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OpenText™ Intelligent Capture

RescanPlus Guide

This guide describes how to use the RescanPlus module to examine and replace pages that other modules or processes have flagged for rescanning.

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OpenText™ Intelligent Capture
RescanPlus Guide
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Chapter 1

Introduction

The RescanPlus module is an important part of a complete Intelligent Capture document capture system. Its purpose is to examine and replace pages that other modules or processes have flagged for rescanning for any reason; for example, incorrect page content, poor image quality, incorrect image settings, excessive skew, folded corner, or improper orientation. In addition to its ability to make corrections to flagged pages, the RescanPlus module provides all of the functionality of the ScanPlus module, except that it does not create batches. Therefore, RescanPlus cannot be the first module in a process because the first module in a process must be able to create batches and kick off the process flow. Also unlike ScanPlus, RescanPlus is a task processing module that can process tasks in Run All Batches mode or in Run Single Batch mode. This enables the RescanPlus operator to process tasks from any batch as tasks become available, or to select a specific batch and process only its tasks.

RescanPlus has a number of important features, which are described in the rest of this section.

The RescanPlus module is a web-deployable, attended client module—an operator interacts with the module to select flagged pages, determine which actions to take, and then carry out those actions. The RescanPlus module enables several corrective actions:

- Replace one or more pages with new pages. The replacement pages may be scanned by using an attached scanner or imported from selected files, and may contain image data or non-image data.
- Insert missing pages. Inserting is similar to replacing, but does not remove existing pages from the batch.
- Rearrange page order within the tree. Pages may be dragged from one location to another in the **Tree View** panel.
- Change the orientation of pages. Image pages may be rotated in 90° increments to obtain a right-side-up presentation.
- Delete pages. No replacement pages are added; unwanted pages are removed.

Notes

- The administrator can disable certain features of the RescanPlus module when configuring a process or batch step. Features that may be disabled include the ability to import replacement pages, the ability to manipulate pages in the tree that are not part of the current task, and the ability to configure scanner settings during production. The administrator also can selectively control tree manipulation, preventing or allowing the ability of operators to insert, add, or delete nodes per level in the tree.

- Feature codes specify support for scanner driver levels. For more information, see *OpenText Intelligent Capture - Administration Guide (ECPCORE-AON)*.

RescanPlus can process tasks at the page level (level 0) or the batch level (level 7). Running RescanPlus at the batch level is usually preferred because doing so enables the module to control when the `Finish` event handler runs, and therefore when subsequent tasks are allowed to begin processing. Triggering at the batch level adds a small amount of complexity, because pages that do not need to be rescanned must still be triggered. This means that to rescan a single page, every page in the batch must have its `NeedsRescan` and `InputImage` trigger values set to a non-zero value. To accommodate this need, a special value for `NeedsRescan` is used to represent a page that does not need to be rescanned within a batch that has at least one page that does need to be rescanned. For information on how to correctly configure RescanPlus to trigger at the batch level, see "Understanding Triggering RescanPlus at Level 7" on page 47.

Typically, RescanPlus is used as an exception handling module. This means that only pages that have been flagged for rescanning are processed by the RescanPlus module. However, the module displays all pages of the tasks it receives, and indicates which pages need to be rescanned by displaying a "thumbmark" symbol over the thumbnail image of each rejected page. The thumbmark symbol and color can be specified by the administrator when configuring a process or batch.

Note: Processes that include one or more RescanPlus steps must also include a ScanPlus step, even if the ScanPlus module is not used.

Understanding Operator and Administrator Roles

An operator can use the RescanPlus module to rescan pages, import files (documents or images), and manipulate images. Typically, the RescanPlus module is used to replace or add pages that have been identified elsewhere as needing rescanning. Pages may be rejected automatically by an unattended module, manually by a module operator, or by an external process (for example, through a web service). For example, a Completion operator may manually reject pages that have folded corners, are too light, or any number of other reasons, depending on how the process is configured.

An administrator can configure a process with one or more RescanPlus steps to receive tasks from other module steps that have rejected pages. This is done by creating a process that directs tasks to the RescanPlus module when certain conditions are true; for example, when a Completion operator selects an option that indicates a page in not readable. To implement this type of conditional process flow, use the `NeedsRescan` IA Value to flag pages that need to be rescanned.

1.1 Identifies Pages That Need to be Rescanned

The RescanPlus module enables operators to review batch pages that are:

- Flagged by a Completion module operator

  The Completion module enables the operator to flag pages with poor image quality. Operators can use these features to reject unreadable pages or to rotate pages. If a page is rejected due to poor quality, code in the *IPP* or XPP routes the image to the RescanPlus module.

- Rejected in an external system

  RescanPlus can handle rescan tasks that originate outside an Intelligent Capture system, typically by accepting work through the Web Services Import module. These modules can be configured to create batches and transform rescan instructions into IA Values that can be used in an IPP to trigger and control the RescanPlus module. After rescanning and other processing, the results can be returned to the external system by using the appropriate custom export module or the Web Services Export module, as required.

- Selected for low level quality assurance

  You can configure an IPP to perform low level quality assurance by routing every <*n*> pages to RescanPlus for review. By setting values in an IPP, the RescanPlus module can be configured to highlight every <*n*>th page. The RescanPlus operator can then assess overall batch image quality by evaluating the highlighted images.

The RescanPlus module displays the entire tree for a batch, marking pages that have been rejected by a quality assurance module, operator, or external process. RescanPlus places a user-defined symbol in one of 14 colors over the thumbnail image of each rejected page. The administrator can define different shapes and colors to indicate different quality problems. The RescanPlus module also displays text in its status bar describing why the image was rejected, including comments entered by a quality assurance operator. After the RescanPlus operator modifies a batch, the RescanPlus module sets values that enable the IPP to route replacement and inserted pages to the appropriate module.

1.2 Receives Rejected Pages for Reprocessing

Other modules, such as Completion and Web Services Import can return IA Values identifying pages that needing to be rescanned and how those pages should be rescanned. The *IPP* is then responsible passing the tasks and these IA Values to the RescanPlus module. The IA Values passed to the RescanPlus module tell the operator how to process pages that need to be rescanned, and tell the module how to display the pages so that rescan operators can perform the correct tasks.

IPPs must process the IA Values to tell the RescanPlus module:

- Which thumbmark symbols to place on the thumbnail images of rejected pages
- Which color to make each symbol

- How to insert rescanned pages into the batch
- How to describe a page's quality problem in the RescanPlus module's status bar.

When another module finishes processing a task that it has flagged for rescanning, it sends the task back to the Intelligent Capture Server. The Intelligent Capture Server runs the module's `Finish` event handler for that task to determine if any of the pages has quality problems. If a page has quality problems, the `Finish` event handler should route the task that contains the page node to the RescanPlus module. For level 0 tasks, the processing is straightforward and described in "Understanding Triggering RescanPlus at Level 0" on page 47.

If a task contains more than one rejected page (for level 1 and higher tasks), what happens in the rejecting module's `Finish` event handler determines how RescanPlus receives, displays, and describes rejected images. The processing is somewhat more complex than for level 0 tasks, and is described in "Understanding Triggering RescanPlus at Level 7" on page 47.

1.3 Automates Operations with Client-Side Scripting

Client-side scripting enables RescanPlus administrators to configure the module to respond to events with custom actions. RescanPlus provides a number of module- and task-level events for which administrators can map methods of their own design to perform actions when those events occur.

Module-level events include `FilterBatchList`, `GotServerConnection`, `ModuleStart`, `ModuleFinish`, and others. Task-level events include `BeforeScan`, `AfterScan`, `BeforeNewLevel`, `AfterNewLevel`, `AfterPageAdded`, `BeforeNodeDeleted`, and several others.

A number of sample client-side scripts are installed with RescanPlus, including:

- `BatchDivider`: divides batches into predefined sizes
- `BatchFilter`: filters the batch list to display only batches where RescanPlus steps have been completed.
- `EventMonitor`: lists important RescanPlus task events in a window each time an event is fired.

For more information, see *OpenText Intelligent Capture - Scripting Guide (ECPCORE-PSC)*.

1.4 RescanPlus and ScanPlus Have Independent Settings

The RescanPlus module contains almost all of the same functionality as the ScanPlus module. However, unlike the Rescan and Scan modules from previous releases, RescanPlus and ScanPlus do not share all the settings. Independent settings enable rescanned pages to have different characteristics than the pages they are replacing. Administrators and operators are responsible for configuring the modules to provide consistent settings, if consistent output is required.

Note: The **Level**, **Type**, and **Display Name** settings on the **Level** tab are shared between the ScanPlus and RescanPlus modules.

Chapter 2

Setup

Most configuration information for Intelligent Capture client modules is defined during *module setup*. You can run a module in setup mode from Intelligent Capture Designer, from Intelligent Capture Administrator, or from a command prompt with appropriate arguments. For more information, see *OpenText Intelligent Capture - Module Reference (ECPCORE-CMD)*.

When launched in setup mode, a client module displays the **Setup** window in which you can specify the module's configuration settings.

2.1 Understanding Online Applications

RescanPlus can only process batches while connected to the Intelligent Capture Server. The connection status is displayed at the bottom right of the window, where Connected indicates that the server connection is active and Disconnected indicates that the server connection is inactive.

Note: Batches cannot be scanned or rescanned, nor can changes be made to index values while the server is in a Disconnected state. When connection with an Intelligent Capture Server is lost, ScanPlus/RescanPlus can log an appropriate message to an error log. However, depending on the logging rules for the machine, enterprise-wide logging rules, or other factors, it may not always be possible to send information about an Intelligent Capture Server disconnect after connection is lost. The status of this message depends on whether the module is currently processing a task or has an opened batch from the disconnected Intelligent Capture Server. If there is a task or opened batch from a disconnected Intelligent Capture Server, ScanPlus/RescanPlus logs an error message. Otherwise, it logs a warning message.

A RescanPlus task in progress or an open batch is not affected by a disconnected Intelligent Capture Server unless the task or batch is sent to or received from the disconnected Intelligent Capture Server.

Related Topics

"Understanding Intelligent Capture Server Connections" on page 14

2.2 Understanding Intelligent Capture Server Connections

When a connection to an Intelligent Capture Server is lost, RescanPlus displays the error message `Server Connection is lost` and logs the error. A RescanPlus task in progress or an open batch will not be affected by a disconnected server unless the task or batch is sent to or received from the disconnected Intelligent Capture Server.

2.3 Understanding RescanPlus Status Information

The **Status Information** pane automatically displays read-only information on RescanPlus, specifically, status information for step properties (name, department, process batch name, and process batch ID) and Intelligent Capture Server connection properties (server name and user name).

2.4 Setting Up Batch Levels

You can use the RescanPlus module to define the batch levels and names that are displayed in the tree during production. These definitions will be seen by various module operators in the production environment.

2.4.1 Defining Levels

The **Levels** pane in RescanPlus setup enables the administrator to define the batch levels and names that are displayed in the tree during production. These definitions will be seen by various operators in the production environment.

To define levels:

1. From the **RescanPlus Setup Window**, select **Levels**.
2. In the **Level** column, select the checkbox for each level to display in the tree.
3. In the **Type** field, type a name that describes the work unit comprising that level, such as `Page` or `Document`.
4. In the **Display Name** field, type a label for each level that clearly identifies the tree nodes to the RescanPlus module operators. To produce the name for each node in the tree, enter any combination of:
   - **Text**: Type descriptive text in the field.
   - **Numbering schema**: Use a schema to automatically number the nodes. The topic "Understanding Numbering Schemas for Tree Nodes" on page 15 has more instructions on using numbering schemas.
   - **IA Value**: Type an IA Value into the node name, either manually or by clicking the **IA Value** button. Clicking **IA Value** opens a **Choose Values** window, which displays all the IA Values declared in the *MDF*s for all the module steps in the process or batch. To limit the variables from which the operator can select, use the following options:

- **Step Name list**: Select one of the module steps declared in the process or batch to only view the variables that are declared in that module's MDF.
- **Level list**: Select a batch level ranging from Page (0) to batch (7) to only view the variables that are declared at that level.
- **Type list**: Select whether the operator views input IA Values (such as `InputImage` and `RescanReason`), output IA Values (such as `OutputImage` and `Date`), or both input and output IA Values.

Select a variable from the IA Values list and click **OK**. The setup window now displays the selected IA Value.

5. Select the **Only allow manipulation of the tree within current task** checkbox to prevent modification of the batch tree outside of the tasked branch. This means that RescanPlus will disable moving non-tasked nodes and rescanning non-tasked nodes at the specified levels. Users can enable the functionality of allowing RescanPlus to delete non-tasked pages by selecting the **Delete** checkbox next to the **Level 0**.

   Notes

   - When this checkbox is disabled, **Insert**, **Delete** and **Move** are enabled.
   - When this checkbox is selected, **Insert** and **Delete**are enabled only for levels less than or equal to the RescanPlus trigger level and **Move** is enabled for levels lesser than the current RescanPlus trigger level.

6. If necessary, enable the following checkboxes:

   - **Insert**: The user is allowed to insert a new node at this level.
   - **Delete**: The user is allowed to delete nodes at this level.
   - **Move**: The user is allowed to move nodes of this level.

7. Click **OK** or **Apply** to save the changes and return to the RescanPlus setup.

Note: All settings on the **Levels** window are shared between ScanPlus and RescanPlus except for the **Insert**, **Delete** and **Move** options.

2.4.1.1 Understanding Numbering Schemas for Tree Nodes

RescanPlus enables schemas for numbering nodes in the tree, making them easier to identify and track throughout the system. RescanPlus queries the Intelligent Capture Server to determine a node's position in the tree with respect to a node at another level. For example, the administrator can number pages according to their position in a document, a folder, a stack, or even the entire batch. RescanPlus can display a number for each page node (level 0) that represents its position within a document node (level 1), a folder node (level 2), a stack node (level 3), or the batch node (level 7). The operator can number nodes at any level simply by typing a numbering schema in the appropriate **Node** name displayed in tree box in the **Levels** window of RescanPlus setup. When writing a numbering schema, the **Node Count** syntax, described below, must be used.

Table 2-1: Node Count Syntax Character Options

Character	Description
@	Gets the value of the following: @x @xy
Z	Represents the level of query, the level at which you enter a numbering schema (0-7). All nodes at level Z display the number created by the numbering schema.
x	Represents node at a specified batch level (0-7). If y is not defined, y = x+1.
y	Represents nodes at a specified batch level (0-7). If y is not defined, y = x+1.

Note: Z = level of query (the level at which the operator enters a schema: 0-7). When the operator enters a numbering schema at level Z, all nodes at level Z display the number created by the numbering schema.

A condition is a number displayed in tree for each level Z node.

The condition x = Z and x < y indicates x's position within its y parent. For example, use this numbering schema to display a page's position within its parent document node (@01), folder node (@02), or batch node (@07) or to display a document's position within its parent folder node (@12) or batch node (@17).

The condition x = Z and x > y indicates the number of level y nodes within the level x/Z node. For example, use this numbering schema to display the number of pages (@70), documents (@71), or folders (@72) in a batch or to display the number of pages (@20) or documents (@21) within a folder.

2.4.2 Inserting, Deleting, or Moving Levels

Both the type of tree manipulation, and the level at which that manipulation is allowed, can be controlled. From the **Levels** window, the operator can also restrict how users manipulate the tree.

For example, an administrator may want to restrict tree manipulation when a new level is inserted when a patch sheet is scanned. Rather than allowing the ScanPlus operators to delete or move these nodes, RescanPlus operators can be required to fix these nodes.

Note: The **Insert**, **Delete**, and **Move** restrictions at each level are stored separately for the ScanPlus and RescanPlus modules.

To insert, delete, or move a level:

1. From the **RescanPlus Setup** window, select **Levels**.

2. From the **Levels** window, select one of the following options:

   - **Insert** - Enables the user to insert a new node at this level
   - **Delete** - Enables the user to delete nodes at this level
   - **Move** - Enables the user to move nodes of this level

3. Click **OK** or **Apply** to save the changes and return to the RescanPlus setup.

2.4.3 Understanding Trigger Levels

In production mode, the RescanPlus module displays the tree to operators so they can see not only the nodes of their current task, but all the nodes in the batch. RescanPlus can be configured during setup to enable operators to manipulate nodes in the batch in ways that can cause problems such as errors being displayed to other operators, unexpected retriggering of tasks, and even batch corruption. To prevent such problems from occurring and to keep batches moving smoothly through production, it is important to consider the following information regarding the setup of triggering levels for batches with the RescanPlus module:

- Running the RescanPlus module at level 7 will enable the module to own the entire batch until the operator finishes all scanning and closes the batch. This will prevent any changes to the tree from causing problems. To run the RescanPlus module at level 7, you must modify your *IPP* as explained in "IPP Code Considerations when Triggering the RescanPlus Module Above Page Level" on page 18.
- If you cannot run the RescanPlus module at level 7, be aware that retriggering will occur whether the nodes that are manipulated are within the current task or in another task. Problems generally result when nodes are manipulated in tasks other than the current task, after other modules may have already processed the task. Ensure your IPP includes code to properly deal with tasks that the Intelligent Capture Server would otherwise want to retrigger. It is often undesirable to retrigger tasks when a node has been modified because that node may have already gone through other processing. In such cases, retriggering may cause unexpected problems in your batches. You may need to disable automatic retriggering, or include code in your IPP to "un-trigger" specific module steps. The *Process Developer Guide* provides more information on how to properly handle retriggering within your IPP.
- While it is possible to configure RescanPlus to run at any level (0–7), the module has been tested to work correctly only at level 7 (batch) and level 0 (page). If you configure the module to run at any other level, you do so at your own risk, and should plan and thoroughly test your configuration accordingly.
- If possible, limit the number of levels the operator can view to avoid issues of manipulating nodes in the tree. To do this, in the **Levels** window, select the checkboxes only for the levels that the RescanPlus operator will need to view. The topic "Inserting, Deleting, or Moving Levels" on page 16 provides details on restricting manipulation of the tree.

- If you must enable levels beyond those in the current task, consider disabling the RescanPlus module settings that enable operators to insert, delete, or move nodes other than the ones in the task they are currently processing. To do this, use the appropriate checkboxes on the **Levels** window. The topic "Inserting, Deleting, or Moving Levels" on page 16 provides details on restricting manipulation of the tree.
- If your work flow requires that you allow operators to manipulate non-task nodes in any way (inserting, deleting, rearranging) and that you run the RescanPlus module at a level lower than level 7, you should explain to your operators the consequences of manipulating nodes in the tree so that they do not inadvertently cause problems by adding, deleting, or rearranging nodes. If manipulation of the tree is necessary during scanning, be sure that changes are made within the current task. Code in your IPP can then properly handle the retriggering that occurs.
- Running RescanPlus at level 0 enables the page from a scanned batch to move to the next module to be processed (assuming the next module runs at level 0), as opposed to waiting for the entire batch to be scanned and closed.

2.4.3.1 IPP Code Considerations when Triggering the RescanPlus Module Above Page Level

If the RescanPlus module is triggered above the page level, sending pages on to the next module requires more code to be added to the RescanPlus `Finish` routine in the *IPP*. However, by triggering the RescanPlus module above the page level, you can eliminate the need for using the Multi module as part of the step, and thus simplify the IPP.

Note: While it is possible to configure RescanPlus to run at any level (0–7), the module has been tested to work correctly only at level 7 (batch) and level 0 (page). If you configure the module to run at any other level, you do so at your own risk, and should plan and thoroughly test your configuration accordingly.

For example, the following code snippets are for a process that has RescanPlus at level 0, Multi at level 7, and Export at level 1. By having Multi at level 7, the export tasks will not proceed until the entire batch is finished (Multi cannot run while the RescanPlus module has a level 7 lock on the batch).

```
Private Sub Scan_Finish(ByVal p As IASLib.IAS_RECORD_0)
p.Export.InputImage = p.Scan.OutputImage
p.Multi.Ready = 8
End Sub

Private Sub Multi_Finish(ByVal pRoot As IASLib.IAS_RECORD_7)
Dim p1 As IAS_RECORD_1
Dim idx As Integer
For idx = 0 To pRoot.Tree.NumChildren(1) - 1
Set p1 = pRoot.Tree.L1Child(idx)
p1.Export.Ready = 1
Next
End Sub
```

With the ScanPlus module triggered at level 7, the above code can be rewritten as follows:

```
Private Sub Scan_Finish(ByVal pRoot As IASLib.IAS_RECORD_7)
Dim pO As IAS_RECORD_O
For Each pO In pRoot.Tree.Pages
pO.Export.InputImage = pO.Scan.OutputImage
Next
End Sub
```

2.5 Defining Event Actions

The **Event Actions** pane in RescanPlus setup enables the RescanPlus operator to automatically generate new nodes during production.

2.5.1 Setting Up Separator Event Actions

The administrator can use separator event actions to automatically generate new nodes or new batches during production.

To set up a scanner event action:

1. From the **RescanPlus setup** window, select **Event Actions**.
2. In the **Scanner Events** list box, select a scanner event that RescanPlus will use to trigger the creation of new nodes or batches:
   - **None** - No scanner event is defined.
   - **Software patch code** - The Kodak Software patch codes are unique images that, when scanned or imported, RescanPlus recognizes as a scanner event. The image file for each patch code is in the `c:\Program Files\InputAccel\Client\images\patch directory`.

     Note: When using Kodak scanner in the 900 or i800 family, do not enable **Software Patch Code** events at the same time as the patch code features built into the scanner are in use. These scanners have built-in hardware patch code detection which can be configured by selecting the **More** button in the **Scanner Settings** window.
   - **Kodak level change**: When the Kodak scanner detects a new page, section, or chapter, RescanPlus generates a new node or batch. You can identify a new page, section, or chapter by inserting patch codes into the hardcopy stack, using a foot pedal, or pushing the appropriate button on the scanner. When using patch sheets, be aware that the behavior of **Patch T** (**Transfer Patch**) sheets is different than the behavior of other patch sheets. The following topic, "Understanding Patch Sheet Separators on Kodak Scanners" on page 22, provides more information on using patch sheet separators for Kodak scanners.
   - **Separator page**: Some scanners come with separator pages. One example of a separator page is a piece of standard paper with a notch in the top. If the scanner provides separator pages, it is possible to configure RescanPlus to generate a new node or batch every time the scanner detects a separator page.

- **Every <*N*> pages**: RescanPlus counts <*N*> pages and then creates a new node or batch.

  Note: When creating multiple levels using this option, define them in ascending order. For example, to create a level 1 document every 5 pages and a level 2 folder every 10 pages, define the document options in the first line of this tab and the folder options in the second line. RescanPlus counts in increments of <*N*> starting with the first page in the batch. When setting up more than one event at **Every <*N*> Pages**, RescanPlus counts each event independently. When scanning double-sided documents, note that a page refers to the physical page and it includes both sides.

- **New stack**: When RescanPlus detects that the operator has placed a new stack of pages on the scanner's document feeder, it generates a new node or batch. Note that the operator must select **Continue Scanning** after placing more pages in the feeder.
- **Bar code**: When RescanPlus detects any barcode on the page, it generates a new node or batch.

  Notes

  – If you are using a MultiStream scanner, patch code and blank page detection are most effective when the least-colorful image stream is used (ideally, a binary image). Therefore, RescanPlus checks each image stream from the scanner and uses the one with the smallest value of `SamplesPerPixel x BitsPerSample` when checking for patch codes or blank pages.

  – RescanPlus itself can only detect patch codes and blank pages. It cannot detect barcodes. The `Bar code` event action in RescanPlus relies on hardware barcode detection, so this would need to be enabled for the scanner itself. Check with the scanner manufacturer if the scanner has hardware barcode detection. If not, use Image Processor to detect the barcodes, and the Multi module to perform the split by setting its ready trigger = 1 (1 is for a new document; all non-barcode pages should be set to 8 for no operation).

- **Blank page**: A blank page is a standard sheet of paper that is blank on both sides. (Or when doing single-sided scanning with a simplex scanner, only the page-side being scanned must be blank.) When scanned or imported, RescanPlus recognizes a blank page as a scanner event and creates a new node or batch.

3. In the **Options** list box, select an option that corresponds to the scanner event (if applicable):

   - **Kodak T/Kodak 2/Kodak 3** - Corresponds to **Software patch code** scanner event.
   - **New page/New section/New chapter** - Corresponds to **Kodak level change** scanner event.

- **Pristine white/Dirty white/Very dirty white/One line OK/Two lines OK** - Corresponds to **Blank Page** scanner event.

  Note: You can also type in a black area ratio value directly into the **Options** field. The black area ratio specifies the percentage of black pixels over the entire image that result in a page being considered non-blank. This value (multiplied by 10) is the total area black pixels on the page divided by the total area of the page. If the computed percentage is larger than this value, then the page is considered non-blank. The range for this value is 0 to 1000. A value of 10 means that if the image contains more than 1% black pixels in its entire page area, the page is non-blank.

4. In the **Actions** list box, select an action for the RescanPlus module to take when it detects the defined scanner event. The separator page, if retained, becomes the first page of the new node (document, folder, batch, or whatever is specified). If scanning in duplex mode, the back side of the separator sheet becomes the second page of the new node. Available **Actions** include:

   - **No change**: This option tells RescanPlus not to create a node or batch. This option is useful if hardcopy documents are already prepared for scanning by adding event pages, such as separator pages, but then the operator decides not to use them. In this case, the operator could define the scanner event as **Separator page**, define the action as **No change**, and then select the **Discard page** checkbox.
   - **New document**: RescanPlus creates a new level 1 node.
   - **New folder**: RescanPlus creates a new level 2 node.
   - **New stack**: RescanPlus creates a new level 3 node.
   - **New level 4**: RescanPlus creates a new level 4 node.
   - **New level 5**: RescanPlus creates a new level 5 node.
   - **New level 6**: RescanPlus creates a new level 6 node.
   - **Up 1 level**: RescanPlus creates a new node 1 level higher than the current node.
   - **Up 2 levels**: RescanPlus creates a new node 2 levels higher than the current node.

   Note: Normally, the current node is a page node. Therefore, RescanPlus creates a new level 1 node if the operator selects Up 1 level and a new level 2 node if the operator selects Up 2 levels. If the operator selects both of these actions, however, the current node may not be a level 0 node. For example, if the operator tells RescanPlus to move Up 1 level and Up 2 levels every four pages, RescanPlus performs the first action, creating a level 1 node, and then moves up two levels, creating a level 3 node. To use either action more than once or in conjunction with the other, it is recommended to define lower level node creation to occur before higher

level node creation. It is also recommended to test the setup. When defining scanner event actions, each **Action** box lists levels by the name specified in the **Levels** window of RescanPlus setup. The individual scanner's documentation provides more information about how to set up the scanner to detect blank pages, patch codes, barcodes, and other events.

5. Select the **Discard Page** checkbox to have RescanPlus delete the event page from the batch.

6. Repeat steps 2-5 for each scanner event that needs to defined.

Note: If defining scanner events that trigger conflicting actions, the latter of the actions will be performed. For example, if configuring RescanPlus to create a new level 2 folder every ten pages and a new level 1 document every five pages, a new folder is created every 10 pages, and a new document is created every 5 pages.

7. Click **OK** to save the settings and close the **Event actions** window.

2.5.2 Understanding Patch Sheet Separators on Kodak Scanners

Kodak scanners have a special job separation sheet called a patch sheet. While Kodak patch sheet separators can be detected by RescanPlus using any scanner and selecting the **Software Patch Code** event action, when patch sheet separators are used with Kodak scanners and the **Kodak Level Change** event action, the behavior of the patch sheet separator is controlled by the configuration of the scanner itself. This topic explains how patch sheet separators work when used with Kodak hardware patch sheet detection.

When using the **Kodak level change** scanner event action, the scanner hardware responds differently to general patch sheets (that is, all patch sheets other than **Kodak T** patch sheets) than to **Kodak T** sheet codes.

- **For all patch sheets other than Kodak T patch sheets**: When a patch sheet other than **Kodak T** is scanned, the scanner sends a level change event to RescanPlus before it scans the page image. This results in the patch sheet triggering the beginning of the action. For example, the patch sheet will become the first page of a new document (if that is the selected option).
- **Kodak T patch sheets**: When a **Kodak T** patch sheet is scanned, the scanner sends a level change event to RescanPlus after it scans the page image. This results in the patch sheet triggering the end of the action. For example, the patch sheet will become the last page of the current document and the next page scanned will become the first page of a new document (if that is the selected option).

  Because Kodak scanners send transfer sheet (**Kodak T**) detection information together with the image that follows the patch sheet, any data associated with the patch sheet is lost if the **Discard Page** checkbox is selected in the **Event Actions** window of the RescanPlus setup. This is the how Kodak defines the events for a

Kodak T sheet. RescanPlus supports this action as it is implemented by Kodak. If the work flow requires a different mode of operation, three other options are available:

- Use the software **Kodak T** detection built into RescanPlus.
- Use **Patch 2** or **Patch 3** separator sheets together with **Patch II** or **Patch III** detection instead
- Use the **Kodak level change** event action to start a new level, but add a second event action as follows: **Software patch code** detection + **Kodak T** + **New document** + **Discard page**. The software **Kodak T** detection will delete the patch sheet and the **Kodak level change** will begin a new level in the tree.

Note: When using the **Software patch code** scanner event action, the behavior is consistent for all types of patch codes (the patch sheet event always occurs before the page image is received by RescanPlus). When designing the document capture work flow, the operator must take these differences into account, and must use caution when electing to discard separator pages.

2.6 Setting Up a Scanner in Setup Mode

Each process uses the scanner configuration mapped to that process. The operator can modify the scanner configuration by configuring the RescanPlus step of each process intended for use. The Intelligent Capture Server saves the configuration for each driver.

For example, if selecting scanner X during installation, the operator must configure the RescanPlus step of each process intended for use. During production, RescanPlus uses the process settings defined for scanner X.

If selecting a different scanner, scanner Y, the operator must reconfigure the RescanPlus step of each process intended for use to reflect the options available with scanner Y. During production, RescanPlus uses the process settings defined for scanner Y.

The **Scanner** pane in RescanPlus setup enables the operator to select and configure the scanner that will be used for scanning during production mode.

2.6.1 Selecting a Scanner

The scanner to be used for RescanPlus can be selected or changed using the **Scanner** pane in RescanPlus setup by running the module's setup step in production mode, or through the Intelligent Capture Administrator module. It is also possible for ScanPlus and RescanPlus set up to each have different scanners to work with. The *Installation Guide* provides more information on installing RescanPlus and scanner drivers.

Changes to the scanner's configuration for RescanPlus that are made from the **Setup step** settings are saved globally and can be used later by all RescanPlus operators. These changes immediately become available to the RescanPlus operator who made them. Other RescanPlus operators will use this changed scanner configuration after it is loaded to their machines. This happens when a scanner configuration is selected after the module is started or after another configuration was in use.

Note: If the user clicks the **Cancel** button from **Setup step** or the **Modify Scanner Configuration** window, all changes that were made are discarded. The existing scanner configuration remains unchanged.

To select a scanner:

1. From the **RescanPlus setup** window, select **Scanner**.
2. Click **Select scanner** or **Change selected scanner...** in the **Scanner Driver** area. (The scanner driver for the scanner connected to the RescanPlus workstation is automatically loaded.)
3. In the **Scanner Selection** pane, select the scanner from the available scanner drivers list, then click **Select** to close the window. The selected scanner displays in the **Current Scanner** field.

Note: When RescanPlus cannot find the scanner when opening the **Scanner Selection** pane, the following message displays: `Can't locate SCSI device; check cable and power`.

If the power to the scanner was switched off, the operator may need to reboot the computer running RescanPlus before RescanPlus detects the scanner. After selecting a scanner, if the scanner does not have a configuration assigned, the operator must select a configuration or create a new configuration. Multiple configurations can be created for a single scanner driver.

2.6.1.1 Updating the Scanner List

When selecting a scanner to use with RescanPlus, the operator can refresh the list of scanners displayed in the **Scanner Selection** pane in case the intended scanner was not detected by RescanPlus the first time.

To update the scanner list:

1. From the **RescanPlus setup** window, select **Scanner**.
2. Select **Change selected scanner...** in the **Scanner Driver** area.
3. In the **Scanner Selection** pane, select **Update scanners list...**.
4. RescanPlus will reload the drivers and add the scanner drivers to the **Available scanner drivers** list.

2.6.1.2 Setting Up the Scanner Driver

After selecting a scanner to use with RescanPlus, the operator can configure the scanner driver's default paper size settings.

To set up the scanner driver:

1. From the **RescanPlus Setup** window, select **Scanner**.
2. Select **Change selected scanner** in the **Scanner Driver** area.
3. In the **Scanner Selection** pane, select **Setup Scanner driver**.
4. Select a **Default Paper Size** from the list of available sizes for this scanner.
5. Click **OK** to save the selection and close the window.

2.6.2 Setting Up a Scanner Configuration Profile

RescanPlus can create and assign multiple scanner configuration profiles for each scanner to be used. Each configuration profile defines all scanner settings for a particular scanner. A profile can be applied either through batch settings or by an operator who has sufficient permissions. Each scanner configuration profile is available across all client machines running RescanPlus (but is not shared with ScanPlus). Changing the settings in a scanner configuration profile, regardless of whether changed in setup mode or production mode, immediately affects scanner settings for all processes and batches that use the profile. However, because RescanPlus loads scanner configuration profiles when it starts, changes to profiles have no effect until RescanPlus exits and restarts.

Notes

- If an operator attempts to change the current profile to a profile that uses a different scanner driver, RescanPlus displays a message explaining that the current scanner must be changed before changing the profile.

- Configuration names are case-sensitive and must be unique.

To set up a scanner configuration:

1. From the **RescanPlus Setup** window, select **Scanner**.
2. Select **Change selected scanner** to specify the scanner to which the configuration will be assigned, then click **Select** to select the scanner.
3. Click **Create** to display the **Create Scanner Configuration** window.
4. Type a **Configuration Name** and **Description** in the appropriate fields for the scanner driver configuration, then click **OK**.
5. The newly created configuration name appears in the **Available Configurations** list box. Click **Edit** to change the configuration name or description, or click **Delete** to remove the configuration name from the list box.
6. Select the **Display configurations for the current scanner only** checkbox to show only the configurations associated with the currently selected scanner.
7. Click **OK** to save the changes and close the **Scanner** window.

Changes to the RescanPlus module's scanner configuration can be done through the following:

- **Quick Panel/Scanner Settings**
- **Select/Modify Scanner Settings** window
- **Set Up Step Settings > Scanner** pane

The scope and priority of changes made in **Quick Panel/Scanner Settings** and **Select/Modify Scanner Settings** differ in scope and priority from changes made in the **Set Up Step Settings > Scanner** pane.

Changes made in **Quick Panel/Scanner Settings** or **Select/Modify Scanner Settings** affect only the current ScanPlus session. These changes are lost when RescanPlus is closed or when the current batch is configured to use another scanner profile. These changes do not affect other RescanPlus instances or scanner configuration profiles.

Changes to scanner settings that are made in the **Set Up Step Settings > Scanner** pane are different because they affect all users. These changes are saved in the Intelligent Capture Database and are seen by all RescanPlus modules.

For example, if Module 1 is using a scanner configuration that is changed system-wide by Module 2, Module 1 does not see these changes until it restarts or reloads the scanner configuration. If Module 1 is using a scanner configuration profile and changes it through the **Set Up Step Settings > Scanner** pane, these changes take effect immediately for Module 1, overriding any changes made in **Quick Panel/ Scanner Settings** and **Select/Modify Scanner Settings**.

If the operator cancels changes from **Quick Panel/Scanner Settings** or **Select/ Modify Scanner Settings**, all changes are discarded. System-wide stored scanner

configuration remains unchanged and settings previously made in **Quick Panel/ Scanner Settings** or **Select/Modify Scanner Settings** remain in effect.

For example, if an operator creates a batch from process P1 and then changes the scanner mode from **Automatic** to **Duplex** using **Quick Panel/Scanner Settings**, the scanner uses **Duplex** mode for that batch. When the operator creates another batch from process P1, the scanner continues using **Duplex** mode. Now if the operator creates a batch from a process that uses a different scanner configuration profile, and then creates another batch from process P1, the scanner reverts to using **Automatic** mode because the changes previously made in **Quick Panel/Scanner Settings** were lost when the batch was closed.

2.6.3 Setting Up Scanner Settings

After the operator has selected a scanner to use with RescanPlus and created a scanner configuration, the operator can then set up the scanner settings by selecting **Modify Scanner Settings...** on the **Scanner Drivers and Configurations** window.

To set up scanner settings:

1. From the **RescanPlus Setup** window, select **Scanner**.
2. Select a scanner configuration from the list of available configurations, then select **Modify Scanner Settings** to display the **Scanner settings** window.
3. In the **Scanner Driver Options** area, select the **Page Size** from the list box.
4. (Optional) Select the **Enable imprinter** checkbox to enable the scanner's imprinter feature.

   Note: If the scanner does not have an imprinter function, the **Enable imprinter** checkbox will be unavailable.

5. Select **Page Bounds** to set up the boundaries of the pages to be scanned.
6. Select **Preview** to set up the output pages from the scanner. Select from one of the following options:

   - **Scan Pages**: Scans all the pages in the automatic document feeder (or until the operator selects **Stop Scanning**).
   - **Close Preview window**: Scans the first side of the first page in the scanner feeder. Or, if no pages are in the feeder, it scans the page in the flatbed.

     Note: The preview mode in setup mode is intended for testing purposes only. Once the operator has optimized the settings in preview mode, the operator must also adjust the standard configuration accordingly to save changes.

7. Click **Advanced Settings** to adjust additional settings for the scanner. The scanner driver's documentation provides more information about the windows and settings that are accessed through these links.

8. In the **Scanning Settings** area, select the scan mode:

   - **Automatic**: Scans from the feeder if pages are present; otherwise, scans from the flatbed.
   - **Simplex**: Scans one side of a page.
   - **Duplex**: Scans both sides of a page, if RescanPlus uses a duplex scanner.
   - **Back side only**: Scans the back side of each page in the feeder.
   - **Flatbed**: Scans from the flatbed only, regardless of whether pages are present in the feeder.

9. If scanning in duplex or using MultiStream scanning, use the **Page Side/Stream Settings** area and the following options to configure settings for different page sides and image streams:

   - **Output Image IA Value**: Specifies which image stream is saved to which output IA Value. Depending on your scanner, options may include:
     - **`OutputImage`**: This IA Value is chosen by default for the first image stream.
     - **`OutputImage2`**: This IA Value is chosen by default for the second image stream.
     - **`OutputImage3`**: This IA Value is chosen by default for the third image stream.
     - **`None`**: Select this option if you do not want to generate an output image.
   - **Enable Automatic Color Detection (ACD)**: Enables the scanner to automatically scan in color when color is detected in a batch.
   - **Mode**: Specifies which color mode RescanPlus will use for scanning or importing pages.
   - **Resolution**: Adjusts the resolution of images to improve their clarity and decrease their file size. Select a resolution from the from the list box or type one. If the scanner does not support the resolution, RescanPlus will change it to the closest support value.
   - **Dither**: Specifies whether the image should be dithered. Dithering consists of creating a halftone image using a pattern of pixels to give the illusion of grayscale.
   - **Brightness**: Adjusts the brightness of an image (within the scanner's limits). Use the list box to specify the scanner's brightness level. Select **Auto** to have RescanPlus automatically adjust the brightness based on the scanner's automatic capability.
   - **Contrast**: Adjusts the contrast of black and white in images. Use the slider control to manually adjust the contrast, or select **Auto** to have RescanPlus automatically adjust the contrast based on the scanner's automatic capability.

10. Click **OK** to save the scanner settings and close the **Scanner Settings** window.
11. From the **Scanner Drivers and Configurations** window, select the **Display configurations for current scanner only** checkbox to display the configurations that apply only to the scanner that RescanPlus is currently connected to.
12. Click **OK** to save the changes and close the **Scanner** window.

The user can specify one or more configurations which will be available in production mode for the configured batches, or for the currently configured process.

2.7 Setting Up Indexing

To set up indexing fields, the administrator must first scan in samples of the images that will be scanned and indexed during production. The administrator will use these samples to define indexing fields. Also note that while the documents may consist of multiple pages, for setup purposes, only pages that need to be indexed should be scanned.

When selecting indexing field display options, note that:

- The display option for indexing fields is applied to all levels.
- Display options cannot be defined for level 7 (the batch level).
- Additional indexing field settings must be configured using the **Level** field described in "Defining Indexing Field Levels" on page 29.

2.7.1 Defining Indexing Field Levels

RescanPlus enables operators to index documents at scan-time, adding detailed organizational information to batch levels before sending them to other modules in the process. To set up indexing fields, the operator must first scan in samples of the images that will be scanned and indexed during production. Use these samples to define indexing fields. Also note that while documents may consist of multiple pages, for setup purposes the operator only needs to scan in those pages that need to be indexed.

To define an indexing field:

1. From the **RescanPlus Setup** window, select **Index**.
2. In the **Level** list box in the **Indexing Fields** window, select the level at which to configure index data entry, then select a corresponding indexing field display option for that level:

    - **Display fields while scanning**: When acquiring page images, RescanPlus prompts operators for index information using the indexing fields and zones defined during setup. Select this option for each level to define indexing fields for the operator to index. When selecting this option, note that when selecting this option and are scanning pages as level 1 or higher, a page-side option must be selected from the **Read index information from** list. The

operator can also change index information after the pages have been scanned.

- **Display fields after scanning**: RescanPlus waits until the first set of pages has been scanned or imported before showing indexing fields and zones. The operator may then select the nodes and enter index information. Select this option for each level to define indexing fields for the operator to index.
- **Do not index**: RescanPlus does not display indexing fields and zones for nodes at the specified level. This option is useful if indexing certain parts of a batch for testing purposes only.

3. Repeat the previous step to define indexing field options for additional levels.
4. If enabled, select one of the following options from the **Read index information from** list:

   - **Current side**: RescanPlus enlarges the first page side (first thumbnail image) in a level 1 node and displays its related indexing fields. Use this option if the operator is not using event pages to trigger the generation of a level 1 node.
   - **Next side**: RescanPlus enlarges the second page side (second thumbnail image) in a level 1 node and displays its related indexing fields. Use this option if the operator is scanning single-sided pages and using an event page to trigger the generation of a level 1 node.

     

     Note: When scanning double-sided pages and using an event page, RescanPlus puts focus on the back side of the event page.
   - **Side after next**: RescanPlus enlarges the third page side (third thumbnail image) in a level 1 node and displays its related indexing fields. Use this option if the operator is scanning double-sided pages and using an event page to trigger the generation of a level 1 node.

     

     Note: When scanning single-sided pages and using an event page, the RescanPlus module puts focus on the second page under the level 1 node. RescanPlus counts the side) of an event page regardless of whether the page is discarded.

   (This list is only enabled when the operator selects to display fields while scanning level 1 or higher nodes.) Use this list to specify which page side RescanPlus should display first in each level 1 node. RescanPlus counts the sides of an event page regardless of whether the page is discarded.
5. Select **Define Indexing Fields**. The RescanPlus **Indexing Setup** window displays. When opening the indexing setup for the first time, RescanPlus prompts the operator to select a sample image. Otherwise, RescanPlus displays the sample image chosen previously.
6. From the **Open Document** window to navigate to the directory containing the sample image files.

7. Select the images for which the operator will define indexing fields and select **OK**. The first image selected displays in the window. To browse through other loaded images, select **Previous** or **Next**. To open a new image at any time, select **Select images**.

8. In the **Level** list box of the **Field Map** window, select an indexing level. If the operator moves to a different level, the operator is prompted to select a new sample image file. To use the previously loaded sample image, select **Cancel**.

9. Draw an index zone on the sample image by dragging your mouse over the text that will be highlighted for the operator. Note that the operator can zoom in or out of an area by clicking while dragging. The operator can return to the normal image size by selecting **Fit to Window**.

10. In the **Field Title** field of the **Field properties** window, type a label for the indexing field. This label displays during production.

11. In the **Character Restriction** field, type a character mask to restrict the types and number of characters an operator can enter. The topic "Understanding Characters for Restricting Data Entry" on page 32 provides more information on using characters for indexing.

12. To display an editable initial value in the restricted field during production, type the value used from the **Field title** field of **Field properties** window. If the administrator has restricted the field, the initial value should be valid for that restriction mask.

13. To define more indexing fields within this level, repeat steps 10 through 13. To define more indexing fields within another level, repeat steps 9 through 13.

    Note: By default, up to five zones per level (up to a total of twenty per batch) can be drawn. Additional index zones and associated indexing fields (up to 15 per level, 20 total per batch) can be defined by creating additional IA Values in the *MDF*. For more information, see `Level_n_KeyEntry_k IA Value` in "IA Values" on page 75 defined in the RescanPlusMDF. Indexing field entries are restricted to 64 characters.

14. To prevent incomplete index data from being saved, enable the **Do not allow incomplete index data to be saved** checkbox.

15. Select **OK** to save the changes and return to the **RescanPlus Setup** window.

Note: RescanPlus commits pages to the Intelligent Capture Server as soon as it captures them. The Intelligent Capture Server immediately releases pages to the next module for processing if it triggers at level 0. If using the **Display fields after scanning** option, it is possible that the RescanPlus operator will index a page or higher level node that is simultaneously being processed by another module. If this situation were to occur, the tree in RescanPlus and the other module would not match. Therefore, it is recommended to use this option only if the administrator is absolutely sure that doing so will not cause data consistency problems within the batches based on the process.

2.7.2 Understanding Characters for Restricting Data Entry

This table describes the characters that can be entered into an indexing field. These characters are entered during the **RescanPlus** setup and control operator input

Table 2-2: Characters for Restricting Data Entry

Character	Usage	Description
A	Required placeholder	Restricts operator input to alphanumeric characters (a-z, A-Z, 0-9)
a	Optional placeholder	Restricts operator input to alphanumeric characters (a-z, A-Z, 0-9)
?	Required placeholder	Restricts operator input to alphabetic characters (a-z, A-Z)
#	Required placeholder	Restricts operator input to numeric characters (0-9)
9	Optional placeholder	Restricts operator input to numeric characters (0-9) and spaces
&	Required placeholder	Restricts operator input to ANSI characters 32-126 and 128-255
C	Optional placeholder	Restricts operator input to ANSI characters 32-126 and 128-255
>	Converter	Converts all characters that follow to uppercase
<	Converter	Converts all characters that follow to lowercase
.	Literal	Decimal placeholder, displayed as a literal
,	Literal	Thousands separator, displayed as a literal
:	Literal	Time separator, displayed as a literal

Character	Usage	Description
\	Escape character	Use this character in front of placeholders (such as #, &, A, and ?) to display them as literals. **Note:** An escape character must be used in front of each placeholder that will be displayed as a literal.
`String`	Literal	Any text string the operator types. Any other character not preceded by a backslash (\) is considered literal. The operator will not be able to replace the character(s) in production mode. This string becomes a static part of the restriction mask that cannot be edited, moved or deleted by the user.

Table 2-3: Examples of Characters Used for Restricting Data Entry

Characters	Description
`(###) ###-####`	Standard North American phone number
`(###) ###-#### Ext(####)`	Standard North American phone number with extension
`###-##-####`	Social Security Number
`##-???-##`	Medium date (for example, 20-May-07)
`##-##-##`	Short date (for example, 05-20-07)
`##:## ??`	Medium time (for example, 05:36 AM)
`##:##`	Short time (for example, 05:36)

2.8 Setting Up Importing of Image and Document Files

The **Import** pane in RescanPlus setup enables the operator to import image and document files during processing.

2.8.1 Setting Up Importing

RescanPlus can be configured to allow the importing of image and document files to a new or existing batch during processing.

To set up importing:

1. From the **RescanPlus Setup** window, select **Import**.
2. Select the **Allow import of image and document files during processing** checkbox.
3. Use the list box to specify one or more file formats that will be allowed to import to a new or existing batch during processing. For a list of support file formats, see "Understanding Supported File Formats" on page 35
4. In the **Image Processing** field, select the **Process image files** checkbox to convert the imported image files into an image format specified on the **Image Output** window page. With this option selected, RescanPlus also can:
   - Convert all multi-page files into single page.
   - Create a node in the tree for each image and assign the file with the converted image to the `OutputImage` IA value. A page node is created for each imported file. If the imported file is a multi-page image file, a page node is created for each image.
   - Render non-image PDF files. Select the **Render non-image PDF** checkbox to convert non-graphical *PDF* files to images. This feature enables image resolution detection for image-only PDF files. Use the **Try to detect resolution** option to activate an algorithm to calculate the resolution for rendering pages. If **RescanPlus** cannot calculate the resolution, it will use the value (from 10-600 *dpi*) specified in the **Default page resolution (dpi)** control. If the PDF file consists of only one image per page and there are no fonts in the document, then the resolution of the existing image is used. Specify the level of smoothing in the **Smoothing** control, either **None**, **Normal**, or **High**.

     Note: To render PDF files with the same resolution, do not select the **Try to detect resolution** option, and only use the **Default page resolution (dpi)** control.

     To minimize distortion when rendering PDF files, use the **Try to detect resolution** option.

Some PDF files, such as PDF files created outside of PixTools, cannot be read correctly. Use the **Render non-image PDF** option in the **Import** configuration window to read and render PDF files correctly.

Using a large value for **Default page resolution (dpi)** may significantly affect import processing performance and may require additional memory, especially if images are sent to the server without compression.

5. Click **OK** to save the changes and return to the **RescanPlus Setup** window.

2.8.1.1 Understanding Supported File Formats

The following image formats can be imported into a new or existing batch during processing:

- *BMP*
- *CAL*
- *DCX*
- *GIF*
- *JBG*
- *JP2*
- *JPEG*
- *MDA*
- *PCX*
- *PDA*
- *PDF*

Note: ScanPlus/RescanPlus is able to read PDF files but cannot write to PDF files. If **Image Processing** is not selected, then ScanPlus/RescanPlus imports PDF files as is (not as graphical file formats). If **Image Processing** is selected, ScanPlus/RescanPlus attempts to import PDF files as graphical file formats; otherwise ScanPlus/RescanPlus saves the imported images according to the settings defined in the **Image Output** window.

- *PNG*
- *TIF*

Note: Some simple BMP files (including 4-bit Gray *RLE* Compression and 8-bit Palette RLE Compression) created by Windows Paintbrush may appear corrupted when imported using ScanPlus. Using an image width that is a multiple of 16 will likely fix the problem.

The following document file formats can be imported into a new or existing batch during processing:

- *DOC*
- *HTM*
- *HTML*

Note: To disable or enable running JavaScript embedded in HTML or HTM files, configure the *`ActionSecurityPolicyOverride`* parameter in the `settings.ini` file. For more information, see the *Client Configuration Settings* documentation, *General ScanPlus and RescanPlus Parameters* section for additional information.

- PDF

Note: Some PDF files, such as PDF files created outside of PixTools, cannot be read correctly. Use the **Render non-image PDF** option in the **Import** configuration window to read and render PDF files correctly.

- *RTF*
- *TXT* (*ANSI*, *UTF*)
- *XLS*
- *XML*

Note: Graphical files are recognized at the file format level. This means that ScanPlus/RescanPlus does not rely on file extensions and uses PixTools to read a file extension. For document file formats, ScanPlus/RescanPlus checks the file extension and tries to represent in accordance with the extension format. Adobe® Acrobat® Reader® is required to view PDFs in the image view pane. Microsoft Excel is required to view XLS files in the image view pane.

2.9 Defining Image Output

The **Image Output** pane enables the operator to specify the image compression formats and enable scan-time image rotation.

2.9.1 Specifying Image File Format

For each image mode (binary, 4-bit gray, 8-bit color, etc.), RescanPlus saves the images it acquires (from scanning or importing) to stage files on the Intelligent Capture Server using the compression format specified in the **Image Output** pane. For each batch, one compression format can be specified per color depth mode. For example, if selecting **Packbits** compression for 24-bit Color, all 24-bit color images within the batch will be saved to the Intelligent Capture Server using that compression format. Any images scanned or imported with other color depths will be saved to the Intelligent Capture Server using the compression format specified for its color depth.

To specify image compression formats:

1. From the **RescanPlus Setup** window, select **Image Output**.

2. Specify an image file format using the list box:

   - **Window Bitmap** (*.*BMP*)
   - **CALS Files** (*.*CAL*)
   - **Compuserve** (*.*GIF*)
   - **TIFF** (*.*TIF*)

     Note: RescanPlus supports *TIFF* images with two different *JPEG* compression options: Sequential JPEG (TIFF compression 6) and JPEG (TIFF compression 7). It is highly recommended that you use the default compression of JPEG (TIFF 7).

   - **Plexus TIFF** (*.TIF)
   - **JBIG Files** (*.*JBG*)
   - **JPEG 2000**(*.*JP2*)
   - **JPEG** (*.JPEG)
   - **MO:DCA Files** (*.*MDA*)
   - **Paintbrush** (*.*PCX*)
   - **Fax** (*.*DCX*)
   - **Calera** (*.*PDA*)
   - **Portable Network Graphics** (*.*PNG*)

3. Under **Save Settings**, select a color depth in the **Mode** column, then click **Edit**. A list displays for the selected mode in the **Compression** column. Use this list to select the compression setting for the selected mode. The following table provides some compression format characteristics to consider when selecting compression methods.

Table 2-4: Compression Format and Characteristics

Compression Method	Depths	Lossless	Speed	Ratio
CCITT Group 4	binary	yes	fast	very good
CCITT Group 3	binary	yes	fast	good
Modified Group 3	binary	yes	fast	good
None	all	yes	slow	worst
JBIG	binary	yes	slow	best
Enhanced JBIG	binary	yes	slow	best
ZIP	binary	yes	slow	good
ZIP	gray/color	yes	slow	medium

Compression Method	Depths	Lossless	Speed	Ratio
Packbits	all	yes	fast	poor
Run Length Encoding	all	yes	fast	poor
LZW	all	yes	slow	medium
Sequential JPEG	gray/color	no	medium	good
Progressive JPEG	gray/color	no	medium	good
Wang JPEG	gray/color	no	medium	good
JPEG 2000	color	no	slow	good
PNG	binary	yes	slow	good
PNG	gray/color	yes	slow	medium

To scan large images, specify the appropriate output file compression for each scanned or imported file color format. This is important for scanning or importing images with high color quality.

4. Repeat step 2 for each **Mode** to specify compression formats for each color depth.

5. Click **OK** to close the setup window.

2.9.2 Selecting Page Rotation Options

Page rotation controls enables the operator to automatically rotate page images while scanning.

To specify page rotation options:

1. From the **RescanPlus Setup** window, select **Image Output**.

2. Use the **Page Rotation Front side** and **Back side** list box controls to automatically rotate page images while scanning. If the scanner can accommodate the paper's length across its scanning width, the operator can improve scanning speed by scanning pages sideways and then enabling automatic rotation to correct orientation.

3. To enable scan-time rotation, select the rotation setting for front and back sides. In most cases, the operator should select **90 Degrees** for one side of the page and **270 Degrees** for the other side; the correct setting depends on the scanner and on how the operators feed pages into the scanner.

4. Click **OK** to save the changes and return to **RescanPlus Setup** window.

2.9.3 Specifying the Thumbnail Size

The thumbnail size can be increased to provide operators with a more detailed view of the batch in progress. The **Thumbnail size** list in the **Image Output** pane controls the size of the thumbnails in the tree for the ScanPlus, RescanPlus, and Completion modules.

Note: The default setting is **Standard**, which is the smallest thumbnail size.

To use a thumbnail size other than **Standard**, the process on which the batch is based must be compiled with the `CustomThumbnail` IA Value in its *MDF*. The MDF installed with Intelligent Capture 6.0 and later releases includes this IA value. If the operator attempts to use a thumbnail size other than **Standard** and is configuring a batch based on a process that was compiled prior to Intelligent Capture 6.0, the operator will receive a warning when RescanPlus attempts to save the setup configuration. The operator must either use the new MDF when compiling, or add the `CustomThumbnail` IA Value to the existing MDF.

To specify the thumbnail size:

1. From the **RescanPlus Setup** window, select **Image Output**.
2. Select from the following options:
   - **Standard**: The thumbnail size is the standard and smallest size with no changes.
   - **Medium**: The thumbnail size is slightly larger than the **Standard** thumbnail size.
   - **Large**: The thumbnail size is slightly larger than the **Medium** thumbnail size
   - **Extra Large**: The thumbnail size is slightly larger than the **Large** thumbnail size
   - **Maximum Size**: The thumbnail size is the largest size.
3. Click **OK** to save the changes and return to **RescanPlus Setup** window.

2.10 Defining Miscellaneous Tasks

The **Miscellaneous Setup** window enables the operator to set up various options that will be applied to RescanPlus in production mode. Depending on the options selected in the **Miscellaneous Settings** pane, these options will be made available, selected, or disabled for the RescanPlus operator.

To define miscellaneous settings:

1. From the **RescanPlus Setup** window, select **Miscellaneous**.
2. Select the checkboxes for the options that will be made available to the RescanPlus operator in production mode:

Property	Description
Check page count when closing batch	Selecting this checkbox allows RescanPlus to verify that the number of pages scanned or imported into the batch matches the number of pages that is expect to be in the batch. When this option is selected, enter a number in the **Number of pages to expect** field. If the number of batch pages does not match this number when the operator closes the batch, the RescanPlus module notifies the operator of the discrepancy in pages.
Hide scanner settings while running	Selecting this checkbox disables the **Modify configuration** option in the **Select the current scanner driver and configuration pane** during production. Use this option to prevent operators from changing scanner settings.
Automatically delete empty batches	Selecting this checkbox deletes empty batches created by a scanner event. An empty batch is a batch with no pages created by a scanner event such as a blank page or a page with a barcode. If you use a scanner event to create batches and do not select the **Discard** page checkbox on the **Event** actions window, the event page becomes the first page in the new batch, which means the batch is not empty and will not be deleted. The batch is automatically deleted if the scan operator deletes all pages from the batch.
Display the page level value in the status bar	Selecting this checkbox allows RescanPlus (running in production mode) to display the data contained in the IA Value specified in the adjacent field. The field can display static text as well as one or more IA Values. If the operator specifies a Page level value, the operator can view a value for a page by selecting the page in the **Tree** pane. Example: If the operator specifies the following: `@(Scan.ImageWidth) X @(Scan.ImageLength)`, the operator will see the size of each image in the status bar for each page. Click the **IA Value** button to display the **Choose Value** window from which the operator can select the value(s) to display in the status bar.

Property	Description
Batch Synchronization period	This is the number of files RescanPlus sends to the server between batch synchronization. The default value is 300; the maximum value is 1000. If the value is 0, RescanPlus synchronizes batches only when batch processing is complete.
Local image cache	Select one of the following: • **Apply global security settings** - To accept the global setting for whether image caching is enabled or disabled. • **Enable image cache** - To specifically enable image caching for this step and ignore the global setting. • **Disable image cache** - To specifically disable image caching for this step and ignore the global setting. The global setting is specified in Intelligent Capture Administrator by **Licensing / Security** > **Security** > **Disable image cache on ScanPlus and RescanPlus**.

2.11 Undocking Windows in RescanPlus

RescanPlus includes a set of windows and tabbed panels that can be configured so that operators (when running the modules in production) have the flexibility to undock these windows and then position them in a different location or on different monitors.

Operators can undock the following windows and tabbed panels in RescanPlus:

- **File View** panel
- **View Settings** tab
- **Scan Settings** tab
- **Batch Summary** tab
- **Indexing** tab

To enable undocking, administrators must enable the undocking functionality by configuring the `settings.ini` file. These configuration settings also include settings that will reset all panels to their default locations. Review the *Client Configuration Settings* documentation, *General ScanPlus and RescanPlus Parameters* section for additional information.

Chapter 3

Production

After the module has been set up, tested, and placed in a production environment, operators and administrators will run the module in production.

For information related to common production tasks such as logging in to the module to run it for production and using common access keys and shortcuts, see *OpenText Intelligent Capture - Common Production Tasks Guide (ECPCORE-UMD)*.

3.1 Changing the Production Window Layout

To change the production window layout of the current batch, operators can:

- Right-click any of the panels, except **File View**, to hide or display panels or reset the default layout. (when you right-click in the **File View** panel, the **File View** menu displays.)
- Press **CTRL+TAB** to move from panel to panel in the production window.

3.1.1 Undocking Windows in the Production Window Layout

If your administrator has enabled the undocking capability in RescanPlus, you can undock the following windows and tabbed panels in RescanPlus:

- **File View** panel
- Group of tabbed panels which include:
  - **View Settings** tab
  - **Scan Settings** tab
  - **Batch Summary** tab
  - **Indexing** tab

To undock the File View window:

- Select the title bar by mouse, drag, and then drop the panel where you want to position it. To return the panel to its original position, double click the title bar.

To undock any tabbed pane:

- Choose one of the following undocking options:
  - Drag the individual tab and drop it in its required position.
  - Drag the title bar of the group of tabbed panels. With this method, all tabbed panels become floating and you can move the tabbed panels as a collection. Each separate tab can then be moved by dragging the tab.

Note: Occasionally, the individual tab retains the name that was displayed in the caption of the group of tabbed panels instead of the name of the individual tab.

3.2 Understanding Running Rescan in Production Mode

RescanPlus automatically obtains the settings defined for ScanPlus. Setting up RescanPlus for production, therefore, consists of reviewing and modifying the settings in the RescanPlus setup windows. For example, you may want to clear some of the scanner event actions in the **Event Actions** window to prevent pages that are re-scanned from generating higher level nodes. The scanner configuration in the **Scanner** window must also be changed if a different scanner is used at the RescanPlus station.

3.2.1 Running in the Wait for Task Modes

When starting RescanPlus in production mode, the operator has the option to run batches with ready tasks using the **Only show batches with ready tasks** checkbox.

To receive tasks:

1. Start RescanPlus in production mode. The production window displays. The **Select batches from the list** window also displays all batches containing RescanPlus in their processes

2. Select a mode in which to receive tasks:

   - **Run All**: Select **Run All** to receive queued tasks from any open batch.
   - **Run Selected**: Select **Run Selected** to receive queued tasks from a specific batch. To only view batches that have tasks queued for the module, select the **Show only Batches with tasks** checkbox.

   Select the batch and select **OK**. After selecting a processing mode, the Intelligent Capture Server sends tasks to the RescanPlus workstation as they become available. When RescanPlus receives one or more tasks, it displays the tasks within the tree for the batch. For more information on how to interpret and rescan RescanPlus tasks, see "Rescanning Pages in a Batch" on page 46.

3. To stop processing tasks, do one of the following:

   - If RescanPlus is in the waiting for task mode: Select **Cancel** to stop task waiting and return to main form.
   - If RescanPlus is processing the task (batch is already opened): Close batch to return to main form.

3.2.2 Understanding Rescanning Pages in a Batch

RescanPlus displays tasks within the context of the tree for their associated batch. RescanPlus also displays the batch's name in its title bar, so even if you run the module in the **Run All** mode, you will know which batch RescanPlus is currently processing.

When RescanPlus receives one or more tasks, it displays the tree for the associated batch and places focus on the thumbnail image corresponding to the first page marked for rescan. RescanPlus also displays the full page image in the **Image** pane. When a thumbnail image has focus, a dotted triangle displays immediately after the thumbnail. If the thumbnail is highlighted, a blinking box displays around it. RescanPlus also highlights the thumbnail image when `NeedsRescan` = 1, 3, 4, or 6 for a task.

RescanPlus behaves much like the ScanPlus module when pages are scanned or imported. Scanner event actions are processed using the same setup that ScanPlus uses. This means that higher level nodes can be inserted, and pages can be discarded. RescanPlus does not support automatic batch creation during scan or import.

The manner in which scanned or imported pages are added to the tree depends on several factors, such as the value of `Rescan.NeedsRescan` of the highlighted page, how many consecutive pages are highlighted, and what level RescanPlus is triggered at. A set of pages can be one or more consecutive pages that were marked for rescan.

Note: A new batch cannot be created in RescanPlus, no matter what actions or settings are indicated. RescanPlus will close the progress window automatically if the scanner source is flatbed.

Considerations when Writing a Process with the RescanPlus Step

Prior to the RescanPlus step, you must set the RescanPlus `InputImage` to ScanPlus `OutputImage`. In the RescanPlus step, the rescanned image is saved to RescanPlus `InputImage` and therefore also to ScanPlus `OutputImage`. Then after the RescanPlus step, you can use either ScanPlus `OutputImage` or RescanPlus `InputImage` for the rescanned image. Furthermore, if you set the ScanPlus `OutputImage` value to RescanPlus `OutputImage`, then make sure to also set the ScanPlus `OutputFileType` to the RescanPlus `OutputFileType`. Otherwise, some problems may result, such as ScanPlus being unable to load the updated file because it does not know about the file type that was changed by RescanPlus.

3.2.3 Rescanning Pages in a Batch

RescanPlus enables operators to rescan pages in a batch, including pages identified as rejected by the operator or by a quality assurance module, and requires that the pages be rescanned. A new batch cannot be created in RescanPlus, no matter what actions or settings are indicated.

To rescan pages in a batch:

1. Start RescanPlus in production mode and run it in one of the Wait for Task modes. When RescanPlus receives one or more tasks from the batch, it displays the task(s) within the tree for the batch.

2. Locate the thumbnail image's hardcopy counterpart within the stack of documents from the ScanPlus station.

3. Place the page in the RescanPlus station's scanner and select **Scan Pages** (shortcut: **CTRL+S**). RescanPlus inserts the new page into the batch. Note that you may also select **Preview Pages** (shortcut: **F7**) if you want to preview the page before adding the page to the batch. Or, you can import a page image from a local or network file by selecting **Import Files** (shortcut: **F8**).

   After inserting the new page in the batch, RescanPlus sends the task back to the Intelligent Capture Server. The Intelligent Capture Server routes the task to the next module defined in the process.

4. RescanPlus advances to the next task (shortcut: **F5**. RescanPlus places focus on the next task and highlights it if `NeedsRescan` = 1 or 3.

5. Repeat steps 3 and 4 until RescanPlus displays the `No pages to Rescan in this batch` message. When you are finished processing RescanPlus tasks, select **Close Batch** (shortcut: **F4**).

6. In the **Close Batch** window, select one of the following **Lock options**:

   - **Remove all locks to allow other modules to accept tasks from this batch**: Removes all the locks from a node in a batch.
   - **Leave locks**: Retains the locked nodes in a batch. When RecanPlus processes a batch, it locks batch nodes in accordance to the trigger level. If this option is selected and the user closes the batch without removing the locks, the server locks the nodes and does not route the batch to the next module in the process for further processing.

   Click **Go to Next Batch** (available if the batch has locks and RescanPlus is in **Run All Batches** mode) or **Close Batch** to finish processing the batch.

   If the batch does not have locks and RescanPlus is in **Run All Batches** mode, click **Yes** to close the batch.

Note: RescanPlus will close the progress window automatically if the scanner source is flatbed.

3.2.4 Understanding Triggering RescanPlus at Level 0

If RescanPlus is triggered at level 0, you can move to the next set by using the **Go to Next Task** button. Moving to the next task clears the current set (`Rescan.RescanDeclined` is set to 1, `Rescan.Thumbmarks` is set to 0 for each highlighted task). This can clear more than one task if multiple consecutive tasks were highlighted by RescanPlus.

Note: When RescanPlus is triggered at level 0, any page that is re-scanned will have its `NeedsRescan` Input IA Value set to 0 by the RescanPlus module. This will ensure that, when the task is restarted after being canceled or otherwise terminated, the already re-scanned pages will not be re-scanned again.

When triggering at level 0, if more than one thumbnail image is highlighted consecutively, RescanPlus deletes all the consecutive thumbnail images when you rescan one or more pages if the value for `NeedsRescan` = 1 (rescan current page). Also, RescanPlus inserts rescanned pages after the first thumbnail image with focus if `NeedsRescan` = 2 (insert after current page). RescanPlus enables you to process the tasks individually but deletes the thumbnail image with focus when you rescan pages if `NeedsRescan` = 3 (rescan current page and insert additional pages).

Until RescanPlus receives a task, it displays `Waiting for task` in its status bar. If RescanPlus displays this message, either the Intelligent Capture Server has not received tasks to route to RescanPlus (in which case the previous module is either not finished processing its tasks or it did not reject any pages), or RescanPlus has already processed all the available tasks from that batch.

If ReascanPlus does not receive tasks from a batch in a reasonable amount of time, you should check the status of tasks in the Intelligent Capture Administrator module. If no tasks are queued for these modules or RescanPlus, select **Stop** to end the RescanPlus session.

3.2.5 Understanding Triggering RescanPlus at Level 7

If RescanPlus is triggered at level 7, there may be multiple sets per task and you can move to the next set by using the **Next Rescan Pages** button. Declining the current set moves to the next set (`Rescan.RescanDeclined` is set to 1, `Rescan.Thumbmarks` is set to 0 for each highlighted page). Rescanning the current set will rescan pages that are marked to be re-scanned (`Rescan.NeedsRescan` is set to 8 and `Rescanned` is set to 1). If there are no more pages marked for rescan in the current task, the button will change to **Next Rescan Pages**.

When RescanPlus is triggered at level 7, any page that is re-scanned will have its `NeedsRescan` Input IA Value set to 8 by the RescanPlus module. If the task is closed or otherwise terminated before being completed, it will need to be queued again by the `IPP Rescan Error` routine if new nodes are created. All trigger values, including the `InputImage` value, need to be set on the new nodes so that the task will be queued again.

RescanPlus always sets the `NeedsRescan` value to 8 for re-scanned nodes, but the *IPP* is responsible for setting any remaining triggers. For example, if you use a `Ready`

trigger and the batch is closed or terminated before completion, the `Ready` trigger must be set in the IPP's error routine so that the server properly retriggers the task for RescanPlus.

3.2.6 Running in Open Batch Mode

When you start RescanPlus in production mode, you have the option of opening any batch that uses RescanPlus in its process. The ability to open a batch without receiving tasks gives you the opportunity to view and modify a batch at any time. If an opened batch has tasks, they are loaded in RescanPlus. The batch processing behavior is similar to the task processing mode.

Routing occurs in the process file when you set the RescanPlus `InputImage` to another module's `OutputImage`. If no image files have been routed RescanPlus when you open a batch, RescanPlus displays this message in its **Image** window for the selected node: `File not found.` The Intelligent Capture Server also sends this message to RescanPlus: `No pages to rescan in this batch.`

There are certain considerations when using a RescanPlus step in a process. For more information, see "Considerations when Writing a Process with the RescanPlus Step" on page 45.

To open a batch in RescanPlus:

1. Start RescanPlus in production mode.
2. Select **Open Batch**. The **Open Intelligent Capture Batch** window displays.
3. In the **Open Intelligent Capture Batch** window, select the batch and select **OK**. Note that this window only lists batches that use RescanPlus in their process.
4. View or modify the batch. Select **Finish and Close Batch** to close the batch.

3.3 Defining RescanPlus Settings During Production

RescanPlus enables operators to modify some general batch settings, including scanner or view settings, during production. These configuration changes can be made any time after a batch has been created or opened.

Note: If changes are made, only the subsequently scanned pages from that batch display the new settings. Previously scanned pages and pages from other batches are not affected.

3.3.1 Defining General Settings

The general settings for RescanPlus in production mode provide options for changing or modifying scanner settings, batch settings (such as separation or tree levels) and other miscellaneous user settings.

3.3.1.1 Selecting or Modifying Scanner Settings

Before the RescanPlus process starts, a scan configuration must be selected from a list of defined configurations. When the operator opens or creates a batch with a default configuration, RescanPlus automatically selects this configuration. If a default configuration is not specified, the operator should manually select a scanner and a scan configuration.

Note: The last used scanner driver and the last used scanner configuration is available to all operators using the same workstation.

3.3.1.2 Selecting the Scanner in Production Mode

If the scanner that was selected during setup is unavailable, or if the RescanPlus operator needs to change the existing scanner selected for production, the RescanPlus operator can specify a new scanner.

Note: The last used scanner driver and the last used scanner configuration is available to all operators using the same workstation.

To select the scanner driver:

1. From the RescanPlus production window, select **Scanner Settings**.
2. Click **Select/Modify scanner settings** in the **Scanner Driver** area. (The scanner driver for the scanner connected to the RescanPlus workstation is automatically loaded.)
3. In the **Scanner Selection** window, select the scanner from the available scanner drivers list, then click **Select** to close the window. The selected scanner displays in the **Current Scanner** field.

Note: When RescanPlus cannot find the scanner when opening the **Scanner Selection** window, the following message displays: `Can't locate SCSI device; check cable and power`.

If the power to the scanner was switched off, the operator may need to reboot the computer running RescanPlus before RescanPlus detects the scanner. If **None (No Scanner)** is selected, the **Scan Pages** and **Preview Pages** buttons in RescanPlus are disabled during production, and the operator cannot perform these functions. After selecting a scanner, the operator must configure the RescanPlus step of each process intended for use with that scanner to establish default settings. If planning to reprocess or continue processing an existing batch, the operator must reconfigure its RescanPlus step to use the proper settings for the new scanner.

3.3.1.3 Creating a Scanner Configuration

In production mode, RescanPlus can create and assign a scanner configuration profile that will be associated with a particular scanner. Scanner configurations cannot be shared between ScanPlus and RescanPlus. The configuration defines the scanner settings that will be used by the selected scanner for processing batches. Multiple configurations can be created for one scanner. If RescanPlus operators need to change the existing scanner configuration selected for production, they can specify a new scanner configuration, or edit and delete an existing configuration.

Note: Configuration names are case-sensitive and names cannot be shared between configurations.

To setup a new scanner configuration:

1. From the **RescanPlus Setup** window, select **Scan**.
2. Select **Change selected scanner** to specify the scanner to which the configuration will be assigned.
3. Select **Create** to display the **Create Scanner Configuration** window.
4. Type a **Configuration Name** and **Description** in the appropriate fields for the scanner driver configuration, then click **OK**.
5. The newly created configuration name appears in the **Available Configurations** list box. Select **Edit** to change the configuration name or description, or click **Delete** to remove the configuration name from the list box.
6. Select the **Display configurations for the current scanner only** checkbox to show only the configurations associated with the currently selected scanner.
7. Select **OK** to save the changes and close the **Scanner** window.

3.3.1.3.1 Updating Scanner Configuration Profiles

Scanner configurations are module-based. This means that the RescanPlus and ScanPlus modules have independent scanner configurations. All RescanPlus-based steps in processes and batches share RescanPlus-based scanner configurations. Likewise, all ScanPlus-based steps share ScanPlus-based scanner configurations. As a result, all scanner configuration profiles are available to all client machines in the system.

Note: The last used scanner driver and the last used scanner configuration is available to all operators using the same workstation.

Changes to RescanPlus scanner configuration can be done in the following locations:

- **Quick Panel/Scanner Settings**
- **Select/Modify Scanner Settings** window
- **Set Up Step Settings > Scanner** panel

The scope and priority of changes made in **Quick Panel/Scanner Settings** and **Select/Modify Scanner Settings** differ in scope and priority from changes made in the **Set Up Step Settings > Scanner** pane.

Changes made in **Quick Panel/Scanner Settings** or **Select/Modify Scanner Settings** affect only the current ScanPlus session. These changes are lost when RescanPlus is closed or when the current batch is configured to use another scanner profile. These changes do not affect other RescanPlus instances or scanner configuration profiles.

Changes to scanner settings that are made in the **Set Up Step Settings > Scanner** pane are different because they affect all users. These changes are seen by all RescanPlus modules.

For example, if Module 1 is using a scanner configuration that is changed system-wide by Module 2, Module 1 does not see these changes until it restarts or reloads the scanner configuration. If Module 1 is using a scanner configuration profile and changes it through the **Set Up Step Settings > Scanner** pane, these changes take effect immediately for Module 1, overriding any changes made in **Quick Panel/ Scanner Settings** and **Select/Modify Scanner Settings**.

If the operator cancels changes from **Quick Panel/Scanner Settings** or **Select/ Modify Scanner Settings**, all changes are discarded. System-wide stored scanner configuration remains unchanged and settings previously made in **Quick Panel/ Scanner Settings** or **Select/Modify Scanner Settings** remain in effect.

For example, if an operator creates a batch from process P1 and then changes the scanner mode from **Automatic** to **Duplex** using **Quick Panel/Scanner Settings**, the scanner uses **Duplex** mode for that batch. When the operator creates another batch from process P1, the scanner continues using **Duplex** mode. Now if the operator creates a batch from a process that uses a different scanner configuration profile, and then creates another batch from process P1, the scanner reverts to using **Automatic** mode because the changes previously made in **Quick Panel/Scanner Settings** were lost when the batch was closed.

3.3.1.4 Specifying Scanner Settings

Once operators have selected a scanner to use with RescanPlus and created or selected a scanner configuration, they can then set up the scanner settings by selecting **Modify Scanner Settings** on the **Scanner Drivers and Configurations** window.

To specify scanner settings:

1. From the **RescanPlus Setup** window, select **Scan**.
2. Highlight a scanner configuration from the list of available configurations, then select **Modify Scanner Settings** to display the **Scanner settings** pane.
3. In the **Scanner Driver Options** area, select the **Page Size** from the list box.
4. (Optional) Select the **Enable imprinter** checkbox to enable the scanner's imprinter feature.

Note: If the scanner does not have an imprinter function, the **Enable imprinter** checkbox will be unavailable.

5. Select **Page Bounds** to set up the boundaries of the pages to be scanned.
6. Select **Preview** to set up the output pages from the scanner. Select from one of the following options:
   - **Scan Pages**: Scans all the pages in the automatic document feeder (or until **Stop Scanning** is selected).
   - **Preview Page**: Scans the first side of the first page in the scanner feeder. Or, if no pages are in the feeder, it scans the page in the flatbed.

     Note: The preview mode in setup mode is intended for testing purposes only. Once the operator has optimized the settings in preview mode, the operator must also adjust the standard configuration accordingly to save changes.
7. Select **Advanced Settings** to adjust additional settings for the scanner. The scanner driver's documentation provides more information about the windows and settings that are accessed via these links.
8. In the **Scanning Settings** area, select the scan mode:
   - **Automatic**: Scans from the feeder if pages are present; otherwise, scans from the flatbed.
   - **Simplex**: Scans one side of a page.
   - **Duplex**: Scans both sides of a page, if RescanPlus uses a duplex scanner.
   - **Back side only**: Scans the back side of each page in the feeder.
   - **Flatbed**: Scans from the flatbed only, regardless of whether pages are present in the feeder.
9. If using duplex or **MultiStream** scanning, use the **Page Side/Stream Settings** area and corresponding setup options to configure settings for different page sides and image streams.
10. Select **OK** to save the scanner settings and close the **Scanner Settings** window.
11. When returning to the **Scanner Drivers and Configurations** window, select the **Display configurations for current scanner only** checkbox to display the configurations that apply only to the scanner that RescanPlus is currently connected to.
12. Select **OK** to save the changes and close the **Scanner** window.

3.3.1.5 Changing Batch Step Settings

Operators can change batch level settings, such as separation or tree levels, while running RescanPlus in production mode.

Note: If changes are made, only the subsequently scanned pages from that batch display the new settings. Previously scanned pages and pages from other batches are not affected

To change batch settings in production mode:

1. From the RescanPlus window in production mode, select a batch by selecting **Open saved batch**.
2. In the **Start by selecting a batch** window, select a batch from the list or enter a batch name manually, then select **Open**.
3. In the RescanPlus window, select **Settings**.
4. From the **Related Tasks** list in the **General settings** area, select **Setup step settings** to display the **RescanPlus Setup** window for the batch.
5. Set up RescanPlus to change its configuration.

3.3.1.6 Applying Miscellaneous Settings in Production Mode

The **Miscellaneous** pane in production mode enables the RescanPlus operator to enable various options for the batch scanning process.

To use miscellaneous settings in production mode:

1. From the RescanPlus window in production mode, select **Settings**.
2. In the **Settings** pane, select **Miscellaneous settings**.
3. In the **Miscellaneous Settings** window, select the checkboxes for the options needed by the operator:
   - **Enable refreshing rate during scanning/importing**: Selecting this checkbox allows RescanPlus to refresh the file view while scanning pages or importing images. When this option is selected, specify a number and the pages or seconds in the **Refresh file view every N pages/seconds** field.
   - **Automatically print the scan report when the application exits**: Selecting this checkbox allows RescanPlus to automatically generate a printed batch status report when the operator exits the application. When this option is selected, the **Include information about all batches in the report** checkbox is selected by default. This allows the printed batch status report to include information about all batches; otherwise, the report will only include information on batches that were scanned successfully.

3.3.2 Defining View Settings

The view settings for RescanPlus in production mode provide options for changing or modifying file view and tree view settings.

3.3.2.1 Changing File View Default Settings

This section describes the default file view settings which are applied by default to any new image that is imported or scanned or to the images in a reopened batch.

In production mode, RescanPlus enables the operator to customize the default file view settings, such as orientation or brightness/contrast, orientation, smoothing, and zooming. These settings are stored for each user on the server and applied at the beginning of each user session to all images in the batch. A user can change the default settings at any time during the scanning session, but the changes will be applied for the newly scanned or imported images or after reopening the batch.

Once the default file view settings have been applied to the scanned or imported image, you can see them as the current file view settings for each currently displayed image. The current settings are shown in the **View Settings** quick panel on the left and in the **File View** panel. You can modify the current file view settings, and the changes will be applied immediately to the currently displayed image only. Also, RescanPlus supports the functionality to apply the current image view settings to all scanned or imported images in a batch.

3.3.2.2 Defining Scaling Settings

Scaling settings are used to fit the image within the **Image** pane.

To define scaling settings:

1. From the RescanPlus window in production mode, select **Settings**.
2. In the **Settings** pane, select **Change file view default settings**.
3. In the **Scaling** area of the **File View Settings** window, select one of the following options for fitting the image within the **Image** pane:
   - **Fit To Window**: Fits the entire image within the **Image** pane.
   - **Fit To Width**: Displays the image so that its width is that of the **Image** pane.
   - **Fit To Height**: Displays the image so that its height is that of the **Image** pane.
   - **Zoom**: Magnifies the image according to the value specified by the slider control or up/down arrows.

Note: If the node has several images from different streams, all the images will be rotated. The action is only available for batches with trigger level = batch (7).

3.3.2.3 Defining Orientation Settings

Orientation settings are used to specify the image orientation within the **Image** pane.

To define orientation settings:

1. From the RescanPlus window in production mode, select **Settings**.
2. In the **Settings** pane, select **Change file view default settings**.
3. In the **Orientation** area of the **File View Settings** window, select one of the following options for orientating the image within the **Image** pane:
   - **Portrait**: Displays the image with the leading narrow edge at the top.
   - **Landscape**: Displays the image with the leading wide edge at the top.
   - **180 Degrees**: Displays the image with the trailing narrow edge at the top.
   - **270 Degrees**: Displays the image with the trailing wide edge at the top.

3.3.2.4 Defining Miscellaneous File View Settings

Miscellaneous file view settings are used to change how RescanPlus displays images during production.

To change how images are displayed:

1. From the RescanPlus window in production mode, select **Settings**.
2. In the **Settings** pane, select **Change file view default settings**.
3. In the **Miscellaneous** area of the **File View Settings** window, specify the options for viewing the image within the **Image**:
   - **Brightness/Contrast**: Adjusts the brightness and contrast of an image using the corresponding slider controls.
   - **Smoothing**: Displays images smaller than a 1:1 image size by representing the average density of missing pixels with a shade of gray.
   - **Invert**: Displays a negative of the image
   - **Reset to default**: Restores all default image view settings to default values.

3.3.2.5 Changing Tree View Settings

In production mode, RescanPlus enables the operator to customize the colors and fonts of the **Tree view** pane. The **Sample** panel displays how the tree view window will actually appear with the selected settings.

3.3.2.6 Defining Tree View General Settings

The **Tree view** general settings enable the operator to define the general look and feel of the tree view.

To define tree view general settings:

1. From the RescanPlus window in production mode, select **Settings**.
2. In the **Settings** pane, select **Change tree view settings**.
3. In the **General** area of the **Tree View Settings** window, specify the settings for the following options:
   - **Pair fronts with backs**: Pairs the back sides of a set of pages with their front sides.
   - **Tree view background color**: Specifies the background color of the **Tree view** window using the drop-down arrow.
   - **Tree view font**: Specifies the font size and font style used the **Tree view** window.

3.3.2.7 Defining Tree View Level Settings

The **Tree View** level settings enable the operator to define the text color of the tree view levels.

To define tree view level settings:

1. From the RescanPlus window in production mode, select **Settings**.
2. In the **Settings** pane, select **Change tree view settings**.
3. In the **Level** area of the **Tree View Settings** window, specify the settings for the following options:
   - **Normal level text background**: Specifies the text background color of the normal level in the **Tree view** window using the drop-down arrow.
   - **Normal level text color**: Specifies the text color of the normal level in the **Tree view** window using the drop-down arrow.
   - **Selected level text color**: Specifies the text color of the selected level in the **Tree view** window using the drop-down arrow.

3.3.2.8 Defining Thumbnail Settings

The **Tree View** thumbnail settings enable the operator to define the text color of thumbnails in the **Tree view** window.

To define thumbnail settings:

1. From the RescanPlus window in production mode, select **Settings**.
2. In the **Settings** window, select **Change tree view settings**.
3. In the **Thumbnail** area of the **Tree View Settings** window, specify the settings for the following options:
   - **Normal thumbnail text color**: Specifies the text color of the normal thumbnail in the **Tree view** window using the drop-down arrow.
   - **Selected thumbnail text color**: Specifies the text color of the selected thumbnail in the **Tree view** window using the drop-down arrow.

3.4 Using the Batch Summary Report

RescanPlus provides the ability to print statistical information for the current application session, for the currently open batch, or for all batches.

3.4.1 Making Reports

RescanPlus enables the operator the option to generate two types of reports – all batches from the current session, or only the current batch.

To create a report:

1. From the RescanPlus window in production mode, select **Summary**.
2. In the **Summary Report** pane, select one of the following options:
   - **All batches from current session**: Creates a report that includes information on all batches from the current RescanPlus session. Selecting the **Include detailed information in report** checkbox allows the report to include additional information about the batches, including batch name, process name, number of pages.
   - **Only current batch**: Creates a report that includes information about the current batch opened in RescanPlus.
3. Immediately after the type of report is selected, RescanPlus will automatically generate and display the report in the preview window at the bottom of the **Summary Report** pane.
4. Once the report is generated, the RescanPlus operator can preview the pages of the report, print the report or set up how the pages are viewed.

3.4.2 Previewing Reports

The RescanPlus operator can preview the pages of a generated report in the preview window using the **Previous page** and **Next page** buttons to move to from one page to the next, or by using the **number** list box to jump to a specific page in the report.

If the user selects to include information only about the opened batch (**Only current batch** setting), the report displays the following:

Table 3-1: Information Displayed for Only Current Batch Setting

Element	Description
User account	The account name of the user who started the application.
Workstation	The name of the computer where the application is running.
Batch name	The name of the batch.
Process name	The name of the process used to create this batch.
Workflow step	The name of the workflow step.
Task start time	Time when the task was started.
Task processing time	Hours and minutes passed since the task was started.
Number of pages marked for rescan	The number of pages marked for rescan when the task was started.
Number of rescanned pages	The number of the pages previously marked for rescan and that have been rescanned during task processing.
Number of discarded sheets	The number of sheets that have been discarded, as configured in the **Event Actions** configuration settings.
Number of imported files	The number of files that were imported since the batch was opened.
Expected number of pages	The expected number of pages according to the batch configuration. If this number is not configured, RescanPlus displays the - symbol.

If the user selects to include information about all batches (**All batches from current session** setting), the report displays the following:

Table 3-2: Information Displayed for All Batches From Current Session

Element	Description
User account	The account name of the user who started the application.
Workstation	The name of the computer where the application is running.
Total processed batches	The total number of batches that was opened or created. If the batch was opened twice, it will also be counted twice.
Application start time	The time when the application was started.
Total scanned sheets	The total number of sheets scanned since the application was started.
Total discarded sheets	The total number of sheets discarded, as configured in the **Event Actions** configuration settings since the application was started.
Total imported files	The total number of files that have been imported since the application was started.

If the user selects to include detailed information about all batches (**Include detailed information in report** setting), the report additionally displays the following information:

Table 3-3: Information Displayed for Include Detailed Information in Report

Element	Description
Task number	Ordinal task number.
Batch name	The name of the batch.
Process name	The name of the process used to create this batch.
Workflow step	The name of the workflow step.
Start time	Time when the task was opened.
Task processing time	Time period (hours and minutes) when the task was processed.
Number of pages marked for rescan	The number of pages marked for rescan when the task was started.
Number of rescanned pages	The number of the page nodes added since the task was started. This also includes images that had been scanned but then deleted.
Number of scanned sheets	The number of scanned sheets during batch processing.

Element	Description
Number of discarded sheets	The number of sheets that have been discarded, as configured in the **Event Actions** configuration settings.
Number of imported files	The number of files that were imported since the batch was opened.
Expected number of pages	The expected number of pages according to the batch configuration. If this number is not configured, RescanPlus displays the - symbol.

3.4.3 Printing Summary Reports

The RescanPlus operator can print a summary of the statistical information for the current application session, for the currently open batch, or for all batches.

To print a summary report:

1. From the RescanPlus window in production mode, select **Summary**.
2. Select **Print** in the **Actions** panel to print the report.

Note: To enable automatic printing of the report when the user exits the RescanPlus application, select the **Automatically print the scan report when the application exits** checkbox.

3.4.4 Configuring Page Setup for Reports

The RescanPlus operator can configure how the summary report pages are displayed in the preview window.

To configure page setup for a report:

1. From the **RescanPlus** window in production mode, select **Summary**.
2. Select **Page Setup** in the **Actions** panel.
3. In the **Page Setup** pane, specify the paper size and source, orientation and margins for the pages of the summary report.
4. Select **OK** to save the changes and return to the **Summary Report** window. The page setup options defined by the operator are automatically applied to the summary report displayed in the preview window.

3.5 Previewing Pages

RescanPlus enables the operator to preview pages before adding them to a batch or local file. This feature gives the operator the opportunity to optimize scanner settings before and during scanning, as well as to create sample images to use when setting up index zones. You must select a scanner to use this feature.

Note: Preview options only apply to an Intelligent Capture batch.

To preview pages:

1. Create or open the batch or local file.
2. Place the first page to be previewed in the scanner's document feeder or on its flatbed. Select **Preview Pages**.
3. RescanPlus displays the page in its **Image** pane and offers the following set of options:
   - **Accept Page / Continue**: RescanPlus adds the page to the open batch or file and scans the next page.
   - **Rescan Page**: RescanPlus rejects the page and scans in the next. To adjust scanner settings and then rescan a page, make sure the same page is reloaded before selecting this button.
   - **Accept Page / Quit**: RescanPlus adds the page to the open batch or file and then returns to the standard control buttons.
   - **Reject Page / Quit**: RescanPlus does not add the page to the open batch or file and then returns to the standard control buttons.

   Note: When previewing pages in production mode with a **MultiStream** scanner, the module only displays thumbnails of the first image stream. ReccanPlus will close the progress window automatically if the scanner source is flatbed.
4. When the operator is finished previewing pages, select the appropriate quit option. RescanPlus returns to the standard control buttons: **Finish and Close Batch**, **Scan Pages**, **Preview Pages**, and **Import Files**.

3.6 Importing Page Images or Files

The following image and document file formats can be imported into a new or existing batch during processing:

Table 3-4: Available Image and Document File Formats for Importing

Image Formats	Document File Formats
• *BMP* • *CAL* • *DCX* • *GIF* • *JBG* • *JP2* • *JPEG* • *MDA* • *PCX* • *PDA* • *PDF* **Note:** If the **Process image file** checkbox is selected in the **Image Processing** section of the **Import** configuration window, PDF files can be considered as non-graphical or graphical file format. • *PNG* • *TIF* • *TIFF* **Note:** Some simple BMP files (including 4-bit Gray *RLE* Compression and 8-bit Palette RLE Compression) created by Windows Paintbrush may appear corrupted when imported using RescanPlus. Using an image width that is a multiple of 16 will likely fix the problem.	• *DOC* • *HTM* • *HTML* • *PDF* • *RTF* • *TXT* (*ANSI*, *UTF*) • *XLS* • *XML* **Note:** Graphical files are recognized at the file format level. This means that RescanPlus does not rely on file extensions and uses PixTools to read a file extension. For document file formats, RescanPlus checks the file extension and tries to represent the file in accordance with the extension format.

To import images or files from a local or network drive:

1. From the RescanPlus production window, create a batch or open an existing batch.
2. Select **Import files to batch** from the **Actions** panel.

3. Navigate to the batch in the directory window, select the files to import using the **Add** button, then click **Open**. Remove files by selecting them and selecting **Remove** or **Remove All**.RescanPlus shows each imported image in the **Tree View** window.

4. Select **Finish and Close Batch** when finished.

Note: Adobe® Acrobat® Reader® is required to view PDFs in the image view pane. Microsoft Excel is required to view XLS files in the image view pane.

3.7 Defining Indexing Fields

If defining indexing fields during setup, RescanPlus prompts operators to enter index information during production. RescanPlus places the cursor in the first indexing field defined for a page and highlights its corresponding index zone on the page image. The operator enters the information highlighted by the zone in the indexing fields listed on the **Index** window of the **RescanPlus Setup** window.

To enter index information:

1. Create or open the batch that has indexing fields.

2. From the RescanPlus window, select **Index**.

3. Start scanning or importing pages. When RescanPlus acquires the first page, it displays the predefined indexing fields on the **Index** tab. RescanPlus places focus in the first field and highlights its corresponding zone on the image.

4. Type the index information highlighted by the zone into the corresponding indexing field.

5. Press **TAB** to move to the next indexing field. Repeat steps 4 and 5 until all fields have been populated.

6. Click **Save** or press **ENTER** to advance to the next page. To retype information after moving to another page, simply select the appropriate thumbnail image. RescanPlus displays the page's indexing fields. Place the cursor in the field and retype the information.

7. Close the batch when finished.

3.8 Manipulating and Viewing Tree Nodes

During production, RescanPlus displays a control panel on the left, the **Tree View** panel in the middle, and the **File View** panel on the right. In the **Tree View** panel, RescanPlus displays a thumbnail image for each batch page and a folder icon for each higher level node in the tree. RescanPlus also displays an enlarged view of the currently selected thumbnail in the **File View** panel. If you select a higher level node, the **File View** panel shows an enlarged image of the first page node under that higher level node.

Caution

Do not manipulate nodes in the tree without first understanding the consequences. Inserting, deleting, or rearranging nodes can cause stuck batches, lost pages, error messages being displayed on other workstations, and in some cases corruption of the entire batch. Be sure your administrator has instructed you on the proper procedures to follow.

While working within the **Tree View**, right-click to display the Tree View context menu. This menu allows you to jump to the first or last page of the batch, select a page by number to view (note that when using this command, pages are counted sequentially, not according to the number displayed in the tree), and insert and delete nodes.

3.8.1 Manipulating Nodes in the Tree

This table describes how to select, move, insert, delete, hide, and refresh nodes.

Table 3-5: Actions for Manipulating Nodes in the Tree

Tree Action	Description
Selecting nodes	To select nodes for movement or deletion, highlight the nodes by dragging the mouse over them. Press **CTRL** while highlighting nodes to select nonconsecutive nodes within the same level. For example, if you want to select the last page in every folder, you can press **CTRL** and then select each of the page nodes. Press **SHIFT** to quickly extend a current selection within the same level. For example, if you want to highlight 50 page nodes, you can press **SHIFT**, select the first page node, and then scroll down to the 50th page node and select it. RescanPlus highlights all the nodes in between. You can use the **SHIFT** and **CTRL** keys for the same selection, but you cannot press them at the same time. If you select a non-highlighted node, all nodes previously selected are cleared. When you select a node at a level higher than 0, all page nodes under that node are highlighted. If you want to select higher level nodes in addition to their page nodes, you must begin the selection process at that higher level.

Tree Action	Description
Moving nodes	Select the nodes you want to move and then release the mouse. Then, grab any highlighted node and drag the selection to the node after which you want to insert it. When that node is highlighted, release the mouse. RescanPlus places the selected nodes immediately following the node to which you dragged the selection. **Note:** You can only move selected nodes among the same level. For example, if you highlight two level 1 nodes, you can only place them after another level 1 node. Because there is only one level 7 node, it cannot be moved. During scanning, the tree is locked and nodes cannot be moved. Stop scanning before moving nodes. Depending on how RescanPlus was set up, you may not be able to move nodes at certain levels.
Deleting nodes	Select the nodes you want to delete. Press **Delete** or right-click to display a menu from which you can select **Delete**. RescanPlus confirms the number of nodes you have selected and prompts you to verify the delete action. **Note:** You cannot restore deleted nodes. If you accidentally delete nodes, you must rescan the affected pages and create any associated higher levels using the **Insert** command on the **Level** context menu. During scanning, the tree is locked and nodes cannot be deleted. Stop scanning before deleting nodes. Depending on how RescanPlus was set up, you may not be able to delete nodes at certain levels. Attempting to delete the level 7 node does not actually delete the level 7 node. In other words, you cannot delete the batch. However, if you try to delete the level 7 node, then all the other nodes in the tree will be deleted, leaving only the level 7 node.

Tree Action	Description
Inserting page nodes	Click the thumbnail image after which you want to add pages and then select **Scan Pages**, **Preview Pages**, or **Import Files**. RescanPlus inserts the pages directly after the selected node. If you select a level 1 node and then select **Scan Pages**, **Preview Pages**, or **Import Files**, RescanPlus inserts page nodes immediately before any page nodes already in the level 1 node. If you select a node higher than level 1 in which to add pages, RescanPlus creates a node for each level between the selected higher level node and the page level. For example, if you want to insert pages in a level 3 node, select the level 3 node and then select the command. RescanPlus creates a level 2 and level 1 node, and then places the new pages under the level 1 node. **Note:** Before you insert pages into a batch, you must select the **Finish and Close Batch** button. If you want to insert pages into a local file, simply select the thumbnail image after which you want to insert the new pages. When RescanPlus adds pages, it follows any defined scanner events.
Inserting higher level nodes	Select the node after which you want to insert the higher level node. Right-click and select the appropriate level from the **Insert** option. **Note:** During scanning, the tree is locked and nodes cannot be inserted. Stop scanning before inserting nodes. Depending on how RescanPlus was set up, you may not be able to insert nodes at certain levels. You cannot insert a level 7 node; in other words, you cannot split the batch.
Hiding the contents of a level 1 or higher node	Double-click the node. (Double-click the node again to display its contents.)

Tree Action	Description
Refreshing nodes in the tree	Refreshing RescanPlus updates the tree so that it reflects any changes to the tree structure. This option is available within the **File View** panel by right-clicking and selecting **Refresh** from the File View context menu.

3.8.2 Viewing Pages in the View Panel

The **File View** panel displays an image of the page currently being imported or scanned. This table describes the actions you can perform in the **File View** panel by right-clicking to display a menu with many of the same commands. For a description of the **File View** toolbar options, see "File View Panel" on page 70. Settings are disabled if an image is not selected or if the selected page is not an image.

Note: XLS and DOC format files open in a separate window instead of in the **File View** panel. To view files of this format in the **File View** panel, follow the instructions described on the Microsoft website (http://support.microsoft.com).

Table 3-6: File View Actions Menu

Action	Instructions
Viewing a thumbnail image	Click the thumbnail image.
Refreshing the tree	Select **Refresh** by right-clicking from the **File View** panel. RescanPlus updates the tree so that it reflects any changes to the tree structure. This action guarantees that the page image displayed in the **File View** panel is the most current image. You can also press **F5**.
Viewing the previous, next, or a specified page	Right-click from the **File View** panel, then select **Next Page**, **Previous Page**, or **Go to Page** by right-clicking from the **File View** panel. If you select **Go to Page**, you are prompted to enter a page number. Note that this number represents a page node's position within the entire batch (level 7).

Action	Instructions
Fitting the image within the **File View** panel	Right-click from the **File View** panel, then select: • **Fit To Width**: Displays the image so that its width is that of the **File View** panel. • **Fit To Window**: Displays the image so that the entire image fits within the **File View** panel. • **Scale 1 to 1**: Displays one pixel of the image for each pixel in the **File View** panel.
Zooming in or out and specifying a zoom factor	Right-click from the **File View** panel, then select: • **Zoom In**: Zooms in on the image by a factor of 10*. • **Zoom Out**: Zooms away from the image by a factor of 10*. • **Change Zoom Factor**: Changes the default zoom factor, which is 10. *This number is different if you change the zoom factor.
Zooming in on a selected region	Right-click and drag over the area you want to zoom in on. The **File View** shows only the area of the image selected by the mouse. If you want to pan outside the selected area, simultaneously press **SHIFT** and click until the pointer changes to a hand. Use the hand to move the image.
Changing a page's orientation	Right-click from the **File View** panel, then select **Orientation**. **Note:** If the node has several images from different streams, all the images will be rotated. The action is only available for batches with trigger level = batch (7). .
Scaling to Gray	Right-click from the **File View** panel, then select **Smoothing** to display images smaller than a 1:1 image size by representing the average density of missing pixels with a shade of gray.
Inverting a page	Right-click from the **File View** panel, then select **Invert** to display a negative of the image.

Action	Instructions
Applying settings to all images in the Batch	Right-click from the **File View** panel, then select **Apply Settings To All Pages** to apply image appearance, zoom, and orientation settings to all batch pages. Select **Apply Settings To All Pages** to apply future changes to viewing options to all loaded images. Changes you have already made are not applied.
Hiding the tree	Drag the window pane separator completely to the left. (When using very high-speed scanners, that is those scanning more than 100 images per minute, hiding the tree may make RescanPlus run faster. Note that a width of 4 thumbnails usually will allow RescanPlus to operate at scanner rated speeds.)

3.8.2.1 File View Panel

The **File View** panel displays an image of the page currently being imported or scanned. If not page is currently being imported or scanned, the panel displays the image of the page that is currently selected in the **Tree** pane.

Note: If the **File View** panel is closed, right-click the panel to re-display the view.

The options for the **File View** panel in the ScanPlus production window are:

Table 3-7: File View Options

Element	Description
Zoom Out icon	Reduces the size of the page displayed in the **Image** pane.

Element	Description
Custom scale icon	Increases or decreases the size of the page displayed in the **Image** pane. Use the list box to specify one of the following sizes: • **1600%** • **800%** • **400%** • **200%** • **100%** • **75%** • **50%** • **25%** • **10%** • **Fit to height** • **Fit to width** • **Fit to Window**
Zoom In icon	Increases the size of the page displayed in the **Image** pane.
Fit to Window icon	Adjusts the size of the page displayed in the **Image** pane so that it fits entirely within the current **View** pane size setting, and automatically resizes as **Image** pane is resized.
Fit to Width icon	Adjusts the size of the page displayed in the **Image** pane so that it fits entirely within the width of the window.
Fit to Height icon	Adjusts the size of the page displayed in the **Image** pane so that it fits entirely within height of the window.
Scale 1 to 1 icon	Displays the image such that one pixel of image data is represented by one pixel in the **Image** pane.

3.9 Changing the Image View During Production

Select **Settings** from the navigation panel to modify the default settings for image view during production. In some modules, this option is available from the **View** tab. The precise text and location of these options depends on the module.

To change the image view during production:

1. Run the module for production.
2. Use options in the **View Settings** panel, buttons on the **File View** toolbar, or execute the appropriate keyboard shortcut to change the image view.
   - **View Settings**: Use this panel to change page orientation, change brightness and contrast levels, scale the image to gray, or invert the image.
   - **File View** toolbar: Use the toolbar to zoom in and out, select a magnification level, fit to window, fit to height, fit to width, or scale 1-1.
   - **Keyboard shortcuts**: Keyboard shortcuts for changing image view and module-specific keyboard shortcuts are provided in the *OpenText Intelligent Capture - Module Reference (ECPCORE-CMD)* guide.

Chapter 4

Reference

The topics within this section contain reference information useful while using the application in setup or production.

4.1 Keyboard Shortcuts and Access Keys

Intelligent Capture modules provide both keyboard shortcuts, for performing common functions, and access keys that facilitate navigation through various module windows, options and panels. Information about using keyboard shortcuts and the process for revealing access keys are documented in this topic.

Keyboard shortcuts are available to perform common tasks in the application. Keyboard shortcuts primarily use **CTRL** and **FUNCTION** key sequences and can help increase efficiency for advance users by providing quick keyboard access to commonly used commands. Keyboard shortcuts can generally be used from anywhere in the application interface and are not limited to the active window, pane, or panel.

Access keys are available to increase accessibility. Press the **ALT** key to reveal access keys indicated as underlined alphanumeric characters. Access keys generally affect only the currently active window, pane, or panel. Standard Windows shortcuts can be used to navigate between windows, panes, or panels.

4.1.1 RescanPlus Keyboard Shortcuts

The following keyboard shortcuts are available in this module.

Table 4-1: Keyboard Shortcuts and Hotkeys

Shortcut	Action
F1	Help window
F2	Scan summary view
F3	Display the RescanPlus production window
F4	Close the batch
F5	Place focus on the next task
F6	Run a single batch
F7	Display a preview of the page
F8	Import image and document files
CTRL+S	Start/Stop/Resume scan process

Shortcut	Action
TAB	Move focus to the next field
SHIFT TAB	Move focus to the previous field
ENTER	Accept field values and move to next node
CTRL +	Zoom in on the image view
CTRL -	Zoom out on the image view
ALT+CTRL+W	Zoom to width in the image view
ALT+CTRL+H	Zoom to height in the image view
ALT+SHIFT+HOME	Zoom to fit page in the image view
ALT+SHIFT+END	Zoom to normal page in the image view
CTRL+G	Move selection to the page N (go to page)
NUMERIC KEYPAD *	Expand everything under the current selection
NUMERIC KEYPAD +	Expand the current selection
NUMERIC KEYPAD –	Collapse the current selection
SPACE BAR	Collapse/expand the current node
RIGHT ARROW	Move cursor to the right side of the visible item and reset the current selection
LEFT ARROW	Move cursor to the left side of the visible item and reset the current selection
UP ARROW	Move cursor up one visible item and reset the current selection
DOWN ARROW	Move cursor down one visible item and reset the current selection
PAGE UP	Move selection up by one page
PAGE DOWN	Move selection down by one page
HOME	Move selection to the topmost item
END	Move selection to the bottom most item
BACKSPACE	Move selection up one level
CTRL+UP ARROW	Move cursor up one visible item and retain the current selection
CTRL+DOWN ARROW	Move cursor down one visible item and retain the current selection
CTRL+LEFT ARROW	Move cursor to the left side of the visible item and retain the current selection
CTRL+RIGHT ARROW	Move cursor to the right side of the visible item and retain the current selection

Shortcut	Action
SHIFT+UP ARROW	Multi-select up one same-level item
SHIFT+DOWN ARROW	Multi-select down one same-level item
SHIFT+LEFT ARROW	Multi-select left one same-level item
SHIFT+RIGHT ARROW	Multi-select right one same-level item
SHIFT+PAGE UP	Multi-select up one screen of same-level items
SHIFT+PAGE DOWN	Multi-select down one screen of same-level items
SHIFT+HOME	Multi-select up to topmost same-level item
SHIFT+END	Multi-select down to bottom most same-level item
CTRL+TAB	Cycle through module panels
CTRL+SHIFT + TAB	Reverse cycle through module panels
CTRL+PAGE DOWN	Make next tab active in tabbed group of panels
CTRL+PAGE UP	Make previous tab active in tabbed group of panels
ALT+F4	Close application

4.2 IA Values

The topics in this section describe IA values that can be used with this application. This section also describes the IA Values (system variables) defined in `iarescan.mdf`, the RescanPlus module's Module Definition File (*MDF*). You may add custom variables to this MDF, but we recommend that you use Dynamic Values in your *IPP* or create a custom MDF for your variables so they are not overwritten when updating the product.

Note: The ScanPlus module outputs data to a variety of statistical IA Values during processing. These statistical output IA Values are also shared with RescanPlus, which means that if an image is rescanned, the values produced by the RescanPlus module will override the original values produced by the ScanPlus module.

4.2.1 Input IA Values

Input IA Values for RescanPlus include file variables as well as display IA Values that you can set in the `Finish` event handler of the step that triggers RescanPlus.

Table 4-2: Input IA Values

IA Value	Description

`InputImage`
 	
`InputImage2`
 	
`InputImage3`
 	
(File, Input, Trigger)
	First image stream stored to the Intelligent Capture Server.
	
	Second image stream stored to the Intelligent Capture Server.
	
	Third image stream stored to the Intelligent Capture Server.
	
	If you are using a non-MultiStream scanner, RescanPlus only saves images to the `InputImage` IA Value. These variables are used per level 0 task to store the path to the task's image files on the Intelligent Capture Server. RescanPlus, which processes level 0 tasks, uses `InputImage` IA Values to retrieve each image stream for processing. Note: `InputImage`, `InputImage2`, `InputImage3`, and `NeedsRescan` are all trigger variables for the module. This means that if, for example, you only use `InputImage` in your *IPP*, the Intelligent Capture Server will route an image to RescanPlus as soon as Rescan.InputImage is set to a nonzero value. If you use both `InputImage` and `NeedsRescan` in your IPP, both `Rescan.InputImage` and Rescan.NeedsRescan need to be set to a nonzero value to trigger RescanPlus.

`NeedsRescan` (Integer, Input, Trigger)	`NeedsRescan` is the second trigger variable for RescanPlus. Make sure that all other RescanPlus input IA Values are set before triggering the module, or the task will be sent without the data necessary for RescanPlus to properly display its tasks. For more information on what the different values of `NeedsRescan` mean, see "NeedsRescan Values" on page 91 table.

IA Value	Description

`OutputImage`
`OutputImage2`
`OutputImage3`
(File, Output)
	`OutputImage2` and `OutputImage3` are used with MultiStream scanners. In addition, `OutputImage3` is only used with scanners that support 3 streams per image.

`RescanReason` (String)	This IA Value stores a string describing the image quality problem of the rejected page. This string is displayed in the RescanPlus status bar when the page task is highlighted. Make sure that `Rescan.RescanReason` is set before triggering RescanPlus or else the module will not receive the string to display in its status bar.
`Rescanned` (Integer, Output)	This variable indicates that this node or image was replaced by RescanPlus. `Rescanned` is set to 1 when one of the following situations occur: • A new level 0 node (page node) is scanned by RescanPlus. This applies to nodes that are replaced (including nodes not marked for rescan) as well as newly inserted nodes (including nodes inserted after pages marked for image replacement or after pages not marked for rescan). • The image is replaced on a page node marked for image replacement (`NeedsRescan` = 4 or 6). **Note:** Image replacement can only occur for `NeedsRescan` = 4 or 6. Node replacement typically occurs for `NeedsRescan` = 1 or 3, but this default behavior can be overridden if the RescanPlus operator highlights pages not marked for rescan.

IA Value	Description
`RescanDeclined` (Integer, Output)	This variable is used to determine whether a RescanPlus task was rescanned. When RescanPlus processes a task, it assigns either a 0 or 1 to this variable. When writing your IPP, be sure to check this value in the `Finish` routine, because you need to check this value to determine which image stage file to route to the next step in your process. 0 = false; rescanning was not declined. There is a new image. Users generally find it helpful to replace the earlier image from ScanPlus with this new RescanPlus image. 1 = true; rescanning was declined. There is no new image, which means that the RescanPlus operator either skipped the task by selecting the **Go To Next Task** button or that the task (a page) was not deleted because its `NeedsRescan` IA Value is 2. In either case, users generally find it helpful to route the RescanPlus input image to the next module for processing. If the IA Value `RescanDeclined` = 1, RescanPlus produces no output image because the page was not rescanned. In this case, users generally find it helpful to set the next module's `InputImage` equal to the RescanPlus `InputImage`, `InputImage2`, or `InputImage3` to route the page image to the next module.

Related Topics

"Output IA Values" on page 79

"NeedsRescan Values" on page 91

4.2.2 Output IA Values

Output IA Values include file and processing variables.

Table 4-3: Output IA Values

IA Value	Description

`ImageOutputFileExtension`
`ImageOutputFileExtension2`
`ImageOutputFileExtension3`
(String, Output)
	Defines an extension for stored image files (such as .jpg or .bmp).

`Date`
`Date2`
`Date3`
(String, Output)
	Date that the `OutputImage` was rescanned, as a formatted string.
	Date that the `OutputImage2` was rescanned, as a formatted string.
	Date that the `OutputImage3` was rescanned, as a formatted string.
	Note: A user can determine the format for the date and time through the **Regional Settings** window on the machine running RescanPlus, which is accessible from the *Windows* **Start** menu: **Start > Settings > Control Panel**. By default, RescanPlus uses the short date style format in the **Regional Settings** window.

`Time`
`Time2`
`Time3`
String, Output
	Time that `OutputImage` was scanned.
	Time that `OutputImage2` was scanned.
	Time that `OutputImage3` was scanned.

`ScanOperator`
`ScanOperator2`
`ScanOperator3`
(String, Output)
	User name of the operator who scanned `OutputImage`.
	User name of the operator who scanned `OutputImage2`.
	User name of the operator who scanned `OutputImage3`.

IA Value	Description

`ScanMachine`
 	
`ScanMachine2`
 	
`ScanMachine3`
 	
(String, Output)
	Name of the machine used to scan `OutputImage`.
	
	Name of the machine used to scan `OutputImage2`.
	
	Name of the machine used to scan `OutputImage3`

IA Value	Description
`ThumbMarks` (Long, Output)	This variable stores the value that determines the symbol and color placed on RescanPlus tasks. RescanPlus is the only module that uses this Value, but because `iascan.mdf` defines all user interface elements of the tree, the variable is declared here. Make sure the IA Value is set before triggering RescanPlus or else the module wont receive the data necessary to clearly identify tasks in the tree. Tasks without thumbmarks will only be highlighted according to the value set for `Rescan.NeedsRescan`. Possible colors and their values include: • Clear 0, 8 • Red 1 • Green 2 • Yellow 3 • Blue 4 • Magenta 5 • Cyan 6 • Black 7, 15 • Dark Red 9 • Dark Green 10 • Dark Yellow 11 • Dark Blue 12 • Dark Magenta 13 • Dark Cyan 14 • Possible shapes and their values include: • X 0 • _ 16 • ` 32 • 0 48 • + 64 To get a certain colored shape, add the value for the shape to the value for the color. Note that “Clear” means that no thumbmark is drawn, no matter what the shape is. This value is defined only for RescanPlus.

IA Value	Description

`Rotation`
`Rotation2`
`Rotation3`
(Long, Output)
	Rotation applied to `OutputImage`.
	Rotation applied to `OutputImage2`.
	Rotation applied to `OutputImage3`.
	These values indicate the "rotate during scan" setting applied to the node, one of the following values:
	• 1 0 degrees
	• 2 90 degrees
	• 3 180 degrees
	• 4 270 degrees

`ScanEpoch`
`ScanEpoch2`
`ScanEpoch3`
(Long, Output)
	Date and time that `OutputImage` was scanned.
	Date and time that `OutputImage2` was scanned.
	Date and time that `OutputImage3` was scanned.
	Each of these values is represented using seconds since January 1, 1970.

`ScanMillisec`
`ScanMillisec2`
`ScanMillisec3`
(Long, Output)
	Millisecond that `OutputImage` was scanned.
	Millisecond that `OutputImage2` was scanned.
	Millisecond that `OutputImage3` was scanned.
	Use `ScanMillisec` IA Values in conjunction with `ScanEpoch` IA Values to provide a highly accurate measure of when your image streams were scanned.
	Note: This is not the amount of time it took to scan the page.

IA Value	Description
`Level_n_KeyEntry_k` (String, Output)	Key entry indexing field number k for nodes of level n (k ranges from 0 to 4 and n ranges from 0 to 6). This variable stores data provided by the operator during production. For example, `Level_2_KeyEntry_1` stores data entered into the second indexing field for a level 2 node **Note:** Although `ScanPlus.mdf` includes declarations for 35 indexing fields (5 per level for 7 levels), you can create additional indexing fields for a particular level. For this, modify `ScanPlus.mdf` to include additional `Level_n_KeyEntry_k` IA Values. ScanPlus/RescanPlus does not apply any restrictions on the number of the values associated with each the level.
`BlankPage` (Long, Output)	1 if the page was detected as blank; 0 otherwise.

`ImageAddress0`
 	
`ImageAddress1`
 	
`ImageAddress2`
 	
(Long, Output)
	The first `Image Address` value detected.
	
	The second `Image Address` value detected.
	
	The third `Image Address` values detected.

`ImageAddressF` (String, Output)	The value detected from a fixed field. These values are saved only when scanning with certain Kodak scanners. See your Kodak scanner documentation for more information about `Image Addresses`.
`PatchCode` (String, Output)	Type of software patch code found: • T – Patch T • 2 – Patch 2 • 3 – Patch • "" – No valid patch code detected **Note:** When attempting to recognize more than one patch code per page, be sure that the patch codes are far enough apart to be recognized. If the patch codes are too close together, it is possible that none of the patch codes will be recognized.

IA Value	Description

`PatchX`
`PatchY`
`PatchDX`
`PatchDY`
(Long, Output)
	X-coordinate of the patch code found.
	Y-coordinate of the patch code found.
	Width of the patch code found.
	Height of the patch code found.

`KodakLevelChange` (Long, Output)	Value indicating that there was a level change on the Kodak scanner. This value is not related to changes in the tree. Possible values include: • 1 Level change based on `ImageAddress0` • 2 Level change based on `ImageAddress1` • 3 Level change based on `ImageAddress2`
`Backside` (Long, Output)	Value stored as 0 if the page is a front side page. Value stored as 1 if the page is back side page.
`NumBarcodes` (Long, Output)	The number of barcodes detected by ScanPlus/RescanPlus.
`EndorserText` (String, Output)	For scanners that perform optical character recognition on specified zones (such as the ElectrocomIntelliscan) the *OCR* data is saved to the *ISIS* tag `TAG_OCRDATA_TEXT`. This IA Value stores data from that ISIS tag.
`OCRText` (String, Output)	Text printed on a hardcopy page by the scanner printer head. **Note:** Your scanner must have an endorser, and you must indicate that you want to store the text during ScanPlus/RescanPlus setup. You can access your scanners processing options by selecting the **More** button in the ScanPlus/RescanPlus Scanner window.

IA Value	Description

`ImageBitsPerSample`
`ImageBitsPerSample2`
`ImageBitsPerSample3`
(Long, Output)
	Number of bits per sample in `OutputImage`.
	Number of bits per sample in `OutputImage2`.
	Number of bits per sample in `OutputImage3`
	These values measure the number of bits per sample in the current image, where a sample is one color plane of the image. The possible return values include:
	• 1 One bit per sample: binary and 3-bit color
	• 2 Two bits per sample: 4-level gray
	• 3 Three bits per sample: 8-level gray
	• 4 Four bits per sample: 16-level gray and 16-bit color
	• 8 Eight bits per sample: 256-level gray and 24-bit color
	Together, the `ImageBitsPerSample` values and the `ImageSamplePerPixel` values determine whether the image is binary, grayscale, or color.

`ImageResolution`
`ImageResolution2`
`ImageResolution3`
(Long, Output)
	Resolution at which `OutputImage` was scanned.
	Resolution at which `OutputImage2` was scanned.
	Resolution at which `OutputImage3` was scanned.

IA Value	Description

`ImagePhotoMetric`
`ImagePhotoMetric2`
`ImagePhotoMetric3`
(Long, Output)
	Color space of the image data of the `OutputImage`.
	Color space of the image data of the `OutputImage2`.
	Color space of the image data of the `OutputImage3`.
	The possible return values for these variables include:
	• 0 – White0: 0 is imaged as white; 1 is imaged as black.
	• 1 – White1: 0 is imaged as black; 1 is imaged as white.
	• 2 – RGB: Red/green/blue color image.
	• 3 – Palette: Palette color image.
	• 120 – *BGR*: Same as *RGB*, but blue and red places are reversed.

`ImageLength`
`ImageLength2`
`ImageLength3`
(Long, Output)
	Number of rows of pixels in `OutputImage`.
	Number of rows of pixels in `OutputImage2`.
	Number of rows of pixels in `OutputImage3`

`ImageWidth`
`ImageWidth2`
`ImageWidth3`
(Long, Output)
	Number of columns of pixels in `OutputImage`.
	Number of columns of pixels in `OutputImage2`.
	Number of columns of pixels in `OutputImage3`

`ImageBytes`
`ImageBytes2`
`ImageBytes3`
(Long, Output)
	Size of the `OutputImage` file in bytes.
	Size of the `OutputImage2` file in bytes.
	Size of the `OutputImage3` file in bytes.

IA Value	Description

`ImageCompression`
`ImageCompression2`
`ImageCompression3`
(Long, Output)
	Value indicating the compression used to save `OutputImage`.
	Value indicating the compression used to save `OutputImage2`.
	Value indicating the compression used to save `OutputImage3`
	You may include the following values in your *IPP*s to determine compression. (Add these as public constants to the Common Constants module or as private constants to a Scan event handler.)
	TAG_COMPRESSION_NONE = 1
	TAG_COMPRESSION_MG3 = 2
	TAG_COMPRESSION_G3 = 3
	TAG_COMPRESSION_G4 = 4
	TAG_COMPRESSION_JPEG = 6
	TAG_COMPRESSION_PACK = 32773
	TAG_COMPRESSION_JBIG = 34661
	TAG_COMPRESSION_JBIG3E = 50011
	TAG_COMPRESSION_ZIP = 50013
	TAG_COMPRESSION_WANGJPEG = 50014
	TAG_COMPRESSION_JPEG_PROGRESSIVE = 50015

`ImageSourceName`
`ImageSourceName2`
`ImageSourceName3`
(String, Output)
	Name of file or scanner for `OutputImage`.
	Name of file or scanner for `OutputImage2`.
	Name of file or scanner for `OutputImage3`
	If the file was imported, the variable will hold the name and file path. If the file was scanned, the variable will hold the scanner driver. If the image is part of a multi-page file, each image file has the same name.

IA Value	Description

`ImageSourceIndex`
`ImageSourceIndex2`
`ImageSourceIndex3`
(Long, Output)
	Value indicating how `OutputImage` was captured.
	Value indicating how `OutputImage2` was captured.
	Value indicating how `OutputImage3` was captured.
	Possible values include:
	• 0 if scanned
	• n if imported, where n is 1-based and represents the pages place within a multi-page file
	• 1 if acquired as preview image

`NumberOfScannedSheets` (Long, Output)	The number of scanned sheets. This value is defined on the level 7. If the batch was opened but not created ScanPlus/RescanPlus adds the number of sheets scanned during the current session to the number of page which was stored in this IA Value on the moment when the batch was opened and then saves the sum to this value again. This value is not affected by node deletion.
`NumberOfImportedPages` (Long, Output)	The number of imported files. This value is defined on the level 7. If the batch was opened but not created ScanPlus/RescanPlus adds the number of files imported during the current session to the number of files which was stored in this IA Value on the moment when the batch was opened and then saves the sum to this value again. This value is not affected by node deletion.
`NumberOfCreatedNodes0` (Long, Output)	The number of level 0 nodes created in this batch. This value is defined on the level 7. If the batch was opened but not created ScanPlus/RescanPlus adds the number of nodes of level 0 added during the current session to the number of nodes which was stored in this IA Value on the moment when the batch was opened and then saves the sum to this value again. This value is not affected by node deletion.

IA Value	Description
`NumberOfCreatedNodes1` (Long, Output)	The number of level 1 nodes created in this batch. This value is defined on the level 7. If the batch was opened but not created ScanPlus/RescanPlus adds the number of nodes of level 1 added during the current session to the number of nodes which was stored in this IA Value on the moment when the batch was opened and then saves the sum to this value again. This value is not affected by node deletion.
`NumberOfCreatedNodes2` (Long, Output)	The number of level 2 nodes created in this batch. This value is defined on the level 7. If the batch was opened but not created ScanPlus/RescanPlus adds the number of nodes of level 2 added during the current session to the number of nodes which was stored in this IA Value on the moment when the batch was opened and then saves the sum to this value again. This value is not affected by node deletion.
`NumberOfCreatedNodes3` (Long, Output)	The number of level 3 nodes created in this batch. This value is defined on the level 7. If the batch was opened but not created ScanPlus/RescanPlus adds the number of nodes of level 3 added during the current session to the number of nodes which was stored in this IA Value on the moment when the batch was opened and then saves the sum to this value again. This value is not affected by node deletion.
`NumberOfCreatedNodes4` (Long, Output)	The number of level 4 nodes created in this batch. This value is defined on the level 7. If the batch was opened but not created ScanPlus/RescanPlus adds the number of nodes of level 4 added during the current session to the number of nodes which was stored in this IA Value on the moment when the batch was opened and then saves the sum to this value again. This value is not affected by node deletion.
`NumberOfCreatedNodes5` (Long, Output)	The number of level 5 nodes created in this batch. This value is defined on the level 7. If the batch was opened but not created ScanPlus/RescanPlus adds the number of nodes of level 5 added during the current session to the number of nodes which was stored in this IA Value on the moment when the batch was opened and then saves the sum to this value again. This value is not affected by node deletion.

IA Value	Description
`NumberOfCreatedNodes6` (Long, Output)	The number of level 6 nodes created in this batch. This value is defined on the level 7. If the batch was opened but not created ScanPlus/RescanPlus adds the number of nodes of level 6 added during the current session to the number of nodes which was stored in this IA Value on the moment when the batch was opened and then saves the sum to this value again. This value is not affected by node deletion.
`BatchProcessingTime` (Long, Output)	The total number of seconds this batch was in processing. This value is defined on the level 7.
`DisableLocalCache`	Indicates whether local image caching on RescanPlus is disabled or enabled as follows. The value corresponds to the **Miscellaneous** > **Local image cache** setting as indicated in bold. • `0` (**Apply global security settings**) - (Default) The global setting (for whether image caching is enabled or disabled) is accepted. • `1` (**Enable image cache**) - Image caching is enabled and the global setting is ignored. • `2` (**Disable image cache**) - Image caching is enabled and the global setting is ignored.

Note: When scanning using MultiStream, note that some statistical IA Values are not designed to return values for multiple image streams (such as `NumBarcodes` or `EndorserText`). In these cases, ScanPlus/RescanPlus uses the first image stream when determining the value. For sets of IA Values that are designed to store values for multiple image streams (using the format `OutputValue`, `OutputValue2`, and `OutputValue3`), the values stored for all streams will generally be the same unless you rescan one of the image streams. For instance, the values for `Time`, `Time2`, and `Time3` would all be the same, because all image streams are scanned and produced at once.

Related Topics

"Input IA Values" on page 76

"NeedsRescan Values" on page 91

4.2.3 NeedsRescan Values

"NeedsRescan Values" on page 91 lists the input values of `NeedsRescan` and describes how RescanPlus will treat pages with these values.

Table 4-4: NeedsRescan Values

Value	Description
0	Do not rescan (not triggered) If `NeedsRescan` = 0, then the behavior is the same as would be expected for ScanPlus. If the cursor is on a page that is not marked for rescan, then any pages scanned or imported will be inserted after the node. If a page is highlighted that is not marked for rescan, it is replaced, and any additional pages are inserted after the new page.
1	Rescan current Page (replaces Node and following Nodes if their `NeedsRescan` = 1) A page with a `NeedsRescan` = 1 will be highlighted, and the entire node will be replaced by any new pages that are scanned or imported. If there are multiple consecutive pages with `NeedsRescan` = 1, then they will all be highlighted and considered a single set of pages. All the highlighted nodes in the set will be replaced by the new set of pages you scan or import. For example, if three consecutive nodes with `NeedsRescan` =1 are highlighted, and you scan only two pages, then the three page nodes will be replaced with the two new page nodes. If you had scanned four pages, then the three old page nodes would have been replaced with the four new page nodes. You can highlight consecutive pages with any combination of `NeedsRescan` values that tell RescanPlus to replace the node (any value other than 4 or 6), and they will be treated as a set. For example, if you have a page with a `NeedsRescan` = 1, and the two pages after that page have `NeedsRescan` values of 3 and 2, you could highlight all three pages and replace them with one or more scanned or imported images.

Value	Description
2	Insert after current page A page with a `NeedsRescan` = 2 will not be highlighted by default, but it will be given focus. The blinking cursor will be placed after the image, and any new pages you scan or import will be inserted after this node. If there are consecutive pages with `NeedsRescan` = 2, then each page will be treated as its own set, allowing you to insert as many pages as necessary after each marked page. If you highlight one or more consecutive pages which have a `NeedsRescan` = 2, then the page node(s) will be replaced by any new images you scan or import. This overrides the default behavior of inserting after the node. You can highlight consecutive pages with any combination of `NeedsRescan` values that tell RescanPlus to replace the node (any value other than 4 or 6), and they will be treated as a set.

Value	Description
3	Rescan current Page and insert after (combination of 1 and 2) A page with a `NeedsRescan` = 3 will be highlighted, and the entire node will be replaced by any new pages that are scanned or imported. However, if there are multiple consecutive pages with `NeedsRescan` = 3, then only the first page will be highlighted by default. If more than one page is scanned or imported, the highlighted node will be replaced, and the additional nodes will be inserted after this node. In effect, this combines the features of `NeedsRescan` = 1 and `NeedsRescan` = 2. You can override this default behavior by manually highlighting multiple consecutive nodes with `NeedsRescan` = 3. **Note:** If a `NeedsRescan` = 3 page is followed by consecutive `NeedsRescan` = 1 pages, all are highlighted. But if `NeedsRescan` = 3 is followed by `NeedsRescan` = 3, each page is highlighted one at a time. You can highlight consecutive pages with any combination of `NeedsRescan` values that tell RescanPlus to replace the node (any value other than 4 or 6), and they will be treated as a set.

Value	Description
4	Rescan current image (replaces image and following images if their `NeedsRescan` = 4) A page with a `NeedsRescan` = 4 will be highlighted by default. When you scan or import a new page, only the image of the current node will be replaced. The node will not be replaced, which will preserve the IA Values associated with that page node. If there are multiple consecutive pages with `NeedsRescan` = 4, then they will all be highlighted and considered a single set of pages. Because all the highlighted pages are treated as a set, you do not need to stop scanning after each node before scanning the new image for the next node. For example, if three consecutive nodes with `NeedsRescan` = 4 are highlighted, and you scan only two pages, then the first two nodes will have their images replaced, and the third page will now be highlighted for you to replace. **Note:** You can highlight consecutive pages with any combination of `NeedsRescan` values of 4 and 6 (values which tell RescanPlus to replace the image).

Value	Description
5	Rescan current image (replaces image and following images if their `NeedsRescan` = 5) A page with a `NeedsRescan` = 5 will be highlighted by default. When you scan or import a new page, only the image of the current node will be replaced. The node will not be replaced, which will preserve the IA Values associated with that page node. If there are multiple consecutive pages with `NeedsRescan` = 5, then they will all be highlighted and considered a single set of pages. Because all the highlighted pages are treated as a set, you do not need to stop scanning after each node before scanning the new image for the next node. For example, if three consecutive nodes with `NeedsRescan` = 5 are highlighted, and you scan only two pages, then the first two nodes will have their images replaced, and the third page will now be highlighted for you to replace.

Value	Description
6	Rescan current image and insert after (combination of 4 and 2) A page with a `NeedsRescan` = 6 will be highlighted, similar to `NeedsRescan` = 4. When you scan or import a new page, only the image of the current node will be replaced. The node will not be replaced, which will preserve the IA Values associated with that page node. If there are multiple consecutive pages with `NeedsRescan` = 6, only the first page will be highlighted by default. If more than one page is scanned or imported, the image of the highlighted node will be replaced, and the additional images will be inserted as new nodes after the highlighted node. In effect, this combines the features of `NeedsRescan` = 4 and `NeedsRescan` = 2. You can override this default behavior by manually highlighting multiple consecutive nodes with `NeedsRescan` = 6. **Note:** You can highlight consecutive pages with any combination of `NeedsRescan` values of 4 and 6 (values which tell RescanPlus to replace the image).
7	Rescan current image and insert after. A page with a `NeedsRescan` = 7 will be highlighted, similar to `NeedsRescan` = 4. When you scan or import a new page, only the image of the current node will be replaced. The node will not be replaced, which will preserve the IA Values associated with that page node. If there are multiple consecutive pages with `NeedsRescan` = 7, only the first page will be highlighted by default. If more than one page is scanned or imported, the image of the highlighted node will be replaced, and the additional images will be inserted as new nodes after the highlighted node.

Value	Description
8	Tasked nodes with `NeedsRescan` = 8 and trigger level = 0 are processed by RescanPlus when a batch is loaded and the user selects the **Open**, **Run** or **Run Selected** option. **Note:** Tasked nodes with `NeedsRescan` = 8 and trigger level = 0 are processed in the following way: the Task is finished with an `IA_SUCCESS` code, the IA value `RescanDeclined` is set to `1` and `NeedsRescan` is set to `0`, then the IA value `NeedsRescan` is set to `0`. These nodes have no effect on the report values for **Number of rescanned pages** or **Number of pages marked to rescan**.
9 or higher	For `NeedsRescan` values higher than 8, RescanPlus extracts the last three lowest bits. If the resulting value is equal to 5, RescanPlus interprets it as `NeedsRescan` = 4. If the resulting value is equal to 7, RescanPlus interprets it as `NeedsRescan` = 6. If the resulting value is 0, RescanPlus interprets it as `NeedsRescan` = 8.

You cannot mix pages of different types when highlighting multiple consecutive pages. Pages which are marked for image replacement are treated separately from non-task pages and pages marked for node replacement. For example, if you highlight a page that has a `NeedsRescan = 4` and another page with a `NeedsRescan = 3`, and then you attempt to scan or import pages, you will get an Invalid Rescan Selection error. You will need to select a different set of images before you can scan or import.

When replacing or inserting node `NeedsRescan` values, the following `NeedsRescan` values cause the whole node to be replaced or inserts a new node:

- `NeedsRescan=1` (Rescan current page)
- `NeedsRescan=2` (Insert after current page)
- `NeedsRescan=3` (Rescan current page and insert after)

Currently, the user can successfully rescan an image node with a non-image node (import non-image file), if `NeedsRescan=1, 2 or 3.` The user can also successfully rescan a non-image node with an image node (import or scan an image), if `NeedsRescan=1, 2, or 3`.

When replacing Image NeedsRescan values, only image or non-image files are replaced:

- `NeedsRescan=4` (Rescan current image)
- `NeedsRescan=5` (Rescan current image)
- `NeedsRescan=6` (Rescan current image and insert after)
- `NeedsRescan=7` (Rescan current image and insert after)

The user cannot change the node type without changing the whole node. It is not possible to import non-image files instead of images. If the user tries to replace an image with a non-image file, an error message is returned. It is not possible to import or scan an image instead of a non-image. If the user tries to replace a non-image with an image file, an error message is returned.

Related Topics

"Input IA Values" on page 76

"Output IA Values" on page 79

4.2.3.1 IA Value NeedsRescan Behavior

The `NeedsRescan` value after the RescanPlus module results are processed has a number of peculiarities for levels 0 and 7. The following sections describe these scenarios.

Level 0

If the trigger value of the RescanPlus module equals 0 (corresponds to the page level), the behavior shown in "NeedsRescan IA Value behavior for before and after RescanPlus" on page 98 is observed.

Table 4-5: NeedsRescan IA Value behavior for before and after RescanPlus

Module name	Before RescanPlus module	After RescanPlus module
RescanPlus 6.5SP1; pages are not marked for rescan.	8	8
RescanPlus 6.5SP1; pages are marked for rescan.	4	0

Level 7

If the trigger value of RescanPlus module (for IA 6.5 SP1) equals 7 (which corresponds to the document level), any rescanned page has its `NeedsRescan` Input IA Value set to 8 by the RescanPlus module. As `NeedsRescan` is an Input IA value and its behavior is only restricted for rescanned pages, the behavior for not re-scanned pages is defined by RescanPlus module.

If all pages are marked for rescan and are rescanned, the behavior shown in "NeedsRescan IA Value behavior for Rescan and RescanDeclined modules" on page 99 is observed.

Table 4-6: NeedsRescan IA Value behavior for Rescan and RescanDeclined modules

Module name	Rescan	RescanDeclined
1	A new node is created; the old node is deleted; 1 is defined for the new node.	0
2	A new node is created; the old node remains; 1 is defined for the new node, 0 is defined for the old node.	0 is defined for the new node, 1 – for the old node.
3	A new node is created, the old node is deleted; 1 is defined for the new node.	0
4	1	0
5	1	0
6	1	0
7	1	0
8	0	0

All pages marked for rescan are not rescanned, but the task is accepted

If all pages are marked for the rescan step are not rescanned but the task is accepted, the behavior shown in "NeedsRescan IA Value behavior for NeedsRescan before RescanPlus" on page 99 is observed.

Table 4-7: NeedsRescan IA Value behavior for NeedsRescan before RescanPlus

NeedsRescan before RescanPlus	Rescanned	RescanDeclined
1, 2, 3, 4, 5, 6, 7	0	1
8	0	0

For all extra pages added in the RescanPlus step:

- `RESCANNED` EQUALS 1
- `RESCANDECLINED` EQUALS 0

In addition, the following behaviors are observed:

- All pages that were created or modified by RescanPlus have `Rescanned` or `RescanDeclined` values are set to 1.
- All pages that had `NeedsRescan` = 8 before the RescanPlus step, or after RescanPlus step, have both `Rescanned` and `RescanDeclined` = 0.

Glossary

ANSI

American National Standards Institute

BGR

Blue Green Red

BMP

Bitmap file extension

CAL

U.S. Department of Defense Computer Aided Acquisition and Logistics Support format

DCX

Multipage *PCX* file extension

dpi

Dots Per Inch

gif

Graphic Interchange Format

HTM

HTML file extension.

HTML

HyperText Markup Language

IPP

Integrated ProcessFlow Project

ISIS

Image and Scanner Interface Specification

JBG

JBIG file extension

JP2

Joint Photographic Experts Group 2000

JPEG

Joint Photographic Experts Group

MDA

MO:DCA file extension

MDF

Module Definition File

MO:DCA

Mixed Object:Document Content Architecture

OCR

Optical Character Recognition

PCX

PC Paintbrush bitmap format file extension

PDA

Calera Processed Document Architecture file extension

PDF

Portable Document Format

PNG

Portable Network Graphics

RGB

Red Green Blue

RLE

Run Length Encoding

RTF

Rich Text Format

TIF

Tagged Image File file extension

TIFF

Tagged Image File Format

UTF

Unicode Transformation Format

XLS

Microsoft Office Excel file extension

XML

Extensible Markup Language