Overview

Usage scenario: Verifying documents after insertion

This scenario describes the steps required to set up a camera or barcode scanner to read barcodes through the window on each envelope of a job as the envelopes exit the inserter. Some of these steps can be done at the same time.

1. Prepare the camera or barcode scanner hardware.
    1. Purchase the camera or barcode scanner and install it on the inserter.

        Note:
        - Follow the instructions provided by the manufacturer when you install the camera or barcode scanner. Test the lighting conditions to be sure that the camera can read the barcode clearly. If light reflects off the plastic window, barcodes might not be read. In addition, measure the location of the camera or barcode scanner to ensure it lines up with the placement of the barcode on all the types of documents it scans.

    2. Connect the camera or barcode scanner to the network. Write down the IP address and port number that the camera uses.
2. Understand and create your barcode format.
    1. Determine what type of barcode you want to use and how you want to format data in the barcodes that are added to your documents. The barcode format must contain the **Job number** job property and the **Sequence in child job** document property. Determine how many characters you want to allocate to each of those properties and whether you want to include other information in the barcode.

        Note:
        - Although the Job number is set at eight characters initially, you should include at least two more characters (.n) in the barcode format. The job numbers of child jobs created for reprints have at least 10 characters. Be sure the barcode symbology you use allows periods, because they are present in the job number of every child job created for reprints.

    2. Log in to RICOH ProcessDirector as an administrator and create the barcode format object. If you install only one camera and read all barcodes in the same location on an envelope, one barcode format should be all you need for the system. If other data might be included in the barcode for other reasons and that data cannot easily be standardized across applications, you might need to create more than one barcode format. However, the **Job number** and **Sequence in child job** properties must be in the same positions in the barcode for all barcode formats used for the same barcode reader.
3. If the print file is in PDF format, add barcodes to the print data.
    1. Follow the instructions in *RICOH ProcessDirector: Installing Document Processing Features* to install the plug-in on your Adobe Acrobat Professional system.
    2. Open the file in Adobe Acrobat Professional and activate the Ricoh plug-in.
    3. Define how document boundaries in the print file can be determined. These boundaries are the triggers that RICOH ProcessDirector can use to know where one document ends and another begins.
    4. After document boundaries are set, define the area to place the barcode and its contents. Be sure that the placement matches what the camera or barcode scanner expects to see. You can place the barcode only on the first page of each document since the camera (in this example) is reading through the envelope.
    5. For the first Content Type, select Job Property and a Content Value of Job.ID. Click **Edit** and select **Pad with Character** as the Modifier. Type `0` for **Character to Pad with**, and specify at least three digits, to allow the handling of reprint jobs.
    6. Return to the Add barcode dialog and select Document Property for the next Content Type with a Content Value of Doc.SequenceInChild. Repeat the steps above to pad the value with 0s for at least the number of digits equal to the number of documents you expect to have in the job. For example: If you expect to have 9,999 documents in this job, enter `4` in the **Minimum Padded Text Length** field. If you expect to have 100,000 documents in this job, enter `6` in the **Minimum Padded Text Length** field.
    7. Save the control file created by the plug-in. Send the file to the RICOH ProcessDirector server in a directory that the RICOH ProcessDirector system user can access.
4. If the print file is in AFP format, add barcodes to the print data.

Important:
- For AFP jobs, you must have page groups already defined to add barcodes. If your AFP files do not contain page groups, you can use the AFP Indexer mode in RICOH Visual Workbench to add page groups.

If you want to use the **Verification recipient** property to identify your documents, you must have an index tag already in the AFP file that you can map to the **Verification recipient** document property that the Automated Verification feature adds. The sample file provided already has that property defined. To link your own index tag to the property:

1. Open the AFP file in the RICOH Visual Workbench. Select the DPD plug-in.
2. Double-click on the Verification recipient property name at the bottom of the window and supply the requested information in the Define link options dialog.
3. Save the control file created by RICOH Visual Workbench. Send the file to the RICOH ProcessDirector server in a directory that the RICOH ProcessDirector system user can access.
4. To create the barcode, select the Enhance AFP mode and export an EnhanceAFP control file, which is used by the **BuildAFPFromDocuments** step. A sample control file named **VerifyAFPbarcode.cfg** is included in the `/aiw/aiw1/testfiles` directory (Linux) or the `C:\aiw\aiw1\testfiles` directory (Windows). Use the comments in the file to specify the number of characters for each property to match your barcode format. Make sure that the location of the barcode matches where the camera or barcode scanner is focused.

5. Create a barcode reader object.
Log in to RICOH ProcessDirector as an administrator and create the barcode reader object to correspond to the camera or barcode scanner. Use the IP address, port, and barcode format you already created.
6. The **VerifySample** workflow provided with RICOH ProcessDirector processes both PDF and AFP files through the Automated Verification workflow. Starting with a copy of the **VerifySample** workflow, modify it to process your own print files:
    1. If your print file is PDF, on the **IdentifyPDFDocuments** step and on the **BuildPDFFromDocuments**, specify the control file you built using the Acrobat plug-in.
    2. If your print file is AFP, on the **IdentifyDocuments** step, specify the control file you built using the RICOH Visual Workbench. On the **BuildAFPFromDocuments** step, specify the Enhance AFP control file that you previously created.
    3. On the **ReadBarcodeData** step, specify the barcode reader you set up earlier.
    4. Specify which document property this **ReadBarcodeData** step should update when the barcode reader receives information about the barcodes on documents.
    5. Decide how you want to manage the completion of this step and how long you want to wait to be sure that all barcodes have been read.
7. Create an input device that points to the workflow you created.
8. To test the system, submit a job.
    1. Enable the workflow and connect the barcode reader, and make sure that the input device is connected and enabled.
    2. Submit the file to the input device.
9. When the job reaches the **ReadBarcodeData** step, its state changes to **Reading barcodes**. The camera on the inserter reads the barcodes through the windows of the envelopes containing documents for the job.
The operator can select the **Complete barcode step** action on the Jobs table to see the percent of documents read. The dialog does not automatically update, but the operator can close and reopen it - during a long-running job, for example - to check on progress.
10. If the **ReadBarcodeData** step is configured to complete the step automatically when 100 percent of the documents have been seen or after a period of inactivity, the job moves to the next step in the workflow without the operator intervening.
If the job does not move to the next step, the operator must select the **Complete barcode step** action for the job. That dialog shows the percent of documents read by the scanner and the number of documents that have not been read. The operator can choose to complete the step even with the missing documents so that the job can go to the next step, often **Reconcile**.
11. If the **Reconcile** step is configured to mark all missing documents for reprint automatically and submit the child job to a printer, a child job containing the reprints is created automatically. The original job moves to the next step in its workflow if no duplicate scans were detected. If any documents were detected more than once, the job moves to the **Waiting to reconcile** state even if Automatic reconciliation is turned on.
If Automatic reconciliation is turned off, the operator must select the **Reconcile** action on the job when it is in the **Waiting to reconcile** state. On the Reconcile dialog, the operator can see a list of documents where the value of the **Document status** property that the step updates is set to **Attention** or **Duplicate**. The operator can choose to reprint, pull, or accept (**Mark OK**) one or more documents in the **Attention** or **Duplicate** state.
When all the documents in the job have a status other than **Attention** or **Duplicate**, the **Reconcile** step is complete and the job moves to the next step.

Parent topic: Automated Verification