kofax Capture Network Server, IT and IS managers can develop and implement enterprise-wide capture solutions. With Kofax Capture Network Server, documents can be scanned inexpensively at remote stations and then automatically uploaded to the central site, securely and reliably.

Integration with Kofax Capture

Kofax Capture Network Server is integrated with certain Kofax Capture modules and menus. Specifically, options for configuring and using Kofax Capture Network Server are available from the Kofax Capture Administration and Batch Manager modules.

Centralized Administration

The Kofax Capture system administrator can centrally manage configuration information, station licenses, schedules for uploading batches, and batch class definitions for all remote sites by creating and assigning remote site profiles to remote sites. The administrator can view a list that shows the Kofax Capture version installed at each remote site to determine if product updates are current.

You can specify the default behavior for assigning remote site profiles to new remote sites. This behavior is automatically applied when a new remote site synchronizes with Kofax Capture Network Server the first time. For example, if a remote site profile name matches a remote site, you can set a policy in which the remote site automatically receives the matching remote site profile.

Centralized License Management

Kofax Capture supports a centralized license management scheme that requires a software license or hardware key (optional) on the Kofax Capture server (in a client/server installation) and standalone stations (in standalone installations) at the central site. No licensing is required for Kofax Capture Network Server remote site stations.

Kofax Capture Network Server also requires volume licenses. However, all licensing is managed at the central site.

Data Security

Kofax Capture Network Server can be configured to meet the security needs of your company. For example, you can configure your Web server software for optimal security.

Offline Capability

With Kofax Capture Network Server, remote stations do not have to be connected to the central Kofax Capture server while processing batches. You can set your remote stations to connect with your central site and then synchronize with your central site at predetermined intervals or on demand.

Internet/Intranet Support

Kofax Capture Network Server is suitable for Internet and/or Intranet configurations.

Remote Site Profile Support

With Kofax Capture Network Server, you can create remote site profiles, which consist of groups of settings assigned to one or more remote sites.

An important feature is the ability to exclusively specify where in the Kofax Capture workflow the remote site routes batches to the central site.

Batch Class Assignment

Use Kofax Capture Network Server to control which batch classes are visible to specific remote sites, based on remote site profiles.

Event Logging

Kofax Capture Network Server maintains a comprehensive log of polling activity and other events. Logs are maintained at both the central site and the remote sites.

Site Switching Capability

With Kofax Capture Network Server, you can easily switch Web servers or central sites, if necessary.

Remote Synchronization Capability

Through the Remote Synchronization Agent (RSA), you can easily synchronize with the central site on a defined schedule or on demand. As a result, you can download batch classes and upload completed batches to the central site at the same time. You can use user profiles to restrict the ability to run the RSA interactively at remote sites.

Assign Web Server Port Number

If you do not want to use the standard Kofax Capture Network Web Server ports, you can assign alternate ports. By default, all HTTP communications use port 80, and all SSL communications use port 443.

Web Cache Affinity

If you have cache folders in multiple locations, a Kofax Capture Network Service will "prefer" to use its local cache folder (if it exists) rather than the other caches, provided other factors (such as priority) are equal. This "cache affinity" reduces network overhead and may improve performance.

KCN Server Components

Kofax Capture Network Server components are installed at your central site and remote sites as described in this section.

Kofax Capture Network Server Software

The KCN Server software is installed on a Web server at your central site and acts as a broker between your central Kofax Capture database and the remote locations. The Web server does not need to be on the same computer as the Kofax Capture server.

Kofax Capture Network Service

The Kofax Capture Network Service is responsible for responding to requests from the remote sites. Specifically, the Kofax Capture Network Service performs the following operations:

- Inserts batches into Kofax Capture on the Kofax Capture server one batch at a time
- Extracts batch class and other remote site profile information
- Verifies licenses

The Kofax Capture Network Service is a manually embedded process included with the Kofax Capture Service, which is automatically installed on all servers and workstations during the Kofax Capture installation process.

On the Windows Services list, Kofax Capture Network Service is listed in the Description column for the Kofax Capture Service. For more information about enabling the Kofax Capture Network Service, see the *Kofax Capture Installation Guide*.

File Cache Folder Locations

The file cache folder locations, accessed by both the Kofax Capture Network Service and the Web server, are used to hold batches uploaded from remote sites until the data can be inserted into Kofax Capture at the central site. The folders can be anywhere on your network, provided that the location offers access to the following:

- Web server and file cache folder locations
- KCN Service and file cache folder locations

Multiple file cache folders can be created on one or more computers. You might want to create multiple file cache folders so that if one file cache folder location fails, the remote sites can continue to synchronize using the remaining file cache folder locations.

Web Server

The Web site is used to route requests and data between the KCN Server remote sites and the central site.

Remote Synchronization Agent (RSA)

The RSA runs on at least one remote workstation at each remote site to automatically download batch classes from the central site and upload batches to the central site. The download and upload processes occur at the same time.

Batches created at a remote site are processed through all the modules set to run at the remote site. When the remote processing is complete, the batches are uploaded to the central site for further processing and export.

Remote Synchronization Agent System Tray Icon

The Remote Synchronization Agent (RSA) system tray icon is installed when you activate the RSA application.

Use the RSA allows to perform the following operations:

- View the status of batches and statistics being uploaded
- Synchronize on demand to download batch classes and upload completed batches, user statistics and administrative data such as shared scanner profiles
- Download batch classes on demand

Usually, synchronization occurs on the schedule set up within the remote site profile assigned to the remote site, or according to the polling settings defined by the remote site itself. You can use Synchronize Now to perform the upload and download process on demand.

You can double-click the RSA Windows system tray icon or right-click Status on the RSA shortcut menu to display the Remote Synchronization Agent window.

If the User Profiles feature is enabled, the tray icon cannot be used to start the RSA unless "Allow RSA to run interactively" is selected in the user's profile.

Note If the RSA has been installed as a service, the RSA application does not have to be activated or running for the RSA to perform automatic polling or synchronize with the central site. In this case, the RSA system tray icon does not appear.

Changing Kofax Capture Network Web Server Port Numbers

If you do not want to use the standard Kofax Capture Network Web Server (KCN Web Server) ports, you can assign alternative ports. By default, all HTTP communications use port 80, and all SSL communications use port 443.

Note When selecting alternative ports, you must ensure that the ports you assign are not being used by other applications or services. Port conflicts can result in intermittent and unpredictable problems.

To specify a different port number, use the following procedure.

1. Run the Internet Information Services administrative tool.
2. Select the Web site where KCN Web Server Components are installed.

3. Change the TCP Port setting to a number, such as 8080.
4. At the remote site, start **Batch Manager**.
5. On the **Remote Site** tab, in the **RSA** group, click **Web Server URL**.
6. Specify the Web Server URL and the new port number using the following syntax:

```
<protocol>://<host>[:port]/acis
```

For example, if the alternate TCP port number is 8080, the URL would be similar to this:

```
http://central:8080/acis
```

Kofax Capture Network Server Activity Logs

As the KCN Server performs its tasks, information is written to various log files.

Windows Application Event Log File

You can view the Windows application event log file using the Event Viewer. You might want to view the Windows Application Event Log if the RSA stops running.

- Use Windows Control Panel to select the Event Viewer.
- Select an item from the Tree tab in the left pane to display the log in the right pane.
- Double-click any line item in the log to view additional details.

Kofax Capture Network Server Log Files

Information on Kofax Capture Network Server is stored in log files at the Kofax Capture Network Server. Errors that occur during batch status checking are logged at the remote site's log file, ACIS_YYMM.txt.

Server Log File

Errors are logged by the KCN Service and sent to <Kofax Capture installation>\logs\ACIS_YYMM.txt. The YY specifies the current year and the MM specifies the current month, such as ACIS_1305.txt.

Each entry in ACIS_YYMM.txt includes the following information:

- Date and time that the RSA locked the batch for processing
- Status number
- Module name
- Kofax Capture server name
- Kofax Capture server version
- Transfer identifier
- Remote site name
- Remote station ID
- Remote Kofax Capture version
- Message
- Extra information as appropriate

Errors are also logged by the Kofax Capture Network Server and sent to <Kofax Capture installation folder>\logs\ACIW_YYMM.txt. The YY specifies the current year and the MM specifies the current month, such as ACIW_1305.txt.

Remote Site Log File

The client log file ACIC_YYMM.txt lists the activity between the remote site and the central site, including information about downloaded batch classes, uploaded batches, and other information.

Each entry in the log file includes the following information:

- Date and time
- Status number
- Message
- Station ID
- Windows computer name

Chapter 13

Database and Other Utilities

On the User Profile Properties and Group Profile Properties windows, you can manage access to administrative utilities with the "Allow admin utility usage" check box. Currently, this check box allows access to the Database Utility, which is used for tasks related to Kofax Capture databases.

Note If you select Oracle or IBM DB2 as your database configuration, the Repair and Compact tab is not available on the Database Utility.

When the User Profiles feature is selected, Kofax Capture does the following when users attempt to launch an administrative utility:

- Prompts user for a login ID
- Allows access to a utility if both of the following are true:
 - The "Allow access to admin utilities" check box is selected in the user profile or group profile
 - A valid login ID is entered, as defined in the user profile or group profile
- Denies access to a utility if either of the following is true:
 - The "Allow access to admin utilities" check box is not selected in the user profile or group profile
 - A valid login ID is not entered, as defined in the user profile or group profile

The Database Utility

Use the Database Utility (DBUtil.exe) to perform the following tasks.

- Configure your system database and statistics database
- Rename your database
- Enable SecurityBoost
- Review and edit site or workstation identification information
- Access the Batch Information Editor
- Repair and compact the database (for SQL Server and SQL Server Express only)
- Select USGCB compliance for the Standard database password
- Get information that may be useful when contacting technical support

This utility is available from the `Bin` folder in your Kofax Capture workstation or server installation.

The Separator Sheet Utility

The Kofax Capture Separator Sheet Utility is used to define and print separator sheets for batches and documents.

Document separator sheets contain patch codes to separate documents, and an optional bar code that encodes the name of the form type. During processing, Kofax Capture recognizes the document separator sheet, reads the bar code (if it exists), and separates and identifies documents accordingly.

Batch separator sheets contain a patch code that signifies the beginning of the next batch and a bar code that encodes the name of the batch class. During processing, Kofax Capture recognizes the batch separator sheet, reads the bar code, and creates a new batch based on the batch class.

Note As the number of published batch classes increases, it may affect the time it takes to launch the Separator Sheet Utility.

With the Separator Sheet Utility, you can do the following:

- [Create batch separator sheets](#), which are used when you select Unattended Scanning in the Scan module
- [Create document separator sheets](#)
- Print separator sheets (when using document separator sheets with multiple form types, you can print a separator sheet for each type)

Note The Separator Sheet Utility is only used for published batch classes with patch codes defined as the document separation method.

Creating a Batch Separator Sheet

Batch separator sheets are used with the Unattended Scanning feature in the Scan module.

1. Start the Kofax Capture Separator Sheet Utility.

Note The **Batch Class Name** list does not include batch classes that use batch totals, required batch fields, or numeric batch fields without default values.

2. At **Separator Sheet Type**, select **Batch Separator**.
3. Select portrait or landscape orientation.
4. On the **Batch Class Name** list, select the batch class associated with the batch that requires separator sheets.

Note The **Batch Class Name** list does not include batch classes that use batch totals, required batch fields, or numeric batch fields without default values.

5. Notice that the **Patch Code Type** list includes the patch code that is currently reserved for batch separation.

In the preview window, you see the sample batch separator sheet updated to reflect your selections, including the patch code, the batch class name and the date/time the batch class was published.

Creating a Document Separator Sheet

1. Start the Kofax Capture Separator Sheet Utility.

Note The Separator Sheet Utility is only for published batch classes where patch codes are defined as the document separation method.

2. At **Separator Sheet Type**, select **Document Separator**.
3. At **Batch Class Name**, use the list to select the name of the batch class for which you want to print separator sheets.
4. At **Patch Code Type**, use the list to select a patch code type.
5. At **Form Type**, do one of the following:
 - Select **None** if you do not want the separator sheet to include a bar code that identifies the document class/form type name.
 - Select the document class / form type for which you want to print a separator sheet. Kofax Capture adds a bar code to the separator sheet to identify the name of the form type.
 - Select **Print All Forms** to produce separator sheets for each document class/form type in the selected batch class.

The Scanner Configuration Utility

The Scanner Configuration Utility is used to configure scan and image source devices.

Using the Scanner Configuration Utility, you can view a list of image devices (scanners and file import sources) and the installed drivers that are available on your computer. From this list, you can select a scanner and set it as the default, or restore the default settings for a specific scanner. You can also create and manage your import sources so you can select a source from any Kofax Capture module that allows you to create batches (such as Scan, Quality Control, or Batch Manager).

You can start the Scanner Configuration Utility from the Kofax Capture program group.

You can also select a scanner using the Scan Source list on the Scan panel in the Administration, Scan, or Quality Control module.

Configuring a Source Device

You configure source devices with the Scanner Configuration Utility.

1. Start the Scanner Configuration Utility.
2. Select your source device from the list.
Scanners appear on the list if they are Kofax VRS-certified, or if their drivers are installed on the computer.
3. Click **Configured sources**.
4. If no configured sources exist for this device, click **Create Standard Sources**.
5. To set the default source for your device, select the appropriate configured source from the list and click **Set Device Default Source**.
A check mark appears next to the default source.

6. Click **Close**.
7. To set a configured scanner as the default, select it from the available image device list and click **Set as Default**.
Your current default scanner and source are listed at the bottom of the Scanner Configuration Utility window.
8. Click **Close** to exit the utility.

For detailed information about all the Scanner Configuration Utility options and features, click **Help** or press F1.

You can also select a scanner using the Scan Source list on the Scan panel in the Administration, Scan, or Quality Control modules.

Setting Image Quality

Kofax Capture internally stores color image files using JPEG compression, which gives you the ability to adjust the quality of the compressed image. The more highly compressed the image is, the worse the quality becomes.

Good OCR recognition requires the best possible quality in the compressed image. See [Color Support](#) for more information on compression. Unlike most of the other properties you can set in Kofax Capture, JPEG image compression quality is not set directly within the program. Instead, you must use the Scanner Configuration Utility.

Note For OCR, set the JPEG compression quality to 100 percent. For patch codes and bar codes, use at least 75 percent. Any changes to this setting take effect the next time you open the Kofax Capture modules that use it. If one of these modules is already open, you must close it and re-open it for the new setting to take effect.

1. Start the Scanner Configuration Utility.
2. In the Scanner Configuration Utility window, select your image device from the list.
3. Click **Configure Sources**.
4. In the **Configure Sources** window, select your source from the list.
5. Click **Properties**.
6. In the **Source Properties** window, set the JPEG compression quality to an appropriate value.
7. Click **OK** to save your settings and close the window.
8. Click **Close**.
9. Close the Scanner Configuration Utility.

Selecting Advanced Source Properties

You can select advanced source properties in the Scanner Configuration Utility or when you select a source device from your application.

1. Start the Scanner Configuration Utility.
2. Select your image device from the list.
3. Click **Configured sources**.
4. In the **Configured sources** window, select your source from the list.

5. Click **Properties**.
6. In the **Source Properties** window, select your preferences.
7. Click **OK** to save your settings and close the window.
8. Click **Close**.
9. Close the Scanner Configuration Utility. The advanced source properties apply to batches created with the selected source device.

Custom Storage String XML Data

Custom storage strings may be used by custom module developers to pass additional information (extended recognition data) between modules using an XML string with a structure understood by all the custom modules sharing the data.

This document-based custom storage string, called "Kofax.AC.ExtendedRecognitionInfo," is used for the storage of extended recognition data. The prefix "Kofax.AC" is used to help prevent collisions with other custom storage strings.

The hierarchy of the XML string is documented below. In many cases, names of elements, and especially attributes, have been kept short to limit the size of the XML string. Extended recognition information is not produced for group zones.

Reference DTD File

An XML DTD file that defines this XML format is provided in the local\Bin subfolder of the Kofax Capture installation. This file (`ACEExtRec.dtd`) is for reference only and is not utilized by Kofax Capture. To prevent issues with resolving file references, add-on applications making use of this XML string should not include a reference to this DTD.

Support for Non-ASCII Characters

All Non-ASCII characters must be represented in UTF-8 (Multi-Byte) format according to the currently active code page. UTF-16 (Unicode) strings are not supported by Kofax Capture.

Sample

The following sample XML string is for a document with a single field called "pet." In this case, the recognized value from the engine is "cat." Based on parameters in Kofax Capture, the resulting index field value has a low confidence mark character added, resulting in "c^at". For this low confidence character, an alternative, lower-confidence character of "o" is provided in the extended recognition information.

```
<ExtendedRecognitionInfo>
  <ExtIndexFields>
    <ExtIndexField Name="pet" EngineValue="cat" FieldValue="c^at" Row="1" Conf ="87"
      X="300" Y="300" W="2000" H="600" >
      <ExtChars>
```

```
<ExtChar WordStart="1" LineStart="1" Char="c" Conf ="100" X="0" Y="0" W="600"
H="600" />

<ExtChar Char="a" Conf ="70" X="600" Y="0" W="600" H="600" Rejected="1" >

  <ExtAltChars>

    < ExtAltChar Char="o" Conf ="60" />

  </ExtAltChars >

</ExtChar>

<ExtChar Char="t" Conf ="90" X="1200" Y="0" W="600" H="600" />

</ExtChars>

<ExtAltFields>

  <ExtAltField EngineValue="cart" Conf="60">

    <ExtChars>

      <ExtChar WordStart="1" LineStart="1" Char="c" Conf ="100" X="0" Y="0" W="600"
H="600" />

      <ExtChar Char="a" Conf ="70" X="600" Y="0" W="600" H="600" />

      <ExtChar Char="r" Conf ="40" X="1200" Y="0" W="300" H="600" Rejected="1"/>

      <ExtChar Char="t" Conf ="50" X="1400" Y="0" W="300" H="600" Rejected="1"/>

    </ExtChars>

  </ExtAltField>

</ExtAltFields>

</ExtIndexField >

</ExtIndexFields >

</ExtendedRecognitionInfo>
```

Element ExtendedRecognitionInfo

This is a placeholder element that encloses all related data for a document. This element has no attributes.

Element ExtIndexFields

This element represents a collection of index fields. This is the only sub-element possible directly under an ExtendedRecognitionInfo element. This element has no attributes.

Element ExtIndexField

This element represents extended recognition information for an index field. ExtIndexField elements can only exist as children of ExtIndexFields elements.

Within an ExtIndexFields element, there is no required order for the ExtIndexField objects. Multiple ExtIndexField elements with the same "Name" attribute can exist within the same ExtIndexFields collection, but each ExtIndexField with the same name must have a different value in the "Row" attribute.

Attributes

Attribute	Data Type	Description
Name	String	Name of the Kofax Capture index field. This name can also be used to locate the index field definition information within the corresponding document class.
EngineValue	String	Value returned by the recognition engine without any string-based post-processing. This value exactly corresponds to the child ExtChar elements (described below). This element may not be the same as the Kofax Capture index field value if the engine value has been modified by recognition scripts, marking, or other post-processing features.
FieldValue	String	Recognition value after post-processing results have been applied. In the case of the Recognition Server, this value corresponds exactly to the index field value. A consumer of this data can determine if value has been modified by comparing the index field value to this attribute. Custom modules that perform recognition without any post-processing should provide identical values for the index field, the FieldValue attribute, and the EngineValue attribute.
Row	Integer	The 1-based row number of a table field. This value is 1 if this index field is not part of a table. For fields recognized by Kofax Capture, this attribute is always 1, even if subsequent text processing by Kofax Capture splits the recognized value into multiple rows.
Conf	Integer	Field confidence value.
Page	Integer	Page number (within the document) on which the zone was recognized.
X	Integer	Zone left coordinate in BMUs (1/1200 of an inch) from the top left corner of the page.
Y	Integer	Zone top coordinate in BMUs from the top left corner of the page.
W	Integer	Zone width in BMUs.
H	Integer	Zone height in BMUs.

Element ExtAltFields

This element represents a collection of alternate field values for an index field. This is an optional element possible only under an ExtIndexField element. This element has no attributes and represents the original data returned by the engine, without any string post-processing that may occur in Kofax Capture.

The Recognition Server does not generate this element. It is included in the specification for use by custom modules.

Element ExtAltField

This element represents an alternate field value for an index field. ExtAltField elements can only exist as children of ExtAltFields elements. Within an ExtAltFields element, there is no required order for ExtAltField objects.

The Recognition Server does not generate this element. It is included in the specification for use by custom modules. Custom modules may make use of algorithms within the recognition engine to generate alternate combinations or numbers of characters.

Attributes

Attribute	Data Type	Description
EngineValue	String	Alternative field value returned by the engine.
Conf	Integer	Alternative field confidence value.

Element ExtChars

This element represents a collection of characters that make up an index field. This is an optional element possible under an ExtIndexField element or an ExtAltField element. This element has no attributes.

Element ExtChar

This element represents extended recognition information for a character. Multiple ExtChar elements can exist as children of an ExtChars element. There is one ExtChar element for each character in the EngineValue attribute of the parent ExtIndexField element, and the order of ExtChar elements is the same as the order of recognized characters.

Attributes

Attribute	Data Type	Description
Char	String (Character)	Recognized character. If the engine had several choices for this character position, this value represents the choice with the highest confidence. Other choices, if applicable, are represented by ExtAlt sub-elements.
Conf	Integer	Character confidence value.
LineStart	Integer	Optional attribute. If the value is present and equal to "1," this character starts a new line. The Recognition Server generates this attribute, even though it is optional.

Attribute	Data Type	Description
Rejected	Integer	If this attribute is present and equal to "1," this character needs human validation and/or repair. To allow for less space usage, this attribute is considered optional and needs to be present only if the character is rejected. If the attribute is not present, client code should assume that the character is not rejected. For fields recognized by Kofax Capture, this attribute is set whenever a character is recognized that would normally generate a "mark" character in the index field. This attribute is provided even if the mark character is empty.
WordStart	Integer	Optional attribute. If the value is present and equal to "1," this character starts a new word. The Recognition Server generates this attribute, even though it is optional.
X	Integer	Zone left coordinate in BMUs (1/1200 of an inch) from the top left corner of the page.
Y	Integer	Zone top coordinate in BMUs from the top left corner of the page.
W	Integer	Zone width in BMUs.
H	Integer	Zone height in BMUs.

Element ExtAltChars

This element represents a collection of alternate choices for a character. This is the sole element possible under an ExtChar element. This element has no attributes.

ExtAltChars and ExtAltChar elements are not generated when the "Kofax Advanced OCR Zonal" engine is used. Characters at the beginning of misspelled words are not marked as rejected.

Element ExtAltChar

This element represents an alternate character choice. Multiple ExtAltChar elements can exist as children of an ExtAltChars element. One ExtAltChar element exists for each alternate character choice, and there is no required order for the character choices.

Attributes

Attribute	Data Type	Description
Char	String (Character)	The alternate character
Conf	Integer	Character confidence value (0-100)

Custom Reports

The Kofax Capture Report Viewer module is based on the Crystal Reports Viewer.

With Crystal Reports (purchased separately), you design and create your own reports using the visual report designer. The report designer is equipped with tools that give you the ability to develop your own reports. This section only covers information specific to customizing reports for Kofax Capture; we assume that you are already familiar with both SQL Server and Crystal Reports.

The easiest modification you can make is to use your own logo in place of the Kofax Capture logo. The simplest way to create reports of your own is to modify the standard reports. For example, you can change the groups and/or data columns by modifying the queries used by these reports.

The Kofax Capture logo in the upper right corner of the standard reports is easily replaced with your own logo.

To use your own logo, use a graphics editor of your choice to size your logo so that it is no larger than 300 pixels wide by 80 pixels high.

After resizing, save your logo file as `logo.bmp` in `<Kofax Capture installation folder>\Bin\Reports`. You can use any color depth.

Note If you use a logo that exceeds the recommended size, the image overflows into other parts of the report.

If the standard reports cannot be modified to suit your needs, you can use Crystal Reports to create your own reports.

If you make your own reports, it may be helpful to understand how the logo graphic is integrated into the standard reports. The default logo is placed in the standard reports as an image with a dynamic Graphic Location based on a formula field named "LogoLocation." The LogoLocation is specified by the Report Viewer at runtime.

The position of the bitmap image is determined by the location of the upper left corner of the bitmap. To accommodate bitmaps of varying sizes, the Kofax Capture Report Viewer positions the "CompanyLogo" control so that its right edge lines up with the right edge of the "PrintDateTime" control. Both controls must be present, or the image position does not adjust properly.

Note You can modify the Summary Data, Comments field to edit the Report Description displayed in the Select Report window.

Database Connection

The Report Viewer module can be used only with the Kofax Capture database. You cannot use it to generate or view reports based on data from other sources.

When creating custom reports, you need to create an OLE DB (ADO) connection using the Microsoft OLE DB Provider for SQL Server.

If you are using the SQL Server database configuration, use the database connection information provided by your database administrator.

If you are using the built-in Kofax Capture Standard database configuration, use the following connection information, where `<servername>` is the location of the Kofax Capture server.

- `<servername>\kofaxcap2017` or `<servername>\kofaxcap2014`
- UserID: StatsMgr

- Password: Screen73
- Password when USGCB Compliance is selected: HDveq3XTgHS6%h\$
- Database: ACSystem

Database Views

The following database views make it easier to access data for the reports. You can use them with your custom reports.

viewBatchList

This view includes one row for each batch currently in the system. These values are always available, even if User Tracking is not selected.

Column	Description
BatchGUID	String that uniquely identifies a batch.
ExternalBatchID	External ID of the batch.
BatchName	Name of the batch.
BatchClassName	Name of the batch class.
ModuleName	Localized name of the current module. Same as Queue in Batch Manager.
ModuleUniqueID	Not localized unique ID for the current module.
ModuleCustom	True if the current module is a custom module.
Description	Batch description.
Priority	Current batch priority.
StationID	ID of the station processing the batch.
ContainsErrors	Same as the ! column in Batch Manager.
ActualPages	Number of pages in the batch as of the last time a session was closed.
ActualDocs	Number of documents in the batch as of the last time a session was closed.
BatchStatus	Same as StatsBatchModule.BatchStatus.
BatchStatusName	String equivalent of BatchStatus.
InProgressString	Descriptive information about the batch current state when it is being processed. Currently used only by Kofax Capture Network Server.
NextSiteGUID	Unique ID of the site where the batch will be processed next. Same as the current site GUID if Kofax Capture Network Server is not used.
NextSiteName	Name of the site where the batch will be processed next.
CreationDate	Date and time when the batch was created.
CreationTimeZone	Number of minutes that the creation time varies from GMT.
CreationSiteGUID	Unique ID of the site where the batch was created.
CreationSiteName	Name of the site where the batch was created.
CreationSiteTZName	String representing the time zone where the batch was created.

viewStatsBatchSummary

This view includes one row for each row in StatsBatch that also has at least one row in StatsBatchModule. This is essentially one row for each batch. These values are only available if User Tracking is selected.

Column	Description
BatchName	Same as in StatsBatch.
CreationStationID	Same as in StatsBatch.
CreationUserID	Same as in StatsBatch.
CreationUserName	Same as in StatsBatch.
BatchClass	Same as in StatsBatch.
BatchClassDescription	Same as in StatsBatch.
ExternalBatchID	Latest EndDateTime for the batch from StatsBatchModule.
LastSessionDateTime	Earliest EndDateTime for the batch from StatsBatchModule.
FirstSessionDateTime	The difference between StatsBatchModule.EndDateTime and StatsBatchModule.StartDateTime added up for all sessions.
ProcessingSeconds	Difference between LastSessionDateTime and FirstSessionDateTime.
EndToEndSeconds	Difference between LastSessionDateTime and FirstSessionDateTime.
Documents ¹	Difference between StatsBatchModule.DocumentsCreated and StatsBatchModule.DocumentsDeleted added up for all sessions.
Pages ¹	Difference between StatsBatchModule.PagesCreated and StatsBatchModule.PagesDeleted added up for all sessions.
Priority	Priority of the batch. If the priority changed as the batch was processed, this is the average priority based on the number of sessions.
ExpectedPages	Same as in StatsBatchModule.
ExpectedDocs	Same as in StatsBatchModule.
Deleted	Greater than 0 if the batch has been deleted.
Exported	Greater than 0 if the batch has been deleted.
PagesPerDocument	StatsBatchModule.PagesPerDocument. If the number of pages changed as the batch was processed, this is the average number of pages based on the number of sessions.
PagesScanned ¹	Total of StatsBatchModule.PagesScanned.
PagesDeleted ¹	Total of StatsBatchModule.PagesDeleted.
DocumentsCreated ¹	Total of StatsBatchModule.DocumentsCreated.
ChangedFormTypes ¹	Total of StatsBatchModule.ChangedFormTypes.
PagesReplaced ¹	Total of StatsBatchModule.PagesReplaced.

¹ If your custom module statistics attributes aren't properly set in the API, the data in these columns are undefined.

viewStatsSession

This view includes one row for each row in StatsBatchModule. This is essentially one row for each session.

Column	Description
ModuleStartDateTime	Same as in StatsModuleLaunch.StartDateTime.
ModuleEndDateTime	Same as in StatsModuleLaunch.StartDateTime.
ModuleUniqueID	Same as in StatsModuleLaunch.
ModuleName	Same as in StatsModuleLaunch.
UserID	Same as in StatsModuleLaunch.
UserName	Same as in StatsModuleLaunch.
StationID	Same as in StatsModuleLaunch.
SiteID	Same as in StatsModuleLaunch.
SiteName	Same as in StatsModuleLaunch. If this value is empty, then the SiteID is substituted.
OrphanedModule	Same as in StatsModuleLaunch.Orphaned.
BatchModuleID	Same as in StatsBatchModule.
ExternalBatchID	Same as in StatsBatchModule.
BatchDescription	Same as in StatsBatchModule.
NextModuleUniqueID	Same as in StatsBatchModule.ModuleCloseUniqueID
NextModuleName	Same as in StatsBatchModule.ModuleName.
SessionStartDateTime	Same as in StatsBatchModule.StartDateTime.
SessionEndDateTime	Same as in StatsBatchModule.EndDateTime.
ProcessingSeconds	Difference between StatsBatchModule.EndDateTime and StatsBatchModule.StartDateTime.
BatchStatus	Same as in StatsBatchModule.
BatchStatusName	String equivalent of BatchStatus.
Priority	Same as in StatsBatchModule.
ExpectedPages	Same as in StatsBatchModule.
ExpectedDocs	Same as in StatsBatchModule.
Deleted	Same as in StatsBatchModule.
PagesPerDocument	Same as in StatsBatchModule.
PagesScanned ¹	Same as in StatsBatchModule.
PagesDeleted ¹	Same as in StatsBatchModule.
DocumentsCreated ¹	Same as in StatsBatchModule.
DocumentsDeleted ¹	Same as in StatsBatchModule.
ChangedFormTypes ¹	Same as in StatsBatchModule.
PagesReplaced ¹	Same as in StatsBatchModule.

Column	Description
ErrorCode	Same as in StatsBatchModule.
ErrorText	Same as in StatsBatchModule.
OrphanedBatch	Same as in StatsBatchModule.Orphaned.

¹ If your custom module statistics attributes aren't properly set in the API, the data in these columns are undefined.

Save Custom Reports

The standard report templates are stored in <Kofax Capture installation folder>\Bin\Reports. If you store your custom reports in the same location, they automatically appear in the Report Viewer Reports menu and in the Select Report window.

Report template files must have an .rpt extension. Reports are added to the menu and the window in alphabetical order based on the file name. You can control the sort order by prefixing numbers to the file names:

```
01_Special Report.rpt
```

```
02_Western Region Report.rpt
```

```
03_National Report.rpt
```

The leading numbers are removed from the name for display in the menu or window.

You can also add accelerators to your report names by inserting an ampersand (&) before the character to use. For example, you would do the following to make the first letter of each report the accelerator character:

```
01_&SpecialReport.rpt
```

```
02_&WesternRegionReport.rpt
```

```
03_&NationalReport.rpt
```

The Select Report window also has a brief description of each report. With Crystal Reports, you can add a comment to the report summary information. This comment is used by the Select Report window as the report description.

Displaying the Report Settings Window

If your custom report includes a text object named "DateRangeTitle," the Report Viewer module displays the Report Settings window using the value assigned to DateRangeTitle as the title of the window. The Report Viewer also sets the "ReportStart" and "ReportEnd" parameters to the values selected in the window.

If your report does not include parameters named "ReportStart" and ReportEnd, the window appears and the report is generated, but with logged errors.

If your report does not include a text object named "DateRangeTitle," the Report Settings window does not appear.

If the report has the named objects that trigger the Report Settings window as well as other parameters, the Report Settings window is displayed first, followed by the standard Crystal Reports window for only the remaining parameters.

If your custom report has only parameters other than "ReportStart" and "ReportEnd," a standard Crystal Reports window is displayed instead.

Note that if the standard Crystal Reports parameters window is displayed, the Please Wait window closes before the entire report appears.

Paper Size

The Report Viewer module can automatically adjust your report margins so that a single report template can print correctly with both A4 and Letter size paper.

To set the Report Viewer module to automatically adjust for these standard paper sizes, save your report template for Letter size paper with margins set as specified in this section. The values are selected so that both A4 and Letter have at least quarter-inch margins.

If you use other settings, the Report Viewer does not make automatic adjustments. This may work if you want to use different paper sizes.

Use the following values for Letter size paper.

Orientation	Top and Bottom Margins	Left and Right Margins
Landscape	0.617 inches	0.500 inches
Portrait	0.500 inches	0.617 inches

When printing to A4, the margins are automatically adjusted to the following values.

Orientation	Top and Bottom Margins	Left and Right Margins
Landscape	0.500 inches	0.846 inches
Portrait	0.846 inches	0.500 inches

Kofax Reporting

Kofax Reporting is a separately purchased product that helps system administrators, business process managers, and other stakeholders gain visibility into and take control of Kofax managed business processes. This product serves as the single conduit across many Kofax products, providing a centralized storage of historical operational metrics and audit data. By default, Kofax Reporting is disabled.

The following Kofax products are currently supported:

- Kofax Capture
- Kofax Transformation Modules
- Kofax Front Office Server

All the reporting features included with Kofax Capture are still available and remain unchanged.

Registering a Custom Module or Workflow Agent with the Extension Registration Utility

If you plan on using a custom module or workflow agent at your remote sites, you must register the custom module or workflow agent at the central site and each applicable remote site, after you add the module or workflow agent to the batch class workflow.

Note When registering a custom module, the RegAscEx command only has to be run once at the remote site (on only one workstation). On the other hand, when registering a workflow agent, the RegAscEx command has to be run at every remote site workstation that will use that workflow agent. This is because the OCX or DLL needs to be registered with the operating system on each workstation.

When importing a batch class containing a workflow agent, you must have previously installed the necessary workflow agents. Failure to do so results in an error.

By default, KCN Server remote site users cannot download batch classes with workflow agents that have not been registered on the remote site workstation. This is consistent with the behavior for downloading custom modules. An exception to this rule applies if the `WorkflowAgentSkipIfCantLoad` flag has been set. In this case, this check is not performed because any non-registered workflow agents are skipped.

To run a custom module or workflow agent at a remote site, the appropriate custom module executable (.exe) or workflow agent COM server (.dll or .ocx) must be installed on the local hard drive at every remote site workstation.

Note The custom module executable or workflow agent COM server must exist at a remote site before the site can use it.

1. If you are registering a workflow agent, ensure the workflow agent registration file (.aex) has been set up to define the property settings.
2. Copy the executable (.exe, .dll, or .ocx) and registration (.aex) files to <Kofax Capture installation>\Bin.
3. Open a **Command Prompt** window.

4. Register your custom module or workflow agent by executing the Kofax Capture Extension Registration Utility, RegAscEx.exe. By default, the utility is available from <Kofax Capture installation>\Bin.

- To register a custom module, enter the following: RegAscEx.exe /f <filename> /m <modulename>
- To register a workflow agent, enter the following: RegAscEx.exe /f <filename> /w <workflowagentname>

where:

- filename is the name of your registration (.aex) file
- modulename is the name of your custom module
- workflowagentname is the name of your workflow agent

Note The /m and /w arguments are optional. If the /m and /w options are not used, you can register the custom modules and workflow agents at the same time. If successful, the following message appears:

```
Success (1002): Module 'modulename' registered.
```

```
Success (1008): Workflow 'workflow agent name' registered.
```

Limiting the Length of Field Names

You can limit the length of certain field names (such as batch class names, document class names, etc.).

1. With any text editor (such as Notepad), create a file named Limits.ini to specify the limits. The format for Limits.ini is shown in this procedure.
2. Copy Limits.ini to your installation folder:
 - For client/server configurations, copy Limits.ini to your server folder as listed in the registry under HKEY_LOCAL_MACHINES\SOFTWARE\Kofax Image Products\Ascent Capture\3.0\Server Path. The file must exist in the server folder so that all clients can access it.
 - For standalone installations, copy Limits.ini to your Kofax Capture folder.

```
[AdminLimits]
BatchClassName=32
DocumentClassName=32
FormTypeName=32
BatchFieldName=32
IndexFieldName=32
FieldTypeName=32
FieldTypeDescription=80
FieldTypeLength=254
```

See the [Valid Maximum Values Table](#) for the valid values to set for your limits. Note that the values shown here represent the default values for Kofax Capture.

Chapter 14

Kofax Capture Licensing

Kofax Capture uses a centralized licensing scheme with the following key features:

- Licenses can be delivered or upgraded via the Internet.
- Licenses can be volume-based.

Although many options and variations are possible, the licensing basics are simple and straightforward. After installing or upgrading the product, activate the license by obtaining an activation code from Kofax. In most cases, the activation occurs automatically.

This scheme applies to both hardware and software licenses.

Kofax Capture Service

The Kofax Capture Service (ACSvc.exe) coordinates all license operations from the Kofax Capture server site. It has no user interface, and generally there is no need for you to interact with this service. Workstations and all remote Kofax Capture Network Server sites receive their licensing permissions from the central Kofax Capture Service. However, standalone installations have a built-in service.

Sharing a License Server

It is possible for a number of otherwise independent Kofax Capture installations to share a common license server. For example, you can use this approach to simplify the license purchase process. Note that sites sharing the license server must all have network access to the shared server. Also note that the system time and date for every site sharing the license server must be within two days of one other. If the system dates are too far apart, an error occurs.

How Kofax Capture Network Server Licensing Works

KCN Server has a flexible licensing capability that ties into the Kofax Capture licensing mechanism. Each time a remote site synchronizes with the central site, licensing information is exchanged. This ensures that the licensing information is reasonably current and consistent across the entire installation.

Each time a remote site synchronizes with the central site, it sends any volume usage information to the central site and downloads any updates to the volume licensing. All licensing downloaded to the remote site automatically expires 5 days after the current remote site date. This ensures that remote sites periodically synchronize volume usage information.

In a disaster recovery scenario, if you switch remote sites to a new primary site, your existing number of station licenses is sufficient — the number of station licenses required for the remote sites does not increase.

The Kofax Capture Service (ACSvc.exe) coordinates all license operations from the Kofax Capture server site, and it is installed automatically with Kofax Capture. It has no user interface and, in general, there is no need to interact with this service.

Workstations and all KCN Server remote sites receive their licensing permissions from the central Kofax Capture Service. Each remote site also has its own service. This service works in concert with the service at the central site to manage the allocation of licenses and the tracking of volume usage.

If you selected the hardware key licensing option when you purchased Kofax Capture, the hardware key is only required on the Kofax Capture central site server.

Hardware keys are not required on Kofax Capture Network Server remote sites. Furthermore, the Kofax Capture Web server does not require a hardware key.

If a remote site fails to synchronize after 5 days, the licenses expire and the remote site is not able to function. Synchronizing keeps a license from expiring.

Kofax Capture Licensing with Terminal Services and Citrix

You can operate Kofax Capture via a Terminal Services or Citrix session. Once logged in to the Terminal Services or Citrix session, Kofax Capture operates as if it were installed on your local computer. However, you should be aware of the following station licensing conditions.

Supported Version

Kofax Capture has been certified for use with Citrix Presentation Server 4.5 Enterprise.

Running Multiple Modules in a Session

Station licenses apply to the session rather than the computer, so you can run multiple licensed applications in one session. Licensed applications running within the same session share the same station license. For example, if you are running Recognition Server, Validation, and Quality Control at the same time on the same computer, and in the same Terminal Services or Citrix session, only one Kofax Capture concurrent station license is required.

However, licensed applications that are running within different sessions do not share the same station license. For example, if you are running Recognition Server, Validation, and Quality Control at the same time on the same computer, but each is running in a different Terminal Services or Citrix session, three Kofax Capture station licenses are required.

Running a Mix of Session and Client-Based Modules

Kofax Capture applications that run as services are part of the same session as the console. For example, if Recognition Server is running as a service and a user at the console is running Validation, then a single Kofax Capture station license is used. However, if Recognition Server is running as a service and a user

connects remotely (via Terminal Services or Citrix) and runs Validation, two Kofax Capture station licenses are required.

Tracking Terminal Services and Citrix Session Usage Statistics

To track individual sessions running on a single station, the station ID for the session includes both the station ID and the session ID. Example:

```
StationID = ScanStation: Sess 42
```

Disconnecting and Logging Out Terminal Services and Citrix Sessions

When a Terminal Services or Citrix session is disconnected, the session state becomes "Disconnected." All running applications remain running in an idle state, and any consumed Kofax Capture station licenses remain consumed. When the user is reconnected, the session becomes active again, and the running applications resume their prior states.

Note If a licensed Kofax Capture module is running within a disconnected session and the administrator forces a logoff of that session, or the application terminates abnormally for any reason, the consumed Kofax Capture station license is released within the timeout period (20 minutes by default) or after the Kofax Capture licensing service has been manually restarted.

When a Terminal Services or Citrix session is logged out, the session is closed and any consumed Kofax Capture licenses are released. The session no longer displays in the Management Console.

Limiting Volume Licenses at Remote Sites

Use the Kofax Capture Network Server Remote Site Volume Management feature to control how volume licenses are shared by your remote sites. If you have a certain volume of Scan/ Import Page Count, you can divide the volume among your remote sites. Each remote site could be given the entire amount, or each remote site could be allocated any fraction of the license volume.

Normally, a volume license is shared across all stations in a Kofax Capture installation. If Kofax Capture Network Server is installed, volume license usage is shared across the central site and all remote sites. This configuration is ideal if you want to centrally manage a license pool.

In some situations, there might be an advantage to treating each remote site as an independent consumer of volume licenses. You can assign specific limits for volume-based licenses to remote site profiles. This setting is optional, and can be done for all, none, or some of the volume-based licenses.

From the perspective of a remote site, these limits set the maximum volume available to it, regardless of the total volume allowed by the license at the central site.

The following example illustrates how this works.

Assume that you have the following licenses and volumes at the central site.

Name and Type of License	Maximum Volume	Minimum Volume
Scan/Import Page Count - Annual	1000	1000

Name and Type of License	Maximum Volume	Minimum Volume
Scan/Import Page Count - One Time Use	1000	1000
PDF Image + Text (PDF Text Under Image) - Annual	1000	1000
PDF Image + Text (PDF Text Under Image) - One Time Use	1000	1000

You have already created a remote site profile called "Back 40" and now want to limit some of the volumes available to that profile. By implication, all remote sites assigned the Back 40 profile will have the same limits placed on them.

You set the following volume limits on the Back 40 remote site profile.

Name	Period	Periodic Limit	One Time Use Limit
Scan/Import Page Count	Annual	500	0
PDF Image + Text (PDF Text Under Image)	Annual	400	0

The preceding settings mean that each remote site with this profile has a maximum annual allowance of 500 scan/import pages and 400 PDF Image Under Text pages. There is no "one time use" volume assigned.

Note that if you have 10 remote sites with the Back 40 profile, you have essentially allocated 5000 Concurrent License volume counts and 4000 PDF Image Under Text license volume counts. The combined total of the remote sites greatly exceeds the maximum allowed by these licenses at the central site. Even so, the central site maximum volume provides an absolute limit on the volume for your entire installation, which cannot be exceeded during production regardless of your combined remote site allowances.

Each time your remote sites synchronize with the central site, the available volume reported at the central site is decremented according to the usage at the remote sites. In this example, once the maximum volume is reached at the central site, the system is no longer able to process batches.

Use the following basic steps to limit volumes at remote sites. This procedure assumes that a remote site profile already exists and that at least one remote site has been assigned to that profile.

1. At the central site, start the Administration module.
2. On the **Tools** tab, in the **Distributed Capture** group, click the arrow under **Remote** and then click **Site Profiles**.

The **Kofax Capture Network Server Remote Site Profiles** window appears.

3. In the **Name** field, select the remote site profile to modify.
4. Click the **Volume Licensing** tab.
Note the available licenses at the top and the applied limits at the bottom. If this is the first time you have modified volume licensing limits for this profile, all the boxes are unselected.
5. Select one of the licenses.
A check mark appears in the selected box and the two limit fields change from No Limit to 0.
6. Click in the **Periodic Limit** field and enter a number from 0 to 2000000000.
This limits the periodic license count for the selected license type.

7. Click in the **One Time Use** field and enter a number from 0 to 2000000000.
This limits the "one time use" license count for the selected license type.
8. Repeat steps (5 - 7) for other license types.
9. Click **Save**.
Your changes are saved to the selected remote site profile.
10. Repeat steps (3 - 8) for other remote site profiles.
11. Close the window.
The next time a remote site assigned to that profile is synchronized, the new licensing limits are transferred.

Kofax Capture Network Server License Types

This section describes the license types employed by Kofax Capture Network Server.

System License

A system license enables a feature or sets limitations for your Kofax Capture installation. With Kofax Capture Network Server, all system licenses from the central site are shared with all remote sites. If the central site is running with an evaluation license, the evaluation license is shared with all remote sites.

Remote Site License

At a remote site, the License Utility shows a system license called "Kofax Capture Network Server remote site license configuration."

To keep the Remote Site Licenses from expiring, you should routinely synchronize (preferably once each day) with the central site. If you do not synchronize, your Remote Site Licenses expire after 5 days. If this happens, simply synchronize to reacquire the licenses.

Station License

Kofax Capture Network Server uses the same station licenses as Kofax Capture.

On a new Kofax Capture Network Server installation, station licenses are initially allocated entirely to the central Kofax Capture Network Server site. The "(Default)" remote site profile is created by the installation application and allocates one Concurrent Station License to each remote site.

The administrator can allocate additional station licenses to each remote site by creating or editing remote site profiles.

As with a Kofax Capture installation, the Kofax Capture Service at the remote site may substitute one license for another if a matching license is not available. However, substitutions across remote sites or with the central site are not supported. In other words, substitutions are limited only to those licenses available at that remote site.

Information about a station license is not displayed in the License Utility at remote sites.

Hardware Key Requirements

If you selected the hardware key licensing option, a hardware key is required on all Kofax Capture servers and standalone Kofax Capture installations. Kofax Capture uses a USB hardware key; parallel hardware keys are not supported.

Kofax Capture client workstations and Kofax Capture Network Server remote sites do not require hardware keys.

Your activation code is tied to your hardware key. Using the activation code on the wrong system, or changing the hardware key does not work.

Note If you are using software-based licensing, there is no need for a hardware key. Every other aspect of activation remains the same.

Kofax Capture License Types

Kofax Capture has three types of licenses:

- System licenses
- Station licenses
- Volume licenses

Note Certain features, such as the Enhanced Bar Code Engine, require additional licenses that are not part of Kofax Capture.

The Administration module, the Batch Manager module, the Database Utility, and the Kofax License Utility do not require any licenses.

System Licenses

A system license enables a feature or sets limitations shared by the entire Kofax Capture system. Specifically, a system license applies to a particular server and all associated client workstations. In a Kofax Capture Network Server installation, a system license automatically applies to all remote sites.

The following sections describe the various system licenses supported by Kofax Capture. To activate Kofax Capture, the correct Version System License must be present in the activation code. Without the appropriate Version System License, Kofax Capture cannot be activated. For example, Kofax Capture version "x" requires a Version System License specifically for version "x."

Software License

Software-based licensing is the default licensing method. Hardware keys are an alternate form of licensing. Except for the hardware key, both types of licensing are the same.

Kofax Capture License

The Kofax Capture License gives you the ability to use all the standard features of Kofax Capture.

Kofax Capture Enterprise License

The Kofax Capture Enterprise License gives you the ability to use all the features available in the Kofax Capture License with the addition of the following:

- High Availability support
- Multiple Instance support
- Terminal Services and Citrix support
- WebSphere support
- Backup Licensing option
- SQL Server Enterprise Edition, Oracle Database, and IBM DB2 configurations
- Disaster Recovery features (adding and editing alternate central sites, automatic site switching, batch replication, uploading new batches to alternate central sites, or related WorkFlow Agent API features).

Note Kofax Capture does not ship with or install a full-featured version of SQL Server Enterprise Edition, Oracle Database, or IBM DB2.

Kofax Capture Product Suite Evaluation License

The evaluation licenses give you the ability to run all modules and have the same activation steps as a purchased license. All evaluation licenses allow you to run in "evaluation mode" for a limited time and with a limited page volume. Evaluation mode provides unrestricted access to most of the features and capabilities of Kofax Capture. Depending on your purchase contract, certain restrictions may be imposed on features allowed by the evaluation mode.

The Kofax Capture product suite has a three-day evaluation license.

If you select the hardware key license option, Kofax Capture attempts to activate your license automatically after installation. However, in some circumstances, automatic activation may not be possible. For example, you may have problems with your Internet connection or hardware key. In such cases, Kofax Capture may be able to obtain an evaluation license.

If acquired, this evaluation license is good for three calendar days, not counting the day you installed Kofax Capture. During this evaluation period, there is an absolute usage limit of 3000 pages.

If automatic activation fails, you can obtain an activation code at <http://www.kofax.com/support/index.asp?t=activation>. If that is not possible, you can send an email to Activation@Kofax.com. If activation fails for any reason, do not attempt to reinstall Kofax Capture. Doing so will render it useless until you obtain an activation code from Kofax.

When your license is about to expire, you will see messages reminding you that the evaluation period will soon end. The exact timing of these messages depends on your sales contract.

Even though evaluation licenses have volume limitations, you do not receive a warning as you approach your page limit. This is because the number of pages remaining is always visible in the Scan module. You can regularly monitor your remaining page counts by looking at this counter.

Station Licenses

Use a station license to run the following Kofax Capture components:

- Scan

- Import scripts
- XML Import Connector and Auto-Import
- OCR Full Text
- PDF Generator
- Quality Control
- Recognition Server
- Export
- Validation
- Verification
- Custom modules
- Customized Standard module
- Email Import Connector

When Kofax Capture Network Server XML Import Connector is run in polling mode, it does not acquire a license until it begins processing a batch. When the batch is closed, the license is released.

Kofax VRS Station Licenses

To use the VRS QC Later feature, it is necessary to have the appropriate station license. As with other Kofax licenses, this license is activated over the Internet. When activated, the purchased Kofax VRS license(s) appears in the Kofax License Utility. The three types of Kofax VRS station licenses are listed in the following table. Each license includes a class of scanners, grouped by throughput.

License Text in License Utility	Supports VRS QC Later Mode
Kofax VRS Professional for Desktop Scanning	No
Kofax VRS Professional for Workgroup Scanning	Yes
Kofax VRS Professional for Production Scanning	Yes

The Kofax VRS Professional for Desktop Scanning station license does not support the VRS QC Later mode. However, it is still possible to use VRS QC Later with a desktop scanner version of Kofax VRS if one of the other two types of station licenses is available. For example, a desktop scanner version of Kofax VRS can run with a workgroup or production license if a desktop scanner license is not available. In this case, VRS QC Later will work, since the higher licenses support it.

As with other types of station licenses, Kofax Capture reallocates the Kofax VRS scanner licenses as they are released.

Note The Kofax Capture evaluation license does not enable Kofax VRS.

Station Licenses with Terminal Services and Citrix

Use a Station license to use Kofax Capture during Terminal Services and Citrix sessions as if Kofax Capture were installed locally. However, there are special considerations that apply if Kofax Capture Licensing is used with Terminal Services and Citrix.

Volume Licenses

Volume licenses limit the number of pages that you can process across the Kofax Capture installation.

In general, each imported image file decrements a volume license by a count of 1 for each page embedded in the image file (most image file formats support only one page; however, TIFF files can support multiple pages).

When scanning or importing using standalone separator sheets, the first separator sheet in each batch is counted against the volume. However, subsequent standalone separator sheets (and blank pages deleted at scan time) don't decrement the page count.

Also, if a bar code/ patch code is found on a standalone separator sheet during document separation, that separator sheet is not counted, either.

An important clarification applies when importing PDF files as TIFF images (as opposed to treating them as eDocuments). When you import a PDF file as a TIFF file, each page in the PDF file results in an embedded page in the corresponding TIFF image file. Consequently, Kofax Capture decrements your license count by one. Therefore, a 124-page PDF file decrements your volume count by 124 pages.

However, if you import the 124-page PDF file as an eDocument, your volume count is decremented by only one page. Note that Kofax Capture has important restrictions on the way eDocuments are handled. These same restrictions apply to PDF files treated as eDocuments.

There are two classes of volume licenses: periodic licenses and one- time use licenses.

Periodic licenses are the most common form of volume license, and they automatically renew on a regular cycle. Annual licenses reset to their maximum volume allowance on the first day of each year. If a new volume license is purchased mid-period, it begins with a full volume. If you upgrade to a license with a greater volume, your volume count continues uninterrupted; it does not reset.

One-time use licenses work by authorizing an absolute number of pages. Each time you process a page, the number is decremented by one. When the remaining amount reaches zero, the license expires. It does not automatically renew.

When used in conjunction with periodic licenses, a one-time use license is used first. If your one-time license count falls to zero, Kofax Capture starts using your periodic license.

You can purchase one-time use licenses at any time. If you have a remaining volume on a current one-time use license, the new volume is added to your remaining count.

Each type of volume license is described in the following sections.

Scan/Import Page Count License – annual

This license is used by the Scan module, import scripts, and custom modules that scan or import pages.

The Scan/Import Page Count license is available with annual periods that automatically renew.

Scan/Import Page Count License – one-time use

This license is the same as the Scan/Import Page Count License annual license, except this license is only decremented when the annual license is depleted.

This is a one-time use license.

Kofax PDF Image + Text Page Count – annual

This license is used by the Kofax PDF Generator when generating Kofax PDF Image Under Text output.

The Kofax PDF Image + Text (Image Under Text) Page Count annual license is available with yearly periods that automatically renew.

Kofax PDF Image + Text Page Count – one-time use

This is the same as the Kofax PDF Image + Text Page Count periodic license, except this license is only decremented when the annual license is depleted.

This is a one-time use license.

Remaining Volume Count

The Kofax Capture Scan and Quality Control modules display the total number of pages remaining in your Scan/Import volume licenses. This is the sum of the current periodic and one-time use licenses minus the number of pages you have used. This display is updated at least as frequently as batches are closed, opened, and created. The same rules apply to the scan counter available to import scripts.

This display shows volume counts for images.

Note The count may be updated more frequently for pages processed locally than for KCN Server remote stations.

Network Support for Licensing

The licensing system requires a TCP/IP connection between all Kofax Capture client workstation applications and the Kofax Capture Service (on the Kofax Capture Server).

The Kofax Capture Service retries for up to 1 minute in the case of a network or server problem. If the server or network recovers within this period, the client workstation detects this and continues normally.

Otherwise, a client workstation error occurs. Note that unattended applications, such as the Export module, continue running, even after such an error. Attended applications, such as the Scan module, will fail and likely need to be restarted.

Note If the Kofax Capture Service is restarted, workstations reacquire any previously held station licenses once they are reconnected.

Licensing Requirements for the Enhanced Bar Code Engine

The Enhanced Bar Code Engine requires additional licensing, as described later in this section. If the Enhanced Bar Code Engine is selected for a recognition profile, but the required licensing is not in place, the Standard Bar Code Engine is automatically used. Processing for 2-D bar codes produces empty results and no warnings or messages appear.

An exception occurs when you test zones on sample pages from the Administration module. If the Enhanced Bar Code Engine is selected, but the required licensing is not in place, empty results are not returned. However, a warning appears in the Results area of the Zone Test window.

Depending on the setup parameters, Kofax Capture usually performs bar code recognition within the Scan module. However, in the following cases, it is necessary to defer bar code recognition to the Recognition

Server module. If you plan to use the Enhanced Bar Code Engine in these cases, the computer running the Recognition Server module must have the appropriate license.

- If automatic index zones of any kind exist in the document class, all bar codes, including page level bar codes, are processed by the Recognition Server module.
- If more than one type of bar code exists per document class (including all page level or zonal bar codes), all bar codes are processed by the Recognition Server module.
- If Recognition scripts exist, all bar codes are processed by the Recognition Server module.
- If more than one form type exists, all bar codes are processed by the Recognition Server module.

The following table shows the licensing requirements for various configurations using the Enhanced Bar Code Engine.

Module	Processing Activity	Enhanced Bar Code Hardware Key Licensing ¹	Enhanced Bar Code Station Licensing ²
Administration	Testing zone-level or page-level bar code recognition with QuickZones	yes	yes
Scan and Quality Control	Bar code recognition when scanning with a scanner	yes	yes
Recognition Server	Bar code recognition	yes	yes

¹ Requires that an Enhanced Bar Code hardware key be installed on every workstation. If you are using this hardware key, you must shut down all Kofax Capture modules before you attach the Enhanced Bar Code Engine hardware key. Failure to do so will yield unpredictable processing results.

² Requires that Enhanced Bar Code be added to your Kofax Capture licensing. In a standalone configuration, only one Enhanced Bar Code station license is required, but in a client/server configuration, a license can only be used by one workstation at a time. In a client/server configuration, if a module attempts to use a license while another workstation is using it, the module either uses a second license or, if a second license is unavailable, the values that require the Enhanced Bar Code Engine are left blank. To avoid this condition, we recommend that you purchase multiple Enhanced Bar Code station licenses.

Note The Scan, Quality Control, and Recognition Server modules use an Enhanced Bar Code station license while a batch invokes the Enhanced Bar Code Engine. In these cases, the license becomes available to other workstations again when the batch is closed. However, the Administration module uses an Enhanced Bar Code station license when the Enhanced Bar Code Engine is invoked through a zone test's recognition profile. In this case, the license does not become available to other workstations until the Administration module is closed.

Activating Your Licenses

Activation is accomplished by acquiring an activation code that is tied to your computer using software-based licensing. Using the activation code on a different system does not work.

Activation is automatically attempted during the installation of Kofax Capture server, or a Kofax Capture standalone system.

Note If you are using the hardware key option, the activation code is tied to your hardware key. Every other aspect of activation remains the same as software-based licensing.

The Kofax License Utility requires a special activation code to activate your licenses. Normally, licenses are activated automatically as part of the installation process. There may be situations, however, in which you must manually acquire an activation code.

While activating your licenses, we suggest that you shut down all Kofax Capture applications throughout your installation.

Automatic Activation

On a new installation (where Kofax Capture has not previously been installed, or where the previous installation was removed), Kofax Capture attempts to automatically activate your license. If this succeeds, you can immediately use all the features and capabilities allowed by your license. If this fails, you can use the Evaluation License, provided your hardware key shows no usage count. If you are reinstalling Kofax Capture and your hardware key shows usage, you are not granted an Evaluation License.

Automatic Activation requires an Internet connection and automatically does the following:

1. Contacts a Kofax server via the Internet.
2. The server at Kofax generates the correct activation code and sends it back to the installation program.
3. The installation program activates your licenses and notifies you that they are activated.

Note Automatic activation can also be performed with the License Utility.

Manual Activation Methods

You can manually activate Kofax Capture if you are unable to activate automatically.

Note If you obtain your activation code manually, you must use it to activate your system within 30 days. After activation, you can continue to use Kofax Capture indefinitely without obtaining a new code. If you are not able to complete the activation within 30 days of obtaining the code, you must obtain a new activation code.

While automatic activation is the most convenient activation method, there may be cases in which manual activation is required.

For example:

- You do not have access to the Internet.
- Your Internet connection is temporarily down.
- You are visiting a customer without Internet access.

All manual activation methods require you to obtain an activation code. The following procedures cover several common methods of manual activation.

Web Page Activation

To use the Web page, you must have your Kofax serial number. You obtain this number from the email you received from Kofax, inside the Kofax Capture box, or on the hardware key (if applicable). With the hardware key option, you can also find your serial number in the Kofax License Utility. The serial number consists of two letters followed by a series of numbers.

1. Note the Kofax serial number.
2. Using your Internet browser, open to the Kofax Capture Activation page at `http://www.kofax.com/support/index.asp?t=activation`.
3. Enter your serial number in the space provided on the Web page and click **Submit** to generate your activation code.
4. After the Web page has generated the activation code, copy the code to the Clipboard.
5. In the Kofax License Utility, select **File** and then **Activate** to open the **Activate** window.
6. Click **Manual** to open the **Manual Activation** window and paste the activation code from the email into the indicated area.
7. Click **Activate**.
The utility activates the system and notifies you that the system is now ready for use.

Email Activation

To use the email activation method, you must have your Kofax serial number. Use this method only if all other activation methods have failed.

1. Note the Kofax serial number.
2. Contact Kofax at `info@Kofax.com`, request an activation code, and provide the serial number.
3. Kofax generates the activation code and relays this information back to you via email.
4. In the Kofax License Utility, select **File** and then **Activate** to open the **Activate** window.
5. Click **Manual** to open the **Manual Activation** window and paste the activation code from the email into the indicated area.
6. Click **Activate**.
The utility activates the system and notifies you that the system is now ready for use.

Activation at Another Location

This method can be used if you plan to visit a remote site (or a different workstation) where automatic activation is not possible.

1. Note the Kofax serial number.
2. Open the Kofax Capture activation page:
`http://www.kofax.com/support/index.asp?t=activation`
3. Enter your serial number in the space provided on the Web page and click **Submit** to generate your activation code.
4. After the Web page has generated the activation code, copy the code to a text file and save it.
5. Go to the remote site or workstation where Kofax Capture will be activated.
6. In the Kofax License Utility, select **File** and then **Activate** to open the **Activate** window.
7. Click **Manual** to open the **Manual Activation** window and copy the activation code from the text file into the indicated area.

8. Click **Activate**.

The utility activates the system and notifies you that the system is now ready for use.

Reactivation

In some cases, you may need to reactivate your Kofax Capture licenses. For example, you may have upgraded the terms of your license to allow for a higher page count.

You can repeat the activation process, even if the system has already been activated. If reactivation fails, then the system is rolled back to its earlier state.

If you use the same activation code, the terms and conditions of your license are unchanged. Reactivation of an identical periodic license does not reset the volume used or the maximum amounts permitted. If you use a new activation code, the terms and conditions of your licenses may change.

Important If you intend to reactivate using the same activation code, you must do so within 30 days of receiving the code. All activation codes expire after 30 days.

Reactivating After a Hardware Key Failure

After obtaining your new hardware key, you must reactivate your Kofax Capture installation.

Note Upon reactivation, your volume counts will reflect any usage that occurred while you were waiting for a new hardware key. In other words, Kofax Capture continues to track your volume usage under these conditions.

There is no need to shut down the Kofax Capture Service, but we suggest that you shut down all other Kofax Capture applications.

1. Install the new hardware key on the server.
2. Start the Kofax License Utility, which will still show the old serial number.
3. Select **File** and then **Activate**.
The **Activate** window displays your new serial number.
4. Click either **Automatic** or **Manual** to select an activation method.

Activating Your Kofax Capture Network Server Licenses

You must activate your Kofax Capture Network Server installation before your evaluation period expires, or you cannot use it for production work. This is done by acquiring an activation code tied to your computer. Using the activation code on a different computer will not work.

Activation Code

The License Utility uses a special code to activate your licenses. Normally this happens automatically when you install the product.

There may be situations, however, in which you must acquire an activation code at another time. Be sure to complete your activation within 30 days of getting the activation code, or the code will expire and you can no longer use it.

Kofax Capture Network Server Activation

All your KCN Server licenses (central and remote sites) are activated at the same time. The activation process establishes licensing information for the central site as well as all remote sites (based on assigned remote site profiles). You are responsible for distributing the license information to the remote sites. However, this does not involve subsequent activation activities.

For example, suppose you have a central KCN Server site and 20 remote sites. You would first install and license the Kofax Capture Network Server central site. If necessary, activate the central site by running the Kofax License Utility.

Next, install the remote sites. Remote sites receive their licensing based on the rules you have established on the Licensing tab on the Kofax Capture Network Server Remote Site Profiles window. For example, if you use the "(Default)" remote site profile, remote sites each get one Concurrent Station License.

At the central site, use the Kofax Capture Network Server Remote Site Manager to assign remote site profiles to remote sites. When each site synchronizes with the central site, it receives the assigned licensing.

Note Remote sites do not need to activate licensing.

Chapter 15

Kofax Capture Configuration File: ACConfig.xml

This chapter gives you details about the Kofax Capture configuration file (ACConfig.xml), which is available in the following folder:

Client/server: <ServerPath>\Config

Standalone: c:\ProgramData\Kofax\Capture\Config

Important If you change any settings in ACConfig.xml, be sure to test them thoroughly before using the updated file in a production environment. Altering the settings may impact product behavior and/or integration with other Kofax products.

For information about ACConfig.xml settings that affect Kofax Front Office Server, refer to the *Kofax Front Office Server Administrator's Guide*.

Parent Element / Element	Attribute	Default Value / Description
ACConfig / BatchCatalogNewEncryption	Enabled	Default value: 0 (Off) 1 = On Supports the custom encryption algorithm for Kofax Capture non-linked user passwords in BatchCat.xml, instead of the standard encryption.
ACConfig / RevertSBWhenScanning	Enabled	Default value: 0 (Off) 1 = On Reverts SecurityBoost while scanning or changing a scan profile.
ACConfig / OCRAdvancedSettings	AutoCleanRecognizerSession	Default value: 0 (Off) 1 = On By default, the recognition engine caches image information between sessions to improve the quality. If the default settings produce inconsistent recognition results, apply this switch to ensure more reliable quality.

Parent Element / Element	Attribute	Default Value / Description
	DetectEmptyParagraphs	<p>Default value: 1 (On)</p> <p>0 = Off</p> <p>Use this switch to ensure that paragraphs are recognized correctly when the OCR Full Text module is in use and "Use blank line as paragraph separator" is enabled.</p> <p>This affects plain text output only.</p>
	ReplacePageBreakWithEmptyLine	<p>Default value: 1 (On)</p> <p>0 = Off</p> <p>Supports the ability to insert an empty line between pages when exporting multiple pages into a single text file, if "Use page break as page separator" is enabled for the OCR Full Text profile.</p>
	RemoveExcessEmptyLines	<p>Default value: 1 (On)</p> <p>0=Off</p> <p>Intended for use with ReplacePageBreakWithEmptyLine; supports the ability to remove excess empty lines if more than one empty line is inserted between paragraphs or pages.</p>
	ResolutionScale	<p><number></p> <p>The width and height of PDF output is reduced by a factor of <number>.</p> <p>This applies only to images with a width greater than 8.5 inches.</p> <p>This limitation prevents the generation of small PDF images if the original image size is already very small.</p> <p>Change the 8.5 inch width threshold by appending the OutputWidthThreshold switch.</p> <p>For implementation details, see PDF Generator DPI Calculator.</p>
	OutputWidthThreshold	<p><number></p> <p>Use this element to change the 8.5 inch width threshold for PDF output. Use this switch along with ResolutionScale.</p> <p>For implementation details, see PDF Generator DPI Calculator.</p>

Parent Element / Element	Attribute	Default Value / Description
ACConfig / PreAllocatedUniqueDocID		<p>Default value: 1</p> <p>Valid range: 1-50</p> <p>Use this element to prevent degradation in performance for the Export module in a high-volume processing environment.</p> <p>As the value is increased, the number of database transactions is reduced, which results in improved export speed.</p>
ReliableFileSystem		Changes to this element may require application to be restarted.
ReliableFileSystem / Retry	MaxRetrySeconds	<p>Default value: 120</p> <p>Total file system operations retry time before returning an error.</p> <p>OK to edit.</p>
	MillisecondsBetweenTries	<p>Default value: 500</p> <p>Wait time between file system retries.</p> <p>OK to edit.</p>
	MinimumRetries	<p>Default value: 1</p> <p>Minimum retry attempts when file system operation fails. This setting disregards other settings.</p> <p>OK to edit.</p>
ACConfig / Services		
Services / Licensing	ServerTimeout	<p>Default value: 30</p> <p>The number of seconds a site tries to connect to a license server to obtain licensing.</p>
	TotalTimeoutSeconds	<p>Default value: 300</p> <p>The amount of time (in seconds) the system will attempt to connect to a license server before timeout.</p>
	UseDefaultWebProxy	<p>Default value: 0</p> <p>0: Do not use the Internet Explorer web proxy configuration.</p> <p>1: Use the Internet Explorer web proxy configuration.</p> <p>OK to edit.</p>

Parent Element / Element	Attribute	Default Value / Description
Services / BatchNotification	WaitForAvailableBatchTimeOut	Default value: 60 Polling interval used if the Batch Notification feature is not responding. Note: if the server or workstations are not reachable, the applications revert back to polling. The valid range is 1 to 600 seconds. OK to edit.
Licensing / Service	Key	Default value: Licensing/Licensing Service Cannot edit.
	Host	Default value: DNS Machine Name of machine where the License Server is enabled OK to edit.
	Protocol	Default value: http Protocol used to communicate with the service. Cannot edit.
	Port	Default value: 2424 Requires corresponding registry change. OK to edit.
	Enterprise	Default value: 0 This value is set after license activation to indicate the system includes an Enterprise license. Used only to display the correct splash screen; not used to verify licensing for any features. Cannot edit.
BatchNotification / Service	Key	Default value: BatchNotification\Batch Notification Service Cannot edit.
	Host	Default value: DNS Machine Name of machine where the batch notification service is enabled. OK to edit.
	Protocol	Default value: http Protocol used to communicate with the service. OK to edit.

Parent Element / Element	Attribute	Default Value / Description
	Port	Default value: 2424 Requires corresponding registry change. OK to edit.
ACConfig / CurrentVersion		Default value: 11.0 Contains current version of the application. Cannot edit.
ACConfig / ACIS		Added when aciscfg enables the KCN Server service.
ACIS / Service	Key	Default value: ACIS\ACI Service Cannot edit.
	Host	Default value: DNS Machine Name of machine where the License Server is enabled. OK to edit.
	Protocol	Default value: http Protocol used to communicate with the service. Cannot edit.
	Port	Default value: 2424 Requires corresponding registry change. OK to edit.
ACConfig / KfxDb	DisableSQLImpersonation	Default value: 0 Specifies that Kofax Capture modules ignore switching the database execution context without checking the database role.
CommandTimeout		Default value: 300 Used when a command takes a long time to execute. Match the default command timeout value to the default retry time to match the threshold you are willing to wait for a command to complete. OK to edit.
KfxDb / SQL-Server		Use the Database Utility to edit.
KfxDb / IBM-DB2		Use the Database Utility to edit.
KfxDb / Oracle		Use the Database Utility to edit.

Parent Element / Element	Attribute	Default Value / Description
KfxDb / BatchStorageOption		Default value: 0 0: Batches are stored in a Microsoft Access database. 1: Batches are stored in a different database such as SQL Server. Use the Database Utility to edit.
KfxDb / DataArchitecture		Either Standard or DBMS values. Valid DBMS values are SQLServer, Oracle, or IBM DB2. Standard: A standard database with batches in access. A valid DBMS value indicates a standard database is not being used. Use the Database Utility to edit.
KfxDb / DBMS		The DBMS used. Valid DBMS values are SQLServer, Oracle, or IBM DB2. Note: When DataArchitecture is Standard, this must be SQL Server. Use the Database Utility to edit.
KfxDb / AllowMultipleAdmins		0: Allow the Administration module to open on multiple stations. 1: Allow only one open instance of the Administration module. OK to edit.
SQL-Server / Database		Default value: ACSystem Use the Database Utility to edit.
SQL-Server / StandardInstance		Default value: <ACServer> &AscentCapture <KCServer> &KOFAXCAP2012 This value is stored even when using SQL Server. It is only used if you switch back to Standard. Cannot edit.
SQL-Server / UserID		Default value: sa Use the Database Utility to edit.
SQL-Server / Password		Default value: Encrypted Use the Database Utility to edit.
SQL-Server / LocalDataDirectory		Default value: <Server-Files>\Server\DB &MSSQL\$Ascent Capture\Data where database is stored on the database server. Cannot edit.

Parent Element / Element	Attribute	Default Value / Description
SQL-Server / AuthenticationMode		Default value: SqlServer SqlServer or MixedMode Use the Database Utility to edit.
SQL-Server / UseBatchCatMth		Default value: 0 Used during upgrade. Cannot edit.
SQL-Server / SQLServerInstance		Name of the SQL Server instance if using SQL Server. Use the Database Utility to edit.
SQL-Server / ThrowImmediateWhenCantRetry		Default value: 0 Used for development only. Set to 1 in debug mode to trigger an exception rather than execute the command. Indicates a coding error. A database operation is called and retry handling is not set in the application code. Cannot edit.
SQL-Server / IsDatabaseInstalled		Default value: 1 Indicates the database is ready for use. Cannot edit.
IBM-DB2 / Server		Name of the DB2 server. Use the Database Utility to edit.
IBM-DB2 / Database		Name of the DB2 database. Use the Database Utility to edit.
IBM-DB2 / UserID		User ID for the DB2 server. Use the Database Utility to edit.
IBM-DB2 / Password		Encrypted password for the DB2 User ID. Use the Database Utility to edit.
Oracle / Service		Name of the local Oracle service. Use the Database Utility to edit.
Oracle / UserID		User ID for the Oracle server. Use the Database Utility to edit.
Oracle / Password		Encrypted password for the Oracle User ID. Use the Database Utility to edit.

Parent Element / Element	Attribute	Default Value / Description
ACConfig / ACIServer	RemoteSite	<p>Default value: 0</p> <p>Set to 1 to configure a temporary image storage location at a KCN Server Remote site.</p> <p>You can change the remote site storage location any time, but a change does not go into effect until you republish the batch class at the central site and synchronize it to the remote site. Relative paths are not supported.</p> <p>Although you can change the temporary storage location multiple times for a remote site, we recommend that you keep any location available if it contains images.</p> <p>Use Batch Manager to edit.</p>
	DontStoreCredentials	<p>Default value: 0</p> <p>RSA Authentication Modification.</p>
	BatchUploadOption	<p>Default value: 0</p> <p>0: Allow .xml file to upload.</p> <p>1: Allow .mdb or .acddb file to upload.</p> <p>OK to edit.</p>
	DisableSharingProfiles	<p>Default value: 0</p> <p>Set to 1 at an KCN Server DisableSharingProfiles to turn off the sharing of scan profiles with remote sites.</p> <p>OK to edit.</p>
ACIServer / Cache	Number	<p>Default value: 0</p> <p>Indicates cache numbers. Must start at 0 and be sequential.</p> <p>OK to edit.</p>
	Path	<p>Default value: <ACServer>\ACIUpload</p> <p>Cache path.</p> <p>OK to edit.</p>
ACIServer / AdditionalDownloadFiles		
ACIServer / MaxLogFileSize		<p>Default value: -1</p> <p>The maximum log file size for KCN Server. When this log file size is exceeded, the old log is renamed to the current date and time and a new log file is created. This value is in bytes. A value of -1 indicates no size limit; a value of 0 turns off logging.</p> <p>OK to edit.</p>

Parent Element / Element	Attribute	Default Value / Description
ACIServer / TransferTimeout		Default value: 0 In seconds, the timeout value for a connection between a remote site and a central site. Allows large batches to be sent successfully without timing out during the file transfer. OK to edit.
ACIServer / ConnectSiteTimeout	TimeoutSeconds	Default value: 5 Guaranteed time (in seconds) the RSA spends attempting to connect to a single central site. OK to edit.
ACIServer / AlternateSiteTimeout	TimeoutSeconds	Default value: 270 Guaranteed total time (in seconds) the RSA spends attempting to connect to all central sites. OK to edit.
ACIServer / BatchUploadTimeout	TimeoutSeconds	Default value: 270 Guaranteed time (in seconds) the RSA spends attempting to upload a single batch after connecting to a central site. OK to edit.
ACIServer / EnableXmlCompression		Default value: 0 Enables compression of the batch; .xml file when downloading to a remote site. OK to edit.
ACIServer / UploadDeploymentLogs		0: Turn off uploads of remote site Customization Deployment logs. To restore upload capabilities, remove this element. OK to edit.
ACIServer / AcisSyncWhilePublish	Enable	Default value: 0 Block sync when the central site is publishing batch classes. OK to edit.
	LogError	Default value: 1 Prevents error in log when AcisSyncWhilePublish is turned off. 0 = Prevent error 1 = Allow error OK to edit.

Parent Element / Element	Attribute	Default Value / Description
ACIServer / SiteSwitch		Optional URL used to define a new primary central site in a Kofax Capture Disaster Recovery specification. OK to edit.
ACIServer / ImageDirectory	Path	Default value: C:\Temporary Image Storage Temporary image storage location (local storage). Use an element in ACConfig.xml at the remote site to specify a location, instead of a static location for each remote site. OK to edit.
ACIServer / CustomSynchronization	RequireSynchAtRS	Default value: 0 (Off) 1 - On After enabling this feature, the KCN Service starts monitoring the custom files changes after the first synchronization request is sent from the remote site.
	MonitoringIntervalSeconds	Default value: 0 (Off) 1 - On Indicates how often to scan for custom file changes if the Capture shared data folder (CaptureSV) is not stored at the local remote server. Add this attribute in addition to RequireSynchAtRS.
	CustomFilePattern	Add this attribute in addition to RequireSynchAtRS and MonitoringIntervalSeconds. Indicates a specific file extensions to monitor the custom files changes, such as *.txt. This CustomFilePattern attribute is only valid if the MonitoringIntervalSeconds attribute is defined. The default value is empty, which means all the custom files are checked after a defined number of seconds.
ACIServer / RSASynchTaskAlternate	CopyClassFilesToLocal	Default value: 0 (Off) 1 - On Add this tag to copy the downloaded catalog (Classes.xml) and class files (BatchCat.xml) to the local Kofax Capture folder.

Parent Element / Element	Attribute	Default Value / Description
AdditionalDownloadFiles / File	Location	Extra XML files transferred during batch class download. OK to edit.
SiteSwitch / URL		See KcnsSiteSwitch.exe usage. Use KcnsSite Switch.exe to edit.
ACConfig / AdminDataSubstitution		Substitute custom data available in the CustomProperty table.
AdminDataSubstitution / Replace	Old	Old value to be replaced. OK to edit.
	New	Value that replaces the old value. OK to edit.
ACConfig / Replication	Path	The path where batches and batch classes are exported for replication.
	DelayTime InMinutes	The time the remote site will hold on to a batch after it has been exported for replication.
	DebugLog	Default value: 0 In milliseconds, log duration time if DebugLog is set for Replication in ACConfig.xml. OK to edit.
Replication / ExcludedBatchClass		Name of a batch class to exclude from replication. Can be multiple ExcludedBatchClass elements.
ACConfig / SecurityBoost	Enable	Default value: 0 Use the Database Utility to edit.
	User	Use the Database Utility to edit.
	Password	Use the Database Utility to edit.
ACConfig / BusinessServices	CompactDBs	Default value: 1 Set to 1 to compact Microsoft Access batch databases before they are copied to the server. Only applies when closing Recognition Server, Validation, or Export or during recovery. OK to edit.
	AlwaysCompactDBs	Default value: 0 Set both CompactDBs and AlwaysCompactDBs to 1 to compact the batch database after every module. OK to edit.

Parent Element / Element	Attribute	Default Value / Description
	CheckBatchDB	Default value: 0 Set to 1 to check for corrupted files each time a Microsoft Access batch database is opened. Corrupted files are fixed if necessary. OK to edit.
	DeleteDBs	Default value: 1 Set to 1 to delete the local Microsoft Access batch database when the batch is closed. OK to edit.
	CleanonAutorecover	Default value: 0 Set to 1 to check for corrupted files each time a batch database is recovered. Corrupted files are repaired if necessary. OK to edit.
	CachePublishedBatchClasses	Value is currently ignored. Microsoft Access batch class databases are always cached.
	LogLockNextBatchErrors	Default value: 0 In LockNextBatch, an error message is logged if a batch is skipped for any of the following reasons: <ul style="list-style-type: none"> • Batch is locked. • User who validated the batch gets this batch as the next one. • Batch has already moved to a different queue or state. OK to edit.
	UseAccessForSetup	Default value: 0 Batch class (setup) information is read from the system database even when not using batches in SQL. Set to 1 when not using SQL batches for possible performance improvements. OK to edit.
	CacheSampleImages	Default value: 0 (Off) 1 = On Caches the sample images locally for access by Kofax Capture modules (except Administration). OK to edit.

Parent Element / Element	Attribute	Default Value / Description
	IgnoreZeroStatsFormTypes	<p>Default value: 1 (On)</p> <p>0: Includes all form type records in the StatsFormType table, even if they have no associated documents and pages.</p> <p>1: Excludes form type records from the StatsFormType table if they have no associated documents and pages.</p> <p>OK to edit.</p>
	SkipPartitioning	<p>Default value: 0 (Off)</p> <p>1 = On</p> <p>Improves database response time when Open Next Batch Automatically feature is enabled.</p> <pre><BusinessServices SkipPartitioning="1" /></pre> <p>OK to edit.</p>
	OrderByCreationDate	<p>Default value: 0 (Off)</p> <p>1 = On</p> <p>With the Open Next Batch Automatically feature, selects the next batch based on the Creation Date instead of the ExternalBatchID.</p> <pre><BusinessServices OrderByCreationDate="1" /></pre> <p>OK to edit.</p>
ACConfig / Workstations		
Workstations / Workstation	Host	<p>Default value: Machine name</p> <p>Used by monitor sample application.</p> <p>OK to edit.</p>
ACConfig / MultiProcesses	MaxInstancesPerProcessor	<p>Default value: 4</p> <p>Starting too many instances degrades performance. If the computer is powerful enough to handle more, this setting can be changed.</p> <p>OK to edit.</p>
ACConfig / ZONE_CorrectSkew		<p>Default value: 0</p> <p>Used to enable skew correction configuration for Recognition Server.</p> <p>Allowed values:</p> <p>0: Turn off skew correction.</p> <p>1: Correct skew by horizontal black squares.</p> <p>2: Correct skew by vertical black squares.</p> <p>4: Correct skew by horizontal lines.</p>

Parent Element / Element	Attribute	Default Value / Description
		8: Correct skew by vertical lines. 16: Correct Skew by horizontal text. 32: Correct Skew by vertical text. Specify one or more of the values. Selected skew corrections apply to all workstations. OK to edit.
ACConfig / OCR_CorrectSkew		Default value: 0 See explanation for ZONE_CorrectSkew. The settings are the same and apply to the OCR Full Text module. OK to edit.
ACConfig / PDF_CorrectSkew		See explanation for ZONE_CorrectSkew. The settings are the same and apply to the PDF Generator module. OK to edit.
ACConfig / MultiBatchQueueChange		Default value: 0 0: Turn off multi-select batches to change the queue. 1: Allow multi-select batches to change the queue. When selected, error batches are returned to the processing queue where they were most recently opened, and they are unrejected. Also, the state for each is changed from Error to Ready. <div style="background-color: #f0f0f0; padding: 5px;"> <p>Important An exception applies if any of the error batches were already opened in the Quality Control module at any time, causing them to be automatically assigned to the Scan module, with all documents and pages remaining rejected. This applies even if the Quality Control module is assigned as a processing queue for the batch class.</p> </div> OK to edit.

Parent Element / Element	Attribute	Default Value / Description
ACConfig / PublishWarning	ExportConnectorsSupportPDF	Default value: 0 Affects warning that occurs if one export connector uses PDF generation and another does not. 0: Turn off warning. 1: Allow batch publishing to generate a warning. OK to edit.
ACConfig / OCR_PDF_SkipProcessEDocs		Default value: 0 0: Suppress creation of blank PDFs. 1: Allow creation of blank PDFs. OK to edit.
ACConfig / PDF_Compression_Settings	jbig2_quality	Default value: .82 PDF Generator PDF compression changes image contents. Specify a float value for the engine to compress the PDF output. Value range can be from 0.0 to 1.0, such as 0.82. OK to edit.
	jbig2_weight	Default value: 1.0 Specify a float value for the engine to compress the PDF output. Value range can be from 0.0 to 1.0, such as 1.0. OK to edit.
	jbig2_compression_off	Default value: 0 Suppress JBIG2 for PDF image compression. 0: Turn off suppression 1: Turn on suppression OK to edit.
	EnableDLCompression	Default value: 0 (Off) 1 = On Enables the enhancement to improve PDF file quality. Note: Once enabled, the old compression engine is no longer used, regardless of the settings in the PDF profiles.
	EnableDLJbig2	Default value: 0 (Off) 1 = On OK to edit.

Parent Element / Element	Attribute	Default Value / Description
	DLCompressionQuality	<p>Does not use the JBIG2 library of Datalogics for PDF Compression.</p> <p>1: Uses the JBIG2 library of Datalogics for PDF Compression:</p> <pre><PDF_Compression_Settings EnableDLJbig2="1" /></pre> <p>In the preceding example, the VRS JBIG2 is turned off automatically, the output returned by VRS is decoded with CCITT and then re-compressed by Datalogics with JBIG2.</p> <p>Another attribute named DLCompressionQuality is introduced to change the compression quality with the corresponding values:</p> <p>Auto = 0 Minimum = 1 (Default) Low = 2 Medium = 3 High = 4 Maximum = 5 Lossless = 6</p> <p>In some cases, the Lossless setting may be useful.</p> <p>Example:</p> <pre><PDF_Compression_Settings EnableDLJbig2="1" DLCompressionQuality="6" /></pre> <p>OK to edit.</p>
ACConfig / EBCLicenseCheck	RefreshPerBatch	<p>Default value: 0 OK to edit.</p>
ACConfig / ScanProcessInterval		<p>Default value: 10 OK to edit.</p>

Parent Element / Element	Attribute	Default Value / Description
ACConfig / DisableBatchNotification		<p>Default value: 1</p> <p>Turn off the batch notification service for an entire site.</p> <p>0: Turn on batch notification.</p> <p>1: Turn off batch notification.</p> <p>OK to edit.</p> <div style="border: 1px solid gray; padding: 5px; background-color: #f0f0f0;"> <p>Note For new Kofax Capture 11.0 installations, the batch notification service is managed with a registry key instead of the entry in ACConfig.xml. However, if you upgrade to Kofax Capture 11.0 from an earlier version, the registry key is not created and the entry in ACConfig.xml is used.</p> </div>
ACConfig / IgnoreBlankPages		<p>Default value: 0</p> <p>When using the blank page deletion feature in combination with fixed page separation:</p> <p>0: Delete blank pages after page separation.</p> <p>1: Delete blank pages prior to page separation.</p> <p>OK to edit.</p>
ACConfig / ValidationScript	NoUIRefreshForSaveAndSkipFields	<p>Default value: 0</p> <p>To improve performance, prevents a refresh of the user interface when a validation script includes several SaveAndSkip fields.</p>
ACConfig / WaitTimeOutSession		<p>Default value: 2</p> <p>Set a warning message wait time when the session is about to time out.</p> <p>OK to edit.</p>
ACConfig / GetPublishedBatchRetryNumber		<p>Default value: 5</p> <p>An error message may display when remote site user verification occurs at the same time as batch creation.</p> <p>Set to 5 to implement a 5-second retry mechanism. Verification overlap does not occur and the error message does not appear.</p> <p>OK to edit.</p>

Parent Element / Element	Attribute	Default Value / Description
ACConfig / EBCLicensingLevel		<p>Default value: module</p> <p>Define the Enhanced Bar Code (EBC) license level on the Recognition Server.</p> <p>module: does not accept the shared EBC license. EBC license is released when the module is closed.</p> <p>batch: accept the shared EBC license. EBC license is released when the batch is closed.</p> <p>OK to edit.</p>
ACConfig / InstanceUICounterUpdate		<p>Default value: 0</p> <p>0: Do not force UI to update the Page, Document- and Folder count instantly in the Scan module.</p> <p>1: Force user interface to update Page, Document and Folder count instantly in Scan module.</p> <p>OK to edit.</p>
ACConfig / IndividualLogs	Enable	<p>Default value: 0</p> <p>Makes it possible for each export process to write information to its own log file.</p> <p>0: Turn off</p> <p>1: Turn on</p> <p>OK to edit.</p>
ACConfig / FRE10	UseFre9Defaults	<p>Default value: 1</p> <p>Define an ABBYY default value used during image recognition or export.</p> <p>0: Use ABBYY FRE 10.0 or later as the default.</p> <p>1: Use ABBYY FRE 9.0 as the default.</p>
	UseLocalFolderForExport	<p>Default value: 1 (Off)</p> <p>1 = On</p> <p>Stores exported files to a local temporary folder. Otherwise, the files are stored over the network and large files may fail to be stored.</p>
	SynthesizePerPage	<p>Default value: 1 (On)</p> <p>1 = Off</p> <p>Uses Page API instead of Document API.</p>
ACConfig / HexEncoding		<p>Specifies a bar code profile name to encode bar code data in hexadecimal. Intended to avoid error caused by NULLs embedded in the bar code data.</p>

Parent Element / Element	Attribute	Default Value / Description
HexEncoding / Profile	Name	Specify a profile name for which the value will be expanded to hexadecimal. 0: Turn on 1: Turn off OK to edit.
	Enable	Default value: 0 Sets encoding for this profile. OK to edit.
ACConfig / PreviousLanguage		Value represents the previous version language, such as de, pr-BR, etc. Cannot edit.
ACConfig / TurnOffFQDN		Default value: 0 0: Use Fully Qualified Domain Naming convention for managing locks in Kofax Capture and for the batch notification service. 1: Turns off support for Fully Qualified Domain Naming. OK to edit.
ACConfig / LogRemoteSiteBatchDelete		Default value: 1 Sets preferences for logging exported and deleted batches. 1: Logs exported and deleted batches as they are deleted. 0: Logs only deleted batches as they are deleted. OK to edit.
ACConfig / TimeoutWarningDuration		Default value: 2 Specify when a message should appear to warn users about an upcoming working session timeout. Time interval set in minutes. OK to edit.
ACConfig / Server	Name	Default value: server name The server name is stored here during installation. Used on the workstation to update registry. Cannot edit.

Parent Element / Element	Attribute	Default Value / Description
ACConfig / PreviousVersion		Element added by installation when upgrading to Kofax Capture 10.x from a previous version. Value represents the previous version such as 8.0, 9.0 or 10.0. Cannot edit.
ACConfig / DBValRestrictions	Enable	Default value: 0 When a database validation is included in the batch class, opening database validation properties may take an extremely long time. Set to 1 to restrict database validation query against user's schema. OK to edit.
	Schema	OK to edit.
ACConfig / CheckStatusFrequency	Batches	Default value: 0 Checks ACConfig.xml to determine how many batches are uploaded before a status check is performed in a single operation at the central site. OK to edit.
ACConfig / Reporting	Enable	Default value: 1 0: Turn off the Reporting feature. Batches may open more quickly. OK to edit.
ACConfig / SupportLongUserName	Enable	Default value: 0 0: Truncates username data in the BatchStatistics table to 32 characters before it is transferred to a remote site. 1: Supports length of 50 characters for username data in the BatchStatistics table. OK to edit.
ACConfig / SharePoint		SharePoint data source validation.

Parent Element / Element	Attribute	Default Value / Description
SharePoint / TermsetCache		Caching is used to minimize round trips to SharePoint. This cache is stored in memory and is not persistent. You can specify individual limits for Managed Metadata term sets, Enterprise Keywords terms, and lookup results in the SharePoint element section of ACConfig.xml. You can also specify expiration times (in minutes) for each individual value. Unused values are removed from the cache when the expiration time has elapsed. Each time a value is used, the expiration timer is reset to zero.
SharePoint / TermsCache		See description for SharePoint/ TermsetCache.
SharePoint / LookupCache		See description for SharePoint/ TermsetCache.
TermsetCache / MaxValues		Default value: 100
TermsetCache / Lifetime		Default value: 60
TermsCache / MaxValues		Default value: 10000
TermsCache / Lifetime		Default value: 60
LookupCache / MaxValues		Default value: 1000
LookupCache / Lifetime		Default value: 60
ACConfig / OCEProfilesConversion	Performance	Default value: 1 Used to ensure optimal recognition results for High Performance profiles. When High Performance profiles are converted to Advanced OCR Recognition profiles, globally sets the Operation mode to "Maximize accuracy" instead of "Maximize performance." 0: Turn on 1: Turn off OK to edit.
OCEProfilesConversion / Profile	Name	Used to apply the OCEProfilesConversion setting to specific High Performance profiles (instead of all profiles). The setting is applied to each High Performance profile name that you specify.

Parent Element / Element	Attribute	Default Value / Description
	Performance	Default value: 1 Used to ensure optimal results for the specified High Performance profiles. When the specified profiles are converted to Advanced OCR Recognition profiles, sets the Operation mode to "Maximize accuracy" instead of "Maximize performance." 0: Turn on 1: Turn off OK to edit.
ACConfig / ExportKTMProject	Enable	Default value: 1 0: Excludes Kofax Transformation Modules projects when batch classes are exported. 1: Includes Kofax Transformation Modules projects when batch classes are exported.
ACConfig / KCNS AlwaysTransferCustomData		Default value: 0 0: Excludes KTM or other CustomDataFolder files downloaded from the central site to a remote site. 1: Includes KTM or other CustomDataFolder files downloaded from the central site to a remote site, if their modified dates are newer than the corresponding files on the central site. The KCN AlwaysTransferCustomData setting at the central site overrides the setting at a remote site.

Parent Element / Element	Attribute	Default Value / Description
ACConfig / ACIServer/BatchRouting	RescanSite	<p>Default value: N/A</p> <p>Automatically routes error batches to a remote site if they were created at a central site. Use the tag to define the site name and GUID for processing error batches and override the Rescan Location setting configured in the KCN Server Central Site profile. Example:</p> <pre><ACConfig> ... <ACIServer> <BatchRouting RescanSite="<Site_Name> <Site_GUID>" /> </ACIServer> ... </ACConfig></pre> <p>The site name and GUID for the remote site are available from the Database Utility on the Identification tab.</p> <p>Note If the specified remote site name or GUID does not exist, the following error appears in the error log and the error batch is not routed: "...The selected site cannot be assigned as the next site."</p> <p>OK to edit.</p>
ACConfig / Export	UseDecimalBasedFileName	<p>Default value: 0</p> <p>0: Does not apply special handling for decimal-based file names.</p> <p>1: Ensures that the decimal-based file names are assigned to reflect the export sequence for single-page TIFF images.</p> <pre><Export UseDecimalBasedFileName="1" /></pre> <p>OK to edit.</p>
ACConfig / PDFExport	FastWebView	<p>Default value: 0 (Off)</p> <p>1 = On</p> <p>Turns on Fast Web View for PDF files.</p> <pre><PDFExport FastWebView="1" /></pre> <p>OK to edit.</p>

Parent Element / Element	Attribute	Default Value / Description
ACConfig / DisableBatchNotification	PropagateToRemoteSite	<p>Default value: 0 (Off) 1 = On</p> <p>Disables batch notification services errors and messages for the entire Kofax Capture installation. Synchronize the DisableBatchNotification tag for remote sites by adding the PropagateToRemoteSite attribute. When PropagateToRemoteSite is set to True, this tag is sent to the remote site.</p> <pre><DisableBatchNotification PropagateToRemoteSite="True">1</DisableBatchNotification></pre> <p>OK to edit.</p>
ACConfig / Logging	DeletedBatches	<p>Default value: 1 (On) 0 = Off</p> <p>Disables logging to the Deleted Batches log file (LOG_yymm.txt). This option may be useful in a high-volume production environment in which logging can adversely affect performance.</p> <pre><Logging DeletedBatches="0"/></pre> <p>OK to edit.</p>
	EnableMilliseconds	<p>Default value: 0 (Off) 1 = On</p> <p>Adds milliseconds to logging files. Otherwise, the time is logged in seconds only. Applies to log files of exported/deleted batches, error logs, and KCN Server logs.</p>
ACConfig / TransferAllVSFiles	Enable	<p>Default value: 0 1=On</p> <p>Includes all Visual Studio Solution files during remote site synchronization in a KCN Server environment.</p> <pre><TransferAllVSFiles Enable="1"/></pre> <p>After adding the tag, restart the Kofax Capture service. By default, the unrequired Visual Studio Solution files are excluded.</p> <p>OK to edit.</p>

Parent Element / Element	Attribute	Default Value / Description
PDFExport/Profile	Name	<p>Default value: N/A</p> <p>Prevents PDF files from becoming unreadable when Image Cleanup profiles are disabled. Otherwise, all images, including color, are detected as black and white and the PDF Generator produces unexpected results.</p> <p>To apply this behavior to one PDF export profile, use the following format and replace "abc" with the profile name used for the PDF Generator:</p> <pre><ACConfig> ... <PDFExport> <Profile Name="abc" DetectColorImage="1"/> </PDFExport> ... </ACConfig></pre> <p>To apply this behavior to all PDF export profiles, use the following format:</p> <pre><ACConfig> ... <PDFExport DetectColorImage="1"/> ... </ACConfig></pre> <p>OK to edit.</p>
	DetectColorImage	<p>Default value: 0 (Off)</p> <p>1=On</p> <pre><PDFExport DetectColorImage="1"/></pre> <p>Prevents PDF files from becoming unreadable when Image Cleanup profiles are disabled.</p>
ACConfig / RemoveUserRightsWithoutInvokingWFA		<p>Default value: True (On)</p> <p>False = Off</p> <p>Skips the invoking of Workflow Agents when Remove Access Rights is selected in Batch Manager.</p> <p>To force Workflow Agents to be invoked when Remove Access Rights is selected in Batch Manager, change the value to <i>false</i>.</p>

Parent Element / Element	Attribute	Default Value / Description
ACConfig / OCRAdvancedSettings/ MultiProcessingMode	Value	Default value: 1 (Off) 0 - On Prevents a PDF Generator internal program error. 1: Disabled. OK to edit.
ACConfig / DocumentSeparation	StopCreatingEmptyDocuments	Default value: 0 (Off) 1 = On Prevents the creation of empty documents, which can occur as the result of duplicate, consecutive patch codes. OK to edit.
	DeleteBackSideSeparator	Default value: 1 (Off) 0 - On Deletes only the first image when Standalone Separator Sheet is enabled. To retain the back side of the separator sheet, set the attribute to "0."
ACConfig / FormIdentification	UseColorImage	Default value: 0 (Off) 1 = On Uses a color image for form identification. OK to edit.
ACConfig / Validation	EnablePageValidationMode	Default value: 0 (Off) 1 = On Eliminates duplication of the first page in multipage layout view during validation. As a result, Validation will display pages along with index fields without index zones. OK to edit.
	ClearIndexFieldsOnPageRotation	Default value: 0 (Off) 1 = On Clears the index field values at Validation when the user rotates the page.

Parent Element / Element	Attribute	Default Value / Description
ACConfig / AdminDataSubstitution	Replace Old	<p>Default value: N/A</p> <p>Uses a regular expression wildcard representing the batch class folder name at the end of the temporary image folder path. The regular expression wildcard may be useful if you are importing a large number of batch classes from one environment to another.</p> <p>To use this enhancement, add the UseRegex="1" attribute to replace the original batch class name. The Old attribute is a regular expression pattern, and the New attribute is a string to replace it.</p> <p>In the following example, all paths containing "C:\Program Files\Ascent\" are substituted with "D:\abc\".</p> <pre><ACConfig> ... <AdminDataSubstitution> <Replace Old="C:\ Program Files\Ascent\ (.+)" New="D:\abc\\$1" UseRegex="1" /> </AdminDataSubstitution> ... </ACConfig></pre> <p>If the regular expression is valid and the paths are substituted successfully, it is noted in the Capture log.</p> <p>If the regular expression is not valid and the paths are cannot be substituted, it is noted in the Capture log:</p> <pre>2017-09-06 22:04:37, ..., Kofax Capture Administration Application, <Machine Name>, <File Version>, Regex, 0, parsing "C:\Program Files\Ascent\ (.+)" - Malformed \p{X} character escape.</pre> <p>OK to edit.</p>

Parent Element / Element	Attribute	Default Value / Description
ACConfig / PDFExport/Profile	Encryption	<p>Default value: 0 (Off)</p> <p>1: On</p> <p>Prevents the PDF Generator from producing encrypted PDF files with blank passwords.</p> <pre style="background-color: #f0f0f0; padding: 5px;"> <ACConfig> ... <PDFExport Encryption="1" Password="kofax"> <Profile Name="abc" Encryption="0"/> <Profile Name="def" Encryption="1" Password="kofax123"/> </PDFExport> ... </ACConfig> </pre> <p>For the "abc" profile, the encryption will be turned off.</p> <p>For the "def" profile, the encryption will be turned on with the password of kofax123.</p> <p>For other profiles, the encryption will be turned on with the password of kofax.</p> <div style="background-color: #f0f0f0; padding: 5px;"> <p>Note The values defined for the Encryption and Password attributes in the PDFExport tag are applied to all profiles except the ones overridden by the Profile tag. Also, the default values of the Encryption and Password attributes are "0" and empty.</p> </div> <p>OK to edit.</p>
ACConfig / BatchFilterProfiles	Enabled	<p>Default value: 1 (On)</p> <p>0 = Off</p> <p>Enables Batch Filter Profiles functionality for Kofax Capture 11.0:</p> <pre style="background-color: #f0f0f0; padding: 5px;"> <BatchFilterProfiles Enabled="1"/> </pre> <p>0 = Disables Batch Filter Profiles functionality in Kofax Capture 11.0 and restores the behavior from Kofax Capture 10.0:</p> <pre style="background-color: #f0f0f0; padding: 5px;"> <BatchFilterProfiles Enabled="0"/> </pre> <p>OK to edit.</p>

Parent Element / Element	Attribute	Default Value / Description
ACConfig / SingleLogonSession	Enabled	Default value: 0 (On) 1 = Off Restricts Kofax Capture users to a single login session per module. OK to edit.
	IncludedServiceModuleIds	Default value: Empty Lists the unique module IDs that run under service mode or OLE mode with SingleLogonSession enabled. The unique module IDs are separated by commas without spaces. Example: IncludedServiceModuleIds="LCI.Validation,Kofax.Verification,Kofax.Correction,release.exe" OK to edit.
ACConfig / EDocViewer	UseIEForMSOfficeFiles	Default value: 1 (On) 0 = Off Uses custom control to view Microsoft Word, Excel, PowerPoint, or other files if Microsoft Office is installed. <pre><EDocViewer UseIEForMSOfficeFiles="0" /></pre> OK to edit.
ACConfig / PasswordEncryptionAlgorithm		Default value: AES Used for custom encryption key for the database password. <ol style="list-style-type: none"> Execute the following command once at the Kofax Capture servers at the central site and the remote site: <pre>DBUtil.exe /algorithm=AES / privatekey=<private key></pre> Where <private key> is the base64 encoded file that contains the custom key. The <private key> length must be 128 or 256 bits. Store the private key in [CaptureSV]\KofaxCapture.key. Encrypt the existing Database password in ACConfig.xml using the new private key and initialization vector. <p>Note The new encryption applies only to the Database password.</p>

Parent Element / Element	Attribute	Default Value / Description
ACConfig / PasswordInitializationVector		Default value: N/A Used internally by Kofax Capture for password encryption. The value is generated randomly and cannot be edited.
ACIServer / RSASynchTaskAlternate	NumBatches	Default value: 10 Checks and updates the status of the batches after NumBatches is uploaded or downloaded. OK to edit.
ACConfig / OmniPage	EnableLog	Default value: 0 (Off) 1 = On With the OmniPage Log enabled, OmniPage_<Module-Name>_<PID>_<Month>-<Day>-<Hour>-<Minute>-<Second>.log is created and saved in <drive:>ProgramData\Kofax\Capture\Local\OmniPage. This file contains information related to the OmniPage recognition engine. Tip To save free disk space from a heavy load of log, settings, and image files, use the <code>OmniPage</code> tag cautiously and disable when unnecessary.
ACConfig / BatchCreation	ValidateHiddenFieldLength	Default value: 0 (Off) 1 = On When the default value of a hidden batch field includes more characters than allowed by the field type, a batch can be created when it should have been prevented. Enable this attribute to validate the hidden field length.
ACConfig / ReportViewer	UseOleDbForOracle	Default value: 0 (Off) 1 = On Enables Report Viewer to use Ole DB Provider for Oracle instead of the ODBC Provider.

Parent Element / Element	Attribute	Default Value / Description
	ODBCSqlDriver	Makes the ODBC driver configurable for Report Viewer. Default value: SQL Server SQL Native Client SQL Server Native Client 10.0 SQL Server Native Client 11.0 ODBC Driver 11 for SQL Server ODBC Driver 13 for SQL Server Makes the ODBC driver configurable for the Report Viewer.
ACConfig / CheckTokenMembership	Enabled	Default value: 0 (Off) 1 = On Enables the single sign-on feature for child domains.
ACConfig / EDocProcessing	EnableTextInjectionForPDF	Default value: 0 (Off) 1 - Detects the bitmap pages and recognizes the text layers in a PDF eDocument page. 2 - Recognizes text when the content page includes both image and text. You must restart the PDF Generator module to apply the changes. Note • If bitmap pages are detected, the PDF output will be overridden to the original page. • The PDF version may be updated automatically to 1.6 when enabling this feature. • If the input is a PDF/A file, the output format setting in the PDF profile should be the same as the input file to retain PDF/A compliance. For example: If the input is PDF/A-1a, then the PDF profile should be configured to use PDF/A-1a for recognition.
	InsertPagesToOutputPDF	Default value: 0 (Off) 1 = On Inserts the eDocument page to the final output.

Parent Element / Element	Attribute	Default Value / Description
ACConfig / PublishBatchClass	UseLocalTempFolder	Default value: 1 (On) 0 = Off 1 - The Administration module uses a local folder when a batch class is published. 0 - The Administration module uses a network shared folder when a batch class is published.
ACConfig / CaptureUI	LayoutPreservation	Default value: 1 (On) 0 = Off If set to "0," the custom panel layout is automatically resized according to the main window when the module is relaunched.

PDF Generator DPI Calculator

To prevent the PDF Generator from producing excessively large PDF output files that are time-consuming to process, use the `ResolutionScale` and `OutputWidthThreshold` tags in `ACConfig.xml`. Using this approach, you can save time and produce manageable PDF sizes.

Note The `ResolutionScale` and `OutputWidthThreshold` settings alter the PDF page dimensions but do not impact the dimensions of the original source document. For example, you could use these settings to produce a standard letter size PDF based on an "oversized" engineering drawing.

ResolutionScale

`ResolutionScale` is a multiplier that increases the value used as the dpi to generate a smaller PDF file size. Increasing the dpi reduces the image size based on this formula:

$$\text{Resolution (in pixels) / dpi}$$

`ResolutionScale` impacts the resulting PDF document size only if the calculated width is greater than the value specified for `OutputWidthThreshold` (in inches). The default value for `ResolutionScale` is 1.0.

OutputWidthThreshold

Use `OutputWidthThreshold` to prevent creation of an image that is too small. This value indicates the smallest acceptable image width and serves as a safety mechanism to prevent creation of images that are too small for the document. When not used in `ACConfig.xml`, or if no value is specified, the default value is 8.5 inches.

Example

A batch contains two single-page documents: Document 1 with a 4000x8000 pixel image and Document 2 with an 800x1600 pixel image. Both have a dpi of 200. Document 1 creates a larger PDF file and must be converted to produce a smaller file size without impacting Document 2.

The ResolutionScale is set to 2 and the OutputWidthThreshold is not configured in ACConfig.xml (therefore, a default of 8.5 is assumed).

Document 1 (D1) calculation:

- The DPI passed to the PDF Generator engine is 400 (200 x 2 - dpi times ResolutionScale).
- PDF image size is 10 x 20, or (4000 / 400) by (8000 / 400).
- Because 10 inches is greater than the OutputWidthThreshold value, the values are valid for use by the PDF Generator engine to create a PDF image.

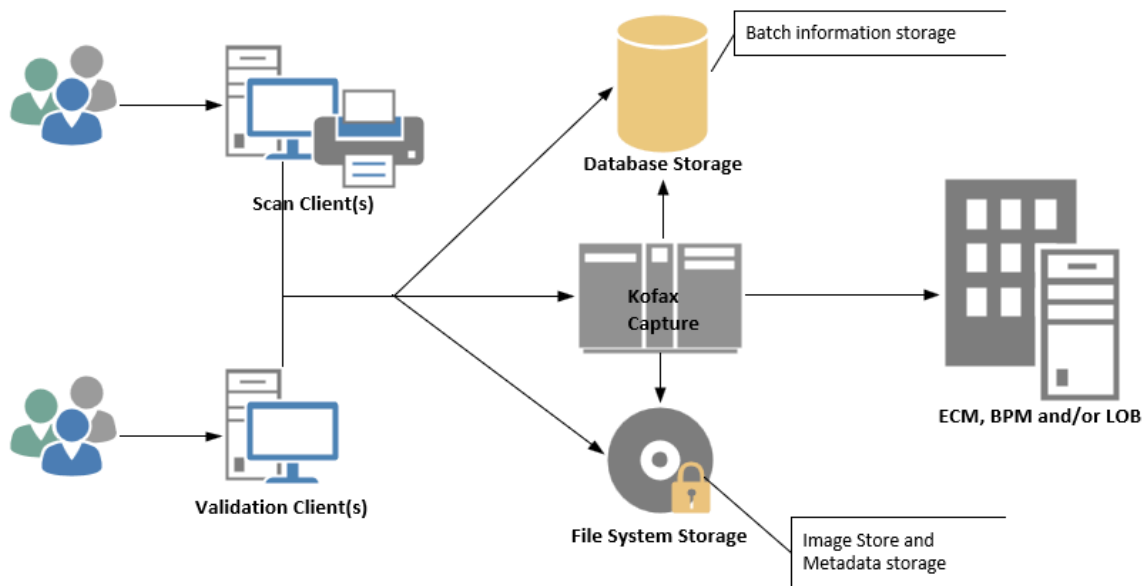
Document 2 (D2) calculation:

- PDF image size is 2 x 4, or (800 / 400) by (1600 / 400).
- Because 2 is less than the OutputWidthThreshold value, the ResolutionScale multiplier is ignored, and the original dpi is used to generate a PDF image that is 4 by 8 inches, or (800 / 200) by (1600 / 200).

Appendix A

Security Model for Kofax Capture

Kofax Capture and Kofax Transformation Modules



A. User login and authentication

Category	Authentication and Authorization
Description	User provides login credentials for Kofax Capture application.
Security Details	Kofax Capture supports corporate directory systems, such as Active Directory through the Linked Users and Linked Groups features, which take advantage of the corporate infrastructure for authentication and credential management. Kofax Capture also has an application specific authentication and authorization mechanism for convenience. This includes credential management and storage. Stored passwords are encrypted. The Linked Users feature must be used to take advantage of external systems that provide AES or equivalent encryption.

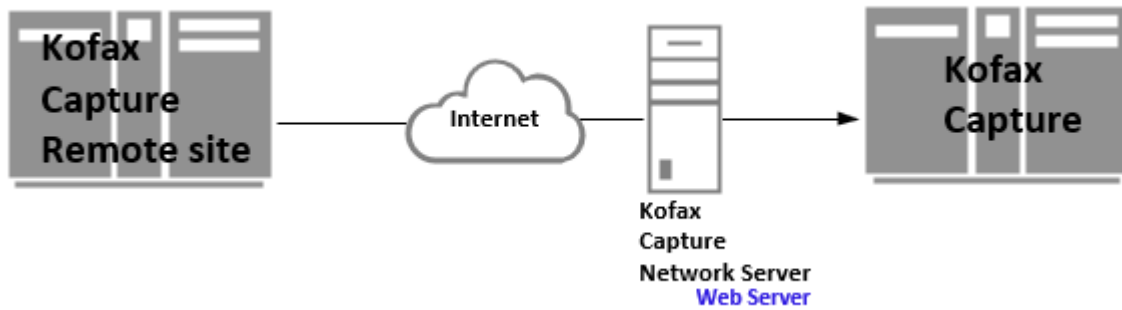
B. Client transmission to servers

Category	Data in transit
Description	Clients (such as Scan or Validation) transmit to servers.
Communication	Database, .NET Remoting, SMB
Security Details	<p>All streams of data in transit can be protected with IPsec to take advantage of network-level peer authentication, data origin authentication, data integrity, data confidentiality (encryption), and replay protection.</p> <p>Details on the streams used are as follows:</p> <p>Database information containing metadata is transferred to and from the database using the database manufacturer's client driver. The network protocol varies depending on what database is being used.</p> <p>For more information, consult documentation from your database manufacturer.</p> <p>.NET Remoting (TCP 2424) is used for licensing and batch notification traffic. No confidential information (nothing related to images or metadata) is transmitted or accessed.</p> <p>Images are transmitted to/from the file system using the SMB (TCP 445) protocol.</p>

C. Image and metadata storage

Category	Data at rest
Description	Image and metadata is stored.
Security Details	<p>Images are stored in the file system and can be secured through use of Windows file system permissions. As additional protection, the Kofax Capture environment should be configured with the SecurityBoost feature that prevents user accounts from accessing the file system outside the application.</p> <p>Images can be also optionally be encrypted via Microsoft BitLocker or Microsoft Encrypting File System (EFS).</p> <p>Metadata is stored in the Kofax Capture database, which is accessed through a configured system account, or by assigning permissions to each user. Database level encryption is also available by using the encryption feature within the database itself.</p> <p>Note: When using the Microsoft SQL Server, you must set the "Store batches in SQL Server" configuration option to ensure all metadata is stored in the database. Oracle or IBM DB2 do not offer a comparable option, as all metadata is always stored in the database.</p> <p>Whether or not file system and/or database encryption is enabled, passwords (for external systems or application-specific users), are further protected. Passwords are always stored using the Triple DES encryption algorithm and the SHA1 hashing algorithms approved by the Federal Information Processing Standard (FIPS) Publication 140-2 standard.</p>

Kofax Capture Network Server



A. User login and authentication

Category	Authentication and Authorization
Description	User provides login credentials for Kofax Capture application.
Security Details	Kofax Capture supports corporate authentication systems, such as Active Directory through the Linked Users and Linked Groups features, which take advantage of the corporate infrastructure for authentication and credential management. Kofax Capture also has an application-specific authentication and authorization mechanism for convenience. This mechanism includes credential management and storage. Stored passwords are encrypted. The Linked Users feature must be used to take advantage of external systems that provide AES or equivalent encryption.

B. Remote Site connection to Kofax Capture Network Server web server

Category	Data in transit
Port	80 or 443
Protocol	HTTP or HTTPS
Communication	.NET remote method calls
Description	Kofax Capture can be configured to use SSL to enable security for communications over networks such as the Internet. This allows end-to-end encryption of the Transport Layer.
Security Details	Remote site requests include HTTP GET requests for data from the File Cache and KCN Service, HTTP POSTs to upload files to the File Cache, and .NET remote method calls to the KCN Service.

C. Kofax Capture Network Server web server connection to the Kofax Capture Server application server.

Category	Data in transit
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Port	2424
Protocol	TCP
Communication	.NET remote method calls
Description	The KCNS Web Server implements a .NET remote method interface that allows remote sites to interact with central site Kofax Capture system.
Security Details	In this context, Kofax Capture Network Server acts as a "client" to Kofax Capture. Compared to interactive clients, Kofax Capture Network Server is typically deployed in a protected server room near the Kofax Capture server, and thus there is relatively low risk of data being intercepted. However, if desired, the Kofax Capture Network Server connection to Kofax Capture can be further secured as described earlier.