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OpenText™ Intelligent Capture

ScanPlus Guide

This guide describes how to use the ScanPlus module to create batches and scan or import new documents.

ECPCORE220300-CSC-EN-01

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ECPCORE220300-CSC-EN-01
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Chapter 1

Introduction

The ScanPlus module is an important part of a complete document capture system. Its purpose is to create batches, scan or import new documents, and kick off the processing flow to the other module steps included in the batch. As a batch creation module, ScanPlus is almost always the first module step in an *IPP*. In addition to its core functionality of scanning pages, ScanPlus enables the operator to perform other important operations (as described in the rest of this section) before releasing documents to the rest of the system.

Notes

- Processes that need to display thumbnail images in their **Tree View** panel must include a ScanPlus step, even if the ScanPlus module is not used.
- Feature codes specify support for scanner driver levels. For more information, see *OpenText Intelligent Capture - Administration Guide (ECPCORE-AON)*.
- 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.

Understanding Operator and Administrator Roles

The scan operator can use ScanPlus to scan documents and to create batches. The operator can also import files (documents or images), manipulate images, and rescan batches using the RescanPlus module.

The administrator can use ScanPlus to monitor production, and to ensure that batches are scanned at a proper speed and that batches are properly sent to the server. At a higher level, the administrator can use Intelligent Capture Administrator to manage multiple operators and to monitor batches on remote sites.

1.1 Acquires Documents Three Different Ways

ScanPlus serves as an entry point for documents to be processed by the document capture system. Using ScanPlus, you can acquire documents in any of the following ways:

Scan

Capture documents using *ISIS* drivers. ISIS is an industry standard interface for high-performance scanner control. By using an appropriate ISIS driver, ScanPlus supports hundreds of scanners, enabling you to take full advantage of many scanner features and full-speed throughput, regardless of whether you are using a simple desktop scanner or a sophisticated, high-speed production scanner.

Note: Your scanner device may include many advanced features. Intelligent Capture may not support every advanced scanner feature that is available with your scanner device.

Import

Import any kind of document into a batch—image files of any supported type as well as non-image documents. Documents can be imported from any location accessible to the machine on which ScanPlus is running.

Preview

Selectively capture pages by using Preview mode, visually reviewing pages and optimizing scanner settings prior to committing scanned pages to the batch.

1.2 Saves Documents to the Intelligent Capture Server

After scanning or importing documents, ScanPlus sends them to the Intelligent Capture Server. If you are using a ScaleServer group, it sends each successive batch it creates to the next Intelligent Capture Server in the group in a round-robin system, automatically achieving load balancing among the servers.

ScanPlus enables you to specify a file format to use for all images captured in a batch step. Furthermore, for each color depth that can be configured in your scanner, ScanPlus can configure a different compression format, depending on the selected file format. Therefore, ScanPlus can be configured to automatically apply one compression format to binary images, another to grayscale images, and another to 24-bit color images. Each compression format has its advantages and disadvantages in terms of the color depths it supports, its compression and decompression speed, the ratio of compression, and whether the compression is “lossy.”

Note: Some modules, notably those that are not distributed as part of the standard installation media, may require specific image file formats or

compression settings to function correctly. Be sure to select settings that are compatible with your modules.

1.3 Defines Batch Levels

As ScanPlus scans or imports documents, it organizes them into a hierarchy defined by the settings of the ScanPlus step in the batch. The hierarchy may contain as many as eight levels, called batch levels. Each level (0–7) represents one type of work unit. Level 0, for example, is the lowest batch level and always contains page images or entire imported documents. Levels 1–7 represent higher work units that are groupings of their lower levels. Default names are assigned to some of the levels, and ScanPlus enables the user to change the assigned names freely. The default level names are:

- Level 0 = Page
- Level 1 = Document
- Level 2 = Folder
- Level 3 = Stack
- Level 4 = (undefined)
- Level 5 = (undefined)
- Level 6 = (undefined)
- Level 7 = Batch

Renaming and enabling/disabling of levels affects only how documents are displayed in the **Tree View** panel. It does not affect system operation in any way.

Related Topics

"Defining Levels" on page 14

1.4 Creates Batches Manually or Automatically

ScanPlus creates batches manually during production when an operator selects the **Create new batch** option. The operator selects the process on which to base the batch, specifies a name and a batch priority, and can immediately start scanning or importing pages into the new batch. If ScanPlus operators are tasked with creating batches, they must be granted Server.Create.Batch permission as well as at least Read permission to the processes from which they are to create batches. (Alternatively, an administrator can create batches in Intelligent Capture Administrator, and ScanPlus operators can then use the **Open saved batch** option to scan or import pages, delete pages, move pages and so on.)

ScanPlus also can automatically create batches during production based on a scanner event, such as a blank page or a page containing a barcode. This feature enables the module to automatically group pages into separate batches as they are scanned. This features is controlled by the module step configuration, so operators

need only choose the appropriate process when creating the first batch, and then ScanPlus creates subsequent batches automatically. ScanPlus names each new batch according to the schema that is specified during ScanPlus setup in the **Auto Batch Creation** pane.

Related Topics

"Setting Up Automatic Batch Creation" on page 45

"Defining Naming Schemas" on page 46

1.5 Automatically Creates Tree Nodes

ScanPlus can be configured to automatically create nodes at levels 1–6 based on a scanner event. During module step setup, you can choose which scanner event triggers the module to insert a new node; for example, scanning a blank page, barcode, or patch code, inserting a new stack in the document feeder, or other events depending on the capabilities of the scanner. When ScanPlus detects this scanner event during production, the module performs the specified action: inserting a new node at the specified level.

This feature enables the ScanPlus to automatically create a batch hierarchy that corresponds to the hard copy document that are being scanned, eliminating a significant amount of operator intervention during scanning. The module may also be configured to automatically create batches in response to a different scanner event, as explained in "Creates Batches Manually or Automatically" on page 9

Related Topics

"Defining Event Actions" on page 19

1.6 Indexes Documents

ScanPlus enables administrators to define index zones and associated index fields during setup, and enables operators to enter date in these indexing fields during production. During setup, you can draw zones on a sample image that during production mode highlight information you want the operator to enter into the corresponding index fields. This feature enables ScanPlus to add detailed organizational information to nodes at any level before sending documents to other modules. The indexing capabilities of ScanPlus can be used instead of, or in addition to, indexing capabilities of other modules such as Completion.

Additional indexing features in ScanPlus enable the administrator to set up index fields that restrict the number and types of characters that an operator can enter to the type of information desired, such as specific alphanumeric combinations.

Related Topics

"Setting Up Indexing" on page 29

1.7 Displays and Manipulates Nodes in the Tree

During production, a ScanPlus operator can use controls to improve the appearance of images by zooming in and out, rotating pages, and changing brightness and contrast settings. These settings affect image viewing only, they are not saved when ScanPlus sends the pages to the Intelligent Capture Server.

In addition to optimizing image viewing, ScanPlus enables operators to insert, delete, and move nodes in the **Tree View** panel, effectively rearranging the entire batch. Nodes can be selected and dragged from one location in the tree to another, selected nodes can be deleted, and new nodes can be inserted at arbitrary locations. Because this capability may be disruptive to certain document capture scenarios, the ability to rearrange the tree can be disabled by using Intelligent Capture Administrator to revoke the ScanPlus.ReorderImages permission.

1.8 Verifies the Number of Pages in a Batch

ScanPlus can keep track of the number of pages scanned into each batch. During setup, the administrator specifies the number of pages the ScanPlus module step should expect. During production, when the operator closes the batch, ScanPlus notifies the operator if the expected number of pages was more or fewer than specified during setup. This feature can be used to verify proper completion of large document capture jobs in which the exact page count is known.

Related Topics

"Defining Miscellaneous Tasks" on page 42

1.9 Automates Operations with Client-side Scripting

Client-side scripting enables ScanPlus administrators to configure the module to respond to events with custom actions. ScanPlus 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 `BeforeNewBatch`, `BatchCreationError`, `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 ScanPlus, including:

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

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

1.10 Generates Scan Reports

ScanPlus provides the ability to capture and review reports on the statistics that were captured when ScanPlus captured the batch. These reports contain a variety of useful information, including the names of the process, batch, and step, the dates and times that batch operations occurred, the number of pages scanned, imported, and processed, number of discarded sheets, and more. ScanPlus can generate reports for the current batch or from all batches from the current session, and can then display or print the reports.

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 Intelligent Capture Server Connections

When a connection to an Intelligent Capture Server is lost, ScanPlus displays the error message `Server Connection is lost` and logs the error. A ScanPlus 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.

2.2 Understanding Online Applications

ScanPlus 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 a 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 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 server. If there is a task or opened batch from this server, ScanPlus/RescanPlus will log this as an error message. Otherwise, the message will be logged as a warning.

A ScanPlus 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.

Related Topics

"Understanding Intelligent Capture Server Connections" on page 13

2.3 Setting Up ScanPlus

2.3.1 Understanding ScanPlus Status Information

The **Status Information** pane displays read-only information about ScanPlus; 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).

2.3.2 Setting Up Batch Levels

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

2.3.2.1 Defining Levels

The **Levels** pane in ScanPlus 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 operators during production.

Note: This setup information affects how all modules display the tree. This number can be changed at any time through ScanPlus, but if the Intelligent Capture Server has already sent a node to another module for processing, that module will not reflect changes made to the tree at the ScanPlus machine.

To define levels:

1. From the **ScanPlus 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 ScanPlus 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 nodes in the tree has further instructions on 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. 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
6. Click **OK** or **Apply** to save the changes and return to the ScanPlus setup.

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

2.3.2.1.1 Understanding Numbering Schemas for Tree Nodes

ScanPlus provides schemas for numbering nodes in the tree, making nodes easier to identify and track throughout the document capture process. ScanPlus 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. ScanPlus 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 ScanPlus setup. When writing a numbering schema, the Node Count syntax, described below, must be used.

Table 2-1: Node Count Syntax Table

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.

Character	Description
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.

2.3.2.2 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 **ScanPlus Setup** window, select **Levels**.
2. From the **Levels** pane, 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 **ScanPlus Setup** window.

2.3.2.3 Understanding Trigger Levels

In production mode, the ScanPlus 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. ScanPlus 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 ScanPlus module:

- Running the ScanPlus module at level 7 enables the module to own the entire batch until the operator finishes all scanning and indexing and closes the batch. This prevents any changes to the tree from causing data consistency problems. To run the ScanPlus module at level 7, you must configure your *IPP* as explained in "IPP Code Considerations when Triggering the Scanplus Module above Page Level" on page 18.
- If you cannot run the ScanPlus 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* has more information on how to properly handle retriggering within your IPP.
- While it is possible to configure ScanPlus 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** pane, select the checkboxes only for the levels that the ScanPlus operator will need to view. For details on restricting manipulation of the tree, see "Inserting, Deleting, or Moving Levels" on page 16.
- If you must enable levels beyond those in the current task, consider disabling the ScanPlus 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** pane. For details on restricting manipulation of the tree, see "Inserting, Deleting, or Moving Levels" on page 16.
- 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 ScanPlus 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 ScanPlus at level 0 enables pages to move immediately from a scanning to the next module in the process (assuming the next module runs at level 0), as opposed to waiting for the entire batch to be scanned and closed.

2.3.2.3.1 IPP Code Considerations when Triggering the Scanplus Module above Page Level

If the ScanPlus module is triggered above the page level, sending pages on to the next module requires more code to be added to the ScanPlus Finish routine in the *IPP*. However, by triggering the ScanPlus 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 ScanPlus 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 ScanPlus 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 ScanPlus 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 p0 As IAS_RECORD_0
    For Each p0 In pRoot.Tree.Pages
    p0.Export.InputImage = p0.Scan.OutputImage
    Next
End Sub
```

2.3.3 Defining Event Actions

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

2.3.3.1 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 **ScanPlus Setup** window, select **Event Actions**.
2. In the **Scanner Events** list box, select a scanner event that ScanPlus will use to trigger the creation of new nodes or batches:

   - **None**: No scanner event is defined.
   - **Software patch code**: ScanPlus uses the software patch code detection to recognize a scanned or imported Kodak patch code as a scanner event. ScanPlus can use patch code detection with any scanner. ScanPlus can have a scanner event for each of the supported Kodak patch codes: Patch 2, Patch 3, and Patch T. The image files for the supported patch codes are located at the following path: `c:\Program Files\InputAccel\Client\images\patch directory`.

     If the scanner is working in duplex mode, this event is only triggered for patch codes scanned from the front side of the page. ScanPlus cannot detect patch codes on the back sides.

     Note: When using a Kodak scanner, do not enable **Software Patch Code** events if the scanner is configured to use the built-in hardware patch code detection. This can be verified by selecting the **More** button in the **Scanner Settings** window.
   - **Kodak level change**: The selected scanner is Kodak with configured hardware patch code detection. When the scanner recognizes a patch code (Patch 2, Patch 3, or Patch T), it detects a new page, section, or chapter and sends the *change level event* with a particular value to ScanPlus. This triggers the Kodak level change scanner event that ScanPlus handles by creating a batch or node, depending on how the event action is configured.

     Note: The Kodak scanner hardware handles the Kodak T patch sheets and all other patch sheets differently. For more information on using patch sheet separators for Kodak scanners, see "Understanding Patch Sheet Separators on KODAK Scanners" on page 22.
   - **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 ScanPlus to

generate a new node or batch every time the scanner detects a separator page.

- **Every N pages**: ScanPlus 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 five pages and a level 2 folder every ten pages, define the document options in the first line of this tab and the folder options in the second line. ScanPlus counts in increments of `N` starting with the first page in the batch. When setting up more than one event at **Every N Pages**, ScanPlus counts each event independently.

  A page is defined as a single-sided image, which is scanned or imported into an Intelligent Capture Server by modules such as Scan, ScanPlus, Standard Import (MDW and Email), Web Service Input, and Ricoh GlobalScan Plug-in. For every page scanned or imported in simplex mode, one page is counted. For every page scanned or imported in duplex mode, two pages are counted. Each single-sided page is counted once when it enters the system.

- **New stack**: When ScanPlus 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 ScanPlus 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, ScanPlus 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.

  – ScanPlus itself can only detect patch codes and blank pages. It cannot detect barcodes. The **Bar code** event action in ScanPlus 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**: On scan or import, ScanPlus recognizes a blank page as a scanner event and creates a new node or batch. One side of a standard sheet of paper is considered to be a page. For duplex scanning, if both sides are blank, then two events are recognized. For single-sided scanning with a simplex scanner, only the side that is being scanned is recognized.

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 ScanPlus 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 ScanPlus 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**: ScanPlus creates a new level 1 node.
   - **New folder**: ScanPlus creates a new level 2 node.
   - **New stack**: ScanPlus creates a new level 3 node.
   - **New level 4**: ScanPlus creates a new level 4 node.
   - **New level 5**: ScanPlus creates a new level 5 node.
   - **New level 6**: ScanPlus creates a new level 6 node.
   - **New batch**: ScanPlus creates a new batch. For more information on setting up batches automatically, see "Setting Up Automatic Batch Creation" on page 45.
   - **Up 1 level**: ScanPlus creates a new node 1 level higher than the current node.
   - **Up 2 levels**: ScanPlus creates a new node 2 levels higher than the current node.

Note: Normally, the current node is a page node. Therefore, ScanPlus 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 ScanPlus to move **Up 1 level** and **Up 2 levels** every four pages, ScanPlus 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 ScanPlus setup. The individual scanner's documentation has 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 ScanPlus delete the event page from the batch.
6. Repeat steps 2-5 for each scanner event that needs to defined.

Note: If scanner events are defined that trigger conflicting actions, the latter of the actions will be performed. For example, if ScanPlus is configured to create a level 2 folder every 10 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 five pages.

7. Click **OK** to save the settings and close the **Event actions** window. If using scanner events to automatically generate new batches, this will finish the configuration to enable automatic batch creation.

2.3.3.2 Understanding Patch Sheet Separators on KODAK Scanners

Kodak scanners have a special job separation sheet called a patch sheet. The Kodak patch sheet separators can be detected by ScanPlus 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 codes other than Kodak Patch T) than to Kodak Patch T sheets.

- **For all patch sheets other than Patch T**: When a general patch sheet is scanned, the scanner throws a level change event before it scans the next sheet with the image page(s). As a result, the detected patch code triggers 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).
- **Patch T sheets**: When a Kodak Patch T sheet is scanned, the scanner throws a level change event after it scans the next sheet with the image page(s). As a

result, the detected Patch T triggers 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).

Kodak scanners send the Patch T (patch transfer) detection information together with the image that follows the patch sheet. If the **Kodak Level Change** event action is enabled with the **Discard Page** option, any data associated with the Patch T sheet will be lost. This is how Kodak handles the events for a Kodak Patch T sheet. ScanPlus supports this action as it is implemented by Kodak. If the workflow requires a different mode of operation, three other options are available:

- Use the software Kodak T detection of ScanPlus
- 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 ScanPlus). When designing the document capture workflow, the operator must take these differences into account, and must use caution when electing to discard separator pages.

2.3.4 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 ScanPlus step of each process intended for use. The Intelligent Capture Server saves the configuration for each driver.

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

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

The **Scanner** pane in **ScanPlus Setup** enables the operator to select and configure the scanner that will be used for scanning during production mode. Fully setting up the scanner for ScanPlus includes the following:

2.3.4.1 Selecting a Scanner

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

Changes to the scanner's configuration for ScanPlus that are made from the **Setup step** settings are saved globally and can be used later by all ScanPlus operators. These changes immediately become available to the ScanPlus operator who made them. Other ScanPlus operators will use this changed scanner configuration after it is loaded to their computers. 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 **ScanPlus Setup** window, select **Scanner**.
2. Click **Change selected scanner** in the **Scanner Driver** area. (The scanner driver for the scanner connected to the ScanPlus 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 ScanPlus 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 ScanPlus before ScanPlus detects the scanner. After choosing a scanner, if the scanner does not have a configuration assigned, the operator must select a configuration or create a configuration. Multiple configurations can be created for a single scanner driver.

Related Topics

"Updating the Scanner List" on page 25

"Setting Up the Scanner Driver" on page 25

2.3.4.1.1 Updating the Scanner List

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

To update the scanner list:

1. From the **ScanPlus Setup** window, select **Scanner**.
2. Click **Change selected scanner** in the **Scanner Driver** area.
3. In the **Scanner Selection** window, select **Update scanners list**.
4. ScanPlus will reload the drivers and add the scanner driver(s) to the **Available scanner drivers** list.

2.3.4.1.2 Setting Up the Scanner Driver

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

To set up the scanner driver:

1. From the **ScanPlus Setup** window, select **Scanner**.
2. Click **Change selected scanner** in the **Scanner Driver** area.
3. In the **Scanner Selection** window, select **Set Up 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.

2.3.4.2 Setting Up a Scanner Configuration Profile

ScanPlus 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 ScanPlus (but is not shared with RescanPlus). 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 ScanPlus loads scanner configuration profiles when it starts, changes to profiles have no effect until ScanPlus exits and restarts.

Notes

- If an operator attempts to change the current profile to a profile that uses a different scanner driver, ScanPlus 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 **ScanPlus Setup** window, select **Scanner**.
2. Click **Select scanner** or **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 ScanPlus 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 ScanPlus is closed or when the current batch is configured to use another scanner profile. These changes do not affect other ScanPlus 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 ScanPlus 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.

2.3.4.3 Setting Up Scanner Settings

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

To set up scanner settings:

1. From the **ScanPlus Setup** window, select **Scanner**.
2. Select a scanner configuration from the list of available configurations, then click **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. Click **Page Bounds** to set up the boundaries of the pages to be scanned.
6. Click **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 has 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.

Note: A page is defined as a single-sided image, which is scanned or imported into an Intelligent Capture Server by modules such as Scan, ScanPlus, Standard Import, Web Service Input, and Ricoh GlobalScan Plug-in. For every page scanned or imported in simplex mode, one page is counted. For every page scanned or imported in duplex mode, two pages are counted. Each single-sided page is counted once when it enters the system.

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)**: Allows the scanner to automatically scan in color when color is detected in a batch.
   - **Mode**: Specifies which color mode ScanPlus 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, ScanPlus 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

ScanPlus 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 ScanPlus 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 ScanPlus 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.

2.3.5 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 choosing 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.

2.3.5.1 Defining Indexing Field Levels

ScanPlus 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 **ScanPlus Setup** window, select **Index**.
2. In the **Level** list box in the **Indexing Fields** pane, 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, ScanPlus 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. Note that selecting this option and configuring the module to run at a level other than level 0 requires you to select a page-side option from the **Read index information from** list. The operator can also change index information after pages have been scanned.
- **Display fields after scanning**: ScanPlus waits until the first set of pages has been scanned or imported before showing indexing fields and zones. The operator may then select the node(s) and enter index information. Select this option for each level to define indexing fields for the operator to index.
- **Do not index**: ScanPlus 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 selected, select one of the following options from the **Read index information from** list:

   - **Current side**: ScanPlus 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**: ScanPlus 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, ScanPlus puts focus on the back side of the event page.
   - **Side after next**: ScanPlus 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 ScanPlus module puts focus on the second page under the level 1 node. ScanPlus counts the sides of an event page regardless of whether the page is discarded.

   (This list is enabled only when the operator selects to display fields and ScanPlus is configured to run at a level other than level 0.) Use this list to specify which page side ScanPlus should display first in each level 1 node. ScanPlus counts the sides of an event page regardless of whether the page is discarded.

5. Select **Define Indexing Fields**. The ScanPlus **Indexing Setup** window displays. When opening the indexing setup for the first time, ScanPlus prompts the

operator to select a sample image. Otherwise, ScanPlus displays the sample image chosen previously.

6. From the **Open Document** window to navigate to the directory containing the sample image files.

7. Select one or more 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 when ScanPlus is run in production. The active index zone is highlighted in yellow. Use the red handles on the zone to resize and move the index zone to obtain the best view of the data. 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. For more information on using characters for indexing, see "Understanding Characters for Restricting Data Entry" on page 32.

12. To display a default initial value for the index field during production, type the value in the **Default Value** field of **Field properties** window. If the administrator has restricted the field, the initial value should be valid for that restriction mask.

13. Set the **Zone Properties** of the index zone with these options:

    - **Zone color**: Modifies the fill color of the index zone.
    - **Zoom to zone**: Ensures that when operators select an index field in production mode, ScanPlus automatically zooms the corresponding index zone.
    - **Show only when the field has focus**: Displays the index zone when the associated index field has focus.
    - **Position**: Modifies the location and size of the zone. The location and position are measured in 1200ths of an inch.

14. To define more indexing fields within this level, repeat steps 9 through 13. To define more indexing fields within another level, repeat steps 8 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 "Output IA Values" on page 89 defined in the ScanPlus MDF. Indexing field entries are restricted to 64 characters.

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

16. Select **OK** to save the changes and return to the **ScanPlus Setup** window.

Note: ScanPlus 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 ScanPlus is configured to run at level 0. If using the **Display fields after scanning** option, it is possible that the ScanPlus operator will index a page or higher level node that is simultaneously being processed by another module. If this situation occurs, the trees in ScanPlus and the other module would not match. Therefore, it is recommended that you use the **Display fields after scanning** option only if the administrator is absolutely sure that doing so will not cause data consistency problems within the batches being processed.

2.3.5.2 Understanding Characters for Restricting Data Entry

This table describes the characters that can be typed into an indexing field. These characters are typed during the ScanPlus 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

Character	Usage	Description
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
\	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)

Characters	Description
##:## ??	Medium time (for example, 05:36 AM)
##:##	Short time (for example, 05:36)

2.3.5.3 Validating Index Entries Using Restriction Masks

This section includes descriptions of using restriction masks for the ScanPlus module index entries.

2.3.5.3.1 Creating Restriction Masks

When you define an indexing field in ScanPlus, you can control the type of data that the operator enters in that field by creating a restriction mask. A restriction mask limits the length and type of characters that an operator can enter using:

- Placeholders: A placeholder is a single character that restricts operator entries to a set of characters. For example, a pound sign (#) restricts an operator entry to a single numeric character (ranging from 0-9). If you enter # in a restriction mask during setup, a prompt character (underscore) displays in the corresponding indexing field during production. The operator must then enter a number in the place designated by the underscore. For more information about placeholders, see "Using Required Versus Optional Placeholders" on page 34. For more information about underscores, see "Enforcing Restriction Masks" on page 35.
- Literals: A literal is a character that displays as itself. If you enter a literal character in a restriction mask during setup, that same character (which cannot be edited) displays in the corresponding indexing field during production. Common literals include colons (:), which you can use as time separators, and forward slashes (/), which you can use as date separators.
- Initial values: An initial value is a character entered during setup which, if necessary, can be edited by operators during production. For example, if you are indexing phone numbers that mainly begin with the area code (800), you can enter the initial values (800) into the field during setup, allowing operators to keep that area code or edit it if necessary. Initial values are not part of restriction masks, but they are used closely with restriction masks. Initial values must conform to any restriction masks that have been entered for the field.

2.3.5.3.2 Using Required Versus Optional Placeholders

Within ScanPlus, placeholders are further subdivided into two categories: required placeholders and optional placeholders. Each type of placeholder requires that the characters entered in an indexing field conform to the placeholders defined in the restriction mask. Required placeholders, however, also require that the operator actually enter data. Operators are only forced to enter data for required placeholder fields if the **Do not allow incomplete index data to be saved** option is enabled during setup. For more information, see "Enforcing Restriction Masks" on page 35. Optional placeholders only enforce the restriction if the operator decides to enter data.

For example, the agent phone number restriction mask shown in "Creating Restriction Masks" on page 34 uses the pound sign (#) to restrict operator entries to numbers:

```
(###)###-#### Ext ###
```

The # sign is a required placeholder, which means that during production, the operator will be required to enter a number for each # sign in the restriction mask, including the extension number. This may not be practical, however, since some insurance agents have direct lines.

To account for this, you could modify the restriction mask to use the optional "9" placeholder for the extension part of the phone number. The character placeholder 9 behaves almost exactly like # except that 9 is optional and # is required. Also, 9 allows the user to enter spaces and # does not. For detailed descriptions of the various placeholders that you can use, see "Understanding Characters for Restricting Data Entry" on page 32.

```
(###)###-#### Ext 9999
```

If you use this restriction mask, the operator will only be required to enter the main part of the phone number, and can optionally enter any extension between 1-4 digits.

2.3.5.3.3 Enforcing Restriction Masks

ScanPlus enables you to further specify how strictly you want to enforce a restriction mask using the **Do not allow incomplete index data to be saved** option during setup.

When you enable the **Do not allow incomplete index data to be saved** option during setup, the ScanPlus module will not allow the operator to save index data to the Intelligent Capture Server (using the **Save** button) until the requirements of any required placeholders in the restriction mask are satisfied. During production, the ScanPlus module will beep and return the focus to the unacceptable indexing field when a field does not satisfy the required placeholders. Any unfilled optional placeholders are saved as underscores. (For example, if the operator only entered the 2 digit extension "89" in a phone number field that specifies an optional four-digit extension, the remaining places would be filled as underscores. The extension would be saved to the Intelligent Capture Server as "89__".)

When you do not select the **Do not allow incomplete index data to be saved** option during setup, the ScanPlus module does not strictly enforce restriction masks that contain required placeholders. In essence, all placeholders are treated as optional. If the user does not enter valid data, the module will simply save underscores where the data should be (both for required and optional fields).

When your ScanPlus configuration produces indexing results containing underscore characters, you may want to remove them in your *IPP*.

Note: If you remove underscore characters from index field data stored on the Intelligent Capture Server, the data will not be displayed in the index fields if

you return to edit it at a later time. (After underscores are stripped from the field, the data no longer complies with the restriction mask, therefore ScanPlus cannot display it.) This means that if you want to make a change, you will need to re-enter the data (since it is no longer displayed) before selecting **Save**. To avoid this, it is recommended to use required masks and enable **Do not allow incomplete index data to be saved**.

The following `RemoveChar` function can be used to remove any single character (`strChar`) from a string (`strField`). When using this function in your IPP to remove underscore characters from an indexing field, pass the underscore character in `strChar` and the indexing field in `strField`.

```
Function RemoveChar(strField As String, strChar As String) As String

On Error GoTo my_error
Dim i As Integer
Dim strOut As String
' Exit the function if the string does not contain any characters.
RemoveChar = ""
    If Len(strField) = 0 Then
        Exit Function
    End If
' Exit the function if the character passed to the function is
' less than 1 or more than 1, i.e., not a single character.
    If Len(strChar) <> 1 Then
        RemoveChar = strField
            Exit Function
    End If
' Loop through the string, testing each character. Only add
' those characters back to the string that do not equal strChar.
    For i = 1 To Len(strField)
        If Mid(strField, i, 1) <> strChar Then
        strOut = strOut & Mid(strField, i, 1)
        End If
    Next
        RemoveChar = strOut
Exit Function

my_error:
Call IALogNTMessage(IALOG_ERROR, "Error " & Format(Err.Number) & ", " & Err.Description
& ", in RemoveChar.")

End Function
```

2.3.6 Setting Up Importing Image and Document Files

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

2.3.6.1 Setting Up Importing

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

To set up importing:

1. From the **ScanPlus Setup** window, select **Import**.
2. Select the **Allow import of image and document files during processing** checkbox.
3. Use the list box to specify the file formats that will be allowed to import to a new or existing batch during processing. For a list of supported file formats, see "Understanding Supported File Formats" on page 38.
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** pane. With this option selected, ScanPlus 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 **ScanPlus** 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.

     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 **ScanPlus Setup** window.

2.3.6.1.1 Understanding Supported File Formats

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

- *BMP*
- *CALS*
- *CMP*
- *DCX*
- *GIF*
- *JBIG*
- *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.

2.3.7 Defining Image Output

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

2.3.7.1 Specifying Image File Format

For each image mode (binary, 4-bit gray, 8-bit color, etc.), ScanPlus 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** page. 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 **ScanPlus 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: ScanPlus 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
Packbits	all	yes	fast	poor
Run Length Encoding	all	yes	fast	poor
LZW	all	yes	slow	medium

Compression Method	Depths	Lossless	Speed	Ratio
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 to specify compression formats for each color depth.

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

2.3.7.2 Selecting Page Rotation Options

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

To specify page rotation options:

1. From the **ScanPlus 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.

2.3.7.3 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 displayed 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 MDFs installed with release 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 release 6.0, the operator will receive a warning when ScanPlus 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 **ScanPlus 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

Note: The **Large** thumbnail size can be configured in Intelligent Capture Designer. Navigate to **Intelligent Capture Designer** > **System** > **System Configuration** > **GlobalOptions**. Update the **ThumbnailHeight** and **ThumbnailWidth** options. These options update the **Large** thumbnail size values.

2.3.8 Defining Miscellaneous Tasks

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

To enable displaying released batches in the ScanPlus batch list, add the `ScanPlus.AllowOpenReleasedBatches` Intelligent Capture permission to the Scan Operator role.

To define miscellaneous settings:

1. From the **ScanPlus Setup** window, select **Miscellaneous**.

2. Select the checkboxes for the options that will be made available to the ScanPlus operator in production mode:

Property	Description
Check page count when closing batch	Selecting this checkbox allows ScanPlus 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, type 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 ScanPlus module notifies the operator of the discrepancy in pages.
Prompt before committing batch to server	Selecting this checkbox allows ScanPlus to prompt the user with the following choices when the operator closes the batch: • **I have finished scanning this entire batch.** • **I am done with the current <<***Level #***>>.** • **There are more pages left in the current document.**
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 allows ScanPlus to delete empty batches created by a scanner event. **Note:** In production mode, this option is visible but disabled.
Disable the priority selection field on the New Batch window	Selecting this checkbox prevents ScanPlus from setting the priority on the batch after creating the batch. This allows the `IPP Batch_Create` routine to set the priority. The default batch priority value set by the Intelligent Capture Administrator module does not take effect when this option is selected. **Note:** This option is visible but disabled when setting up a batch.

Property	Description
Disable the description field on the New Batch window	Selecting this checkbox prevents ScanPlus from setting the description on the batch after ScanPlus creates the batch. This allows the `IPP Batch_Create` routine to set the description. **Note:** This option is visible but disabled when setting up a batch.
Automatically release batch on batch close	Enable to have ScanPlus release a batch when the batch is closed using the **F4** shortcut key.
Display the page level value in the status bar	Selecting this checkbox allows ScanPlus (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.
Batch Synchronization period	This is the number of files ScanPlus sends to the server between batch synchronization. The default value is 300; the maximum value is 1000. If the value is 0, ScanPlus synchronizes batches only when batch processing is complete.

Property	Description
Local image cache	Select one of the following to apply to this instance of the Scanplus module: • **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 and ignore the global setting. • **Disable image cache** - To specifically disable image caching 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**. The IA value name for this option is `DisableLocalCache`.

2.3.9 Setting Up Automatic Batch Creation

The **Auto Batch Creation** pane enables the operator to configure settings for creating a batch automatically during production. To use this feature, set up an initial batch using a process that defines scanner event actions. These scanner event actions trigger new batch creation.

To set up automatic batch creation:

1. Select the process that to base the batches on, then start that process in setup mode.
2. Click **Event Actions** from the **ScanPlus Setup** window. From the **Event Actions** pane, define the scanner event action that will prompt the creation of new batches. Then select **New Batch** from the **Action** list box.
3. Click **Auto Batch Creation** from the **ScanPlus Setup** window.
4. In the **Batch name schema** field of the **Auto Batch Creation** window, type a schema for naming each batch created by the process. For a list of valid schema keys, see "Defining Naming Schemas" on page 46.
5. In the **Process schema** field, select a schema from the list box or type a schema to designate a process from which each new batch will be created. To process each new batch with a different process, type the `@(BarTextn)` schema key, assigning a value of <*n*> from 0 to 9. This tells ScanPlus to recognize the nth barcode on a page and base the new batch on the process of that name.

   Note: If the process chosen by an operator or returned by the `@(BarTextn)` schema key does not use the automatic batch creation feature, ScanPlus scans all subsequent pages into this last new

batch. During automatic batch creation, the scanner settings used by the first batch carry over to all subsequently created batches. ScanPlus uses the same scanner settings for all the batches it creates, even if a process schema selects a new process that defines a different scanner configuration. When using automatic batch creation, the only way to change scanner settings is to manually stop scanning during production mode and reconfigure options from the **Scanner** window. All subsequently scanned batches inherit the new scanner settings. For important information on using naming schemas, see "Defining Naming Schemas" on page 46.

6. Click **OK** to save the settings.
7. When ScanPlus encounters a scanner event action defined to create a batch, a new batch will be automatically created according to the process configuration.

Note: If automatic batch creation is configured so that at some point it selects a process that does not use the auto batch creation feature, automatic batch creation ends. At that point, module scans or imports all subsequent pages into this final batch regardless of any scanner events that occur.

Related Topics

"Defining Naming Schemas" on page 46

"Defining Event Actions" on page 19

2.4 Defining Naming Schemas

ScanPlus uses naming schemas to automate batch creation. Naming schemas enable the module to create batches with unique names with minimal or no operator interaction. Using naming schemas to automate batch creation can ensure consistent batch naming.

A naming schema is a naming pattern consisting of literal text, schema keys, and certain IA Values. Literal text is used in names exactly as entered during setup. Schema keys are placeholders that are replaced with the value they represent at the moment a new file or batch is created. IA Values are variables that also are replaced with the value they represent in the same way as schema keys. However, any IA Values used must contain valid data at the time the file or batch is created. The naming schema must produce a unique name each time the module creates a new batch. If it produces a duplicate name or an empty string, a new batch will not be created.

For example, if a batch naming schema includes only the schema key to insert the date, the module will create only a single batch on a given date. The second batch it attempts to create on the same date will have an identical name and batch creation will fail. However, if the schema includes schema keys to insert the date and time (changes every second) or the batch index (increments with each new batch), the resulting batch name will be unique.

Note: When batches are created automatically, the batch description and priority are copied from the previous batch to the new batch. To prevent copying this information from batch to batch, reset the <*Description*> and <*Priority IA Values*> in the level 7 process code following the ScanPlus step.

To define a batch naming schema:

1. Run the module for setup.
2. Select the **Auto Batch Creation** option from the navigation panel.
3. In the **Batch name schema** field, type a combination of literal text and batch naming schema keys that will produce unique batch names. The following table provides a description of all available batch naming schema keys supported by the module.

Table 2-5: Naming Schema Keys

Schema key	Description
<*@(BarText<n>)*>	Outputs the text from barcode <*n*>, where <*n*> is the <*n*>th barcode value on a page. Valid values of <*n*> are 0–9. **Notes** • ScanPlus numbers barcodes from left to right, top to bottom, beginning at 0. • This schema key works only with scanners that are able to recognize barcodes.

Schema key	Description
<@(Date)>	Outputs the current date in the form of *<YYYYMMDD>*, where: • *<YYYY>* is the four digit year • *<MM>* is the current month • *<DD>* is the current date To change the format of *<@(Date)>* and *<@(Now)>*, add a format string to the schema key as shown in the following examples: • *<@(Date,MM-DD-YYYY)>*: Outputs the date in the format of month-day-year (for example, 12-31-2013). • *<@(Date,YYYYY)>*: Outputs the date as a four-digit year followed by the integer day of the year (for example, 2013365). • *<@(Date,YYYY)>*: Outputs the date as a four-digit year (for example, 2013). • *<@(Date,YYY)>*: Outputs the date as a two-digit year followed by the integer day of the year (for example, 13365). • *<@(Date,YY)>*: Outputs the date in the format of a two-digit year (for example, 13). • *<@(Date,Y)>*: Outputs the date as an integer day of the year, 1–366 (for example, 365)

Schema key	Description
<@(Index<[,num]>)>	Returns a unique, sequential, increasing integer value within a single Intelligent Capture Server, beginning with 1. **Note:** `@(Index<[,num]>)` does not create a unique integer value among Intelligent Capture Servers in a ScaleServer group. Use the `@(Index<String>)` to create a unique, increasing integer value among Intelligent Capture Servers in a ScaleServer group. You may format the value to pad the number with leading zeros, if desired. For example: • `@(Index,00)` produces, 01, 02, 03. • `@(Index,0000)` produces 0001, 0002, 0003. Padding does not limit the number of digits in the value. It only adds leading zeros to fill the specified number of digit placeholders. In the first example above, the number continues to increment, if necessary, past 99 to 100, 101, 102, etc. To generate a unique index number using the `@(Index)` key, the operator must have permissions to modify the process (**System.ProcessModify** permission) used to create the batch. If the operator does not have these permissions, the module will not be able to update the index value, which is stored in the process file.

<table>
<tr><th>Schema key</th><th>Description</th></tr>
<tr><td><@(Index<string>)></td><td>Returns a unique, increasing integer value among all Intelligent Capture Servers in a ScaleServer group. The value produced is a unique, increasing number, but not sequential by default. <code>String</code> represents a user-defined alphanumeric string containing no spaces (underscores are allowed).

Examples

You have <code>@(IndexABC)</code> as part of your automatic batch creation naming schema and you want to reset the key value to 1 each day using IATimer. You can use the key string <code>$module=IA__EDITABLEVALUES/BatchSchemaIndexABC</code> where <code>ABC</code> is a user-defined alphanumeric string containing no spaces (underscores are allowed).

Your company uses three scanner workstations to capture accounting documents. The accountants use a process called “Expense Reports” to capture documents, and each batch based on this process is named “Expense Reports”. You can configure the capture step for “Expense Reports” to use the schema key <code>@(IndexAcct1)</code> to differentiate batches by typing <code>Expense Reports @(IndexAcct1)</code> in theProcess schema list box from the Auto Batch Creation pane.

Each time a new batch is created using the process, the batch name contains an index number:

<table>
<tr><th>Scanner station</th><th>Batch name</th></tr>
<tr><td>1</td><td>Expense Reports 1</td></tr>
<tr><td>1</td><td>Expense Reports 2</td></tr>
<tr><td>2</td><td>Expense Reports 3</td></tr>
<tr><td>1</td><td>Expense Reports 4</td></tr>
<tr><td>3</td><td>Expense Reports 5</td></tr>
<tr><td>2</td><td>Expense Reports 6</td></tr>
</table>

Format the index number using 0 as a placeholder. For example: <code>@(IndexAcct1,00)</code> produces, 01, 02, 03, etc. <code>@(IndexAcct1,0000)</code> produces 0020, 0021, 0022.</td></tr>
</table>

Schema key	Description
<@(Name)>	Enables the operator to enter a portion of the automatically-generated batch name. Inclusion of this schema key causes the module when run for production to display a **New batch name** field which otherwise would not be present. For example, the batch naming schema: `<@(Name)> <@(Now)>` displays the **New batch name** field where the operator can type text that is prepended to the value inserted by the *<@(Now)>* schema key.
<@(Now)>	Outputs the current date and time in the form of *<YYYYMMDD-HHMMSS>*, using the same rules and formatting overrides as *<@(Date)>* and *<@(Time)>*.
<@(Server)>	Outputs the machine name of the Intelligent Capture Server that owns the batch.
<@(Time)>	Outputs the current time in the form of *<HHMMSS>*, where: • *<HH>* is the current hour in a 24-hour clock • *<MM>* is the current minute • *<SS>* is the current second When auto-naming with *<@(Time)>*, the batch name uses the time when scanning starts, not the time when the batch is created. To change the format of *<@(Time)>* and *<@(Now)>*, add a format string to the schema key and rearrange the placeholders. For example: *<@(Time,SS-MM-HH)>* outputs the time using the format of seconds-minutes-hours.

2.4.1 Defining a Process Schema

ScanPlus can optionally use a process schema to further refine automatic batch creation.

To define a process schema:

1. Run the module for setup.
2. Select the **Auto Batch Creation** option from the navigation panel.
3. Under **Process schema**, select or type one of the following:
   - ***<Same Process>***: Select this option to use the same process for the new batch as was used for the previous batch. This is the most commonly-used option and results in each new batch having identical characteristics to the previous batch.
   - ***<Ask User>***: Prompts the operator to select a process from which the new batch will be created.
   - *<process name>*: Select a specific process to use to create the new batch.

     Note: If the new process does not use automatic batch creation, any subsequent scanner events will not create batches. All remaining pages will be scanned into the batch created from this process.
   - *A naming schema*: Type any combination of literal text, IA Values, and naming schema keys that will resolve to a process name. Use any of the schema keys described in the "Naming Schema Keys" on page 47 table.

     Note: Unlike a batch naming schema definition, the process naming schema need not resolve to a unique name, because it is valid to use the same process to create any number of new batches.

To create a process naming schema:

1. In the Intelligent Capture Administrator window, select **Systems** from the navigation panel. The **Systems** pane displays.
2. Click **View Processes**. The **Processes** pane displays a table of processes installed on the system.
3. Select the process that will use file naming from the **Processes** table. The process steps are displayed in the **Steps for process** table.
4. Select a process step from the **Steps for process** table and double-click, or right-click, and select **Settings**. This displays the setup window for the selected step.
5. Click **Auto Batch Creation** on the navigation panel.
6. In the **Process schema** list box, select the process on which to base each new batch. Alternatively select **<Ask User>** to prompt the operator to select a process on which to base the new batch.

7. Click **OK** to save the process naming schema and close the setup window, or click **Apply** to save the schema and continue with module setup.

2.5 Undocking Windows in ScanPlus

ScanPlus 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 ScanPlus:

- **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 the **File View** panel to hide or display panels or reset the default layout. (Right-clicking the **File View** panel displays the **File View** context menu)
- 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 ScanPlus, you can undock the following windows and tabbed panels in ScanPlus:

- **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 Scanning Pages

ScanPlus enables control of basic scanning operations through options in its control panel.

To scan pages:

1. Start the ScanPlus module for production.
2. Select **Create new batch** to create a new batch or **Open saved batch** to open an existing batch to scan or import pages.
3. If creating a new batch, select a process for the new batch from the process scroll list or search for a process using the **Search** field. If you are using the **Search** field, the ScanPlus process scroll list will display the processes that match the text typed into the field.

   After selecting the process, provide the following information:

   1. – a name for the new batch. Do not use the < character in the batch name. Administrators cannot search for batches in Intelligent Capture Administrator if the batch name contains the < character
   2. – a priority for the batch (low, normal, high or default priority)
   3. – a description for the batch

      Note: To choose whether to use this description for the next batch, select **Reuse description for the next batch**.

   Click the **Create** button when finished to create the new batch.
4. If selecting an existing batch, select the batch from the **Pick a batch from the list** list, or enter the batch manually in the field at the bottom of the **Start by selecting a batch** window.
5. Place pages into your scanner. Consult your scanner's documentation for instructions on how to load pages. If you are opening an existing batch, click the thumbnail image in the **Tree** pane after which you want the newly-scanned pages to be inserted.
6. In the navigation panel of the ScanPlus production window, select **Scan Pages**. Your scanner will begin scanning and the new pages will appear in the **Tree** pane. During this time, a small **Scanning** progress window opens showing the number of pages that have been scanned. If you want to cancel scanning, select **Stop Scanning** in the **Scanning** progress window.

   When scanning pages in production mode with a MultiStream scanner, note that the module only displays thumbnails of the first image stream. More

exactly, ScanPlus displays images mapped to the `OutputImage` IA value, and if a second stream is mapped to `OutputImage`, ScanPlus shows the second stream. The control panel buttons change to a **Stop Scanning** button and your scanner scans hardcopy pages until the document feeder is empty.

When your scanner has an automatic document feeder and flatbed combination, selecting **Scan** causes the scanner to attempt scanning from the feeder. If the feeder is empty, it scans from the flatbed. If your scanner has a flatbed only (no automatic document feeder), use the ScanPlus **Flatbed scanning mode**. ScanPlus will close the progress window automatically if the scanner source is flatbed.

Note: With Kodak i260 scanners, if a document is in the flatbed and the automatic document feeder is empty, selecting **Scan** results in an `automatic document feeder not ready` message. Select **Preview Pages** to scan one page at a time from the flatbed.

7. Select **Stop Scanning** to stop scanning. When the scanner's document feeder is empty, or when you select **Stop Scanning**, the ScanPlus module prompts you to continue scanning or finish scanning.

Note: With Eastman Kodak Digital Science 3590C scanners, selecting **Continue Scanning** after using the **Stop Scanning** button in the ScanPlus module results in an error message from the scanner driver. You can safely dismiss this error and continue scanning.

8. To continue scanning, place another set of pages on the scanner's document feeder and select **Continue Scanning**. To finish the scanning process, select **Finish Scanning**.
9. When you have finished scanning pages into the batch, select **Finish Batch**.
10. In the **Finish 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 when the batch is closed.
    - **Leave locks**: Retains the locked nodes in a batch. When ScanPlus 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 ScanPlus is in **Run All Batches** mode) or **Close the batch** to finish processing the batch.

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

Note: A page is defined as a single-sided image, which is scanned or imported into an Intelligent Capture Server by modules such as Scan, ScanPlus, Standard Import, Web Service Input, and Ricoh GlobalScan Plug-in. For every page

scanned or imported in simplex mode, one page is counted. For every page scanned or imported in duplex mode, two pages are counted. Each single-sided page is counted once when it enters the system.

3.2.1 Scanning Large Images

To optimize the environment for scanning or importing large images (over 100 *MB*) in ScanPlus, and to prevent potential problems, such as an out of memory issue, try one of the following options:

- Use the **Compression** settings specified in the **Image Output** window to have ScanPlus save scanned images with compression.
- If changing the compression does not help, or if you do not want to use compression, the `FileCacheSize` and `MemoryEstimationFactor` parameters can be edited in the `settings.ini` file.
  - First, try setting `FileCacheSize=1`.
  - If this does not help, set `FileCacheSize=1` and `MemoryEstimationFactor` to more than 0.4.
  - If this does not help, set `FileCacheSize=1` and `MemoryEstimationFactor=1.0` .
  - If this does not help, set `NetBufferSizeMB` to a value that is appropriate for the current scanner hardware and `MemoryEstimationFactor=1.0`. The `NetBufferSizeMB` indicates the network buffer size. By default this value is set to 100 MB.

If large images can be scanned or imported without any problems, there is no need to change the `FileCacheSize` and `MemoryEstimationFactor` parameters in the `settings.ini` file.

More information on changing parameters in the `settings.ini` file is provided in the *Client Configuration Settings* topic in the *Intelligent Capture Guide*.

3.3 Defining ScanPlus Settings During Production

ScanPlus 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 ScanPlus 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 ScanPlus 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, ScanPlus 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.

3.3.1.1.1 Selecting the Scanner in Production Mode

If the scanner that was selected during setup is unavailable, or if the ScanPlus operator needs to change the existing scanner selected for production, the ScanPlus 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 ScanPlus 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 ScanPlus 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 ScanPlus 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 ScanPlus before ScanPlus detects the scanner. If **None (No Scanner)** is selected, the **Scan Pages** and **Preview Pages** buttons in ScanPlus are disabled during production, and the operator cannot perform these functions. After choosing a scanner, the operator must configure the ScanPlus 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 ScanPlus step to use the proper settings for the new scanner.

3.3.1.2 Creating a New Scanner Configuration

In production mode, ScanPlus 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 ScanPlus 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 set up a new scanner configuration:

1. From the **ScanPlus 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.

3.3.1.2.1 Updating Scanner Configuration Profiles

Scanner configurations are module-based. This means that the ScanPlus and RescanPlus modules have independent scanner configurations. ScanPlus scanner configurations are centrally stored and shared among all ScanPlus steps in all processes and batches. Therefore, all ScanPlus scanner configurations are available in all ScanPlus steps in all processes and batches across the system. Similarly, RescanPlus scanner configurations are similarly stored and shared (but are maintained independently from ScanPlus scanner configurations).

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

Changes to ScanPlus 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** panel.

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

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

Scan Settings Quick Panel

The **Scan Settings Quick Panel** in the ScanPlus production window contains the following controls that enable the user to change scanner settings:

Table 3-1: Scan Settings Quick Panel Menu

Element	Description
Scan Mode	Specifies the scanning source, for example, **Auto**, **Flatbed** or **Feeder**. Choices depend on the capabilities of the selected scanner.
Settings for	Specifies the camera (front/back) to use for scanning the image.

Element	Description
Apply to all streams	Applies scanner settings to all streams.
Resolution	Selects the scanning resolution in dots per inch. Choices depend on the capabilities of the selected scanner.
Brightness	Adjusts the display brightness of the image in the **Image** pane. Move the slider to the right to increase the brightness. For binary images, this control only affects appearance when the image is displayed smaller than actual size. For grayscale and color images, this control affects the brightness at any display size.
Contrast	Adjusts the display contrast of the image in the **Image** pane. Move the slider to the right to increase the contrast. For binary images, this control only affects appearance when the image is displayed smaller than actual size. For grayscale and color images, this control affects the contrast at any display size.
Kodak Settings	Available with Kodak model scanners only.
Imprinter checkbox	Enables the scanner's imprinter feature. Available only if the selected scanner has an imprinter function.
ISIS Settings – Configure Driver button	Displays a window to configure the scanner's driver default paper size settings.
Revert	Dismisses the changes made during current session. If this button is clicked, ScanPlus reloads the scanner configuration from the server and applies it for scanner. **Note:** Reloading scanner configuration is not applied when a new batch is created automatically during scanning. Additionally, this feature does not impact the scanner configuration counters persistent through all batches such as the **Kodak Image Address** counter.

Select/Modify Scanner Settings

The options available from the **Select/Modify scanner settings** window are:

Table 3-2: Select/Modify Scanner Settings Options

Element	Description
Scanner Driver	Displays information about the currently-selected scanner driver, if any.
Change selected scanner	Specifies the scanner that will be used for **ScanPlus**. The selected scanner is displayed in the **Current Scanner** field.
Current Configuration	Displays the scanner configuration selected for the scanner. The **Modify configuration** link launches a window for modifying the selected scanner configuration.
Available Configurations	Displays the available scanner configurations.
Display configurations for the current scanner only	Displays only the configurations associated with the currently selected scanner.
Set as current button	Selects the scanner configuration highlighted in the **Available Configurations** field as the current configuration.
Back button	Returns to the previous window.

3.3.1.3 Specifying Scanner Settings

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

To specify scanner settings:

1. From the **ScanPlus 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** 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 **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. For more information about the windows and settings that are accessed through these links, see the scanner driver's documentation.
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.

   Note: A page is defined as a single-sided image, which is scanned or imported into an Intelligent Capture Server by modules such as Scan, ScanPlus, Standard Import, Web Service Input, and Ricoh GlobalScan Plug-in. For every page scanned or imported in simplex mode, one page is counted. For every page scanned or imported in duplex mode, two pages are counted. Each single-sided page is counted once when it enters the system.

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 ScanPlus is currently connected to.
12. Select **OK** to save the changes and close the **Scanner** window.

3.3.1.4 Changing Batch Step Settings

Operators can change batch level settings, such as separation or tree levels, while running ScanPlus 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 ScanPlus window in production mode, select a batch by clicking **Open saved batch**. Operators can use this option to open an existing batch to scan or import pages, delete pages, move pages and so on.
2. In the **Start by selecting a batch** window, select a batch from the list or type a batch name manually, then click **Open**.
3. In the ScanPlus window, select **Settings**.
4. From the **Related Tasks** list in **General settings** area, select **Setup step settings** to display the **ScanPlus Setup** window for the batch.
5. Set up ScanPlus to change the ScanPlus configuration. See the *ScanPlus Guide* for information on setting up ScanPlus.

3.3.1.5 Applying Miscellaneous Settings in Production Mode

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

To use miscellaneous settings in production mode:

1. From the ScanPlus window in production mode, select **Settings**.
2. In the **Settings** pane, select **Miscellaneous settings**.
3. In the **Miscellaneous Settings** panel, select the checkboxes for the options needed by the operator:
   - **Enable refreshing rate during scanning/importing**: Selecting this checkbox allows ScanPlus 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 ScanPlus 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 enabled 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.

- **Fetch existing batches list on the new batch screen**: Selecting this checkbox enables ScanPlus to automatically complete a batch name (based on the existing list of batches) when the operator starts typing the batch name.

3.3.2 Defining View Settings

The view settings for ScanPlus 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, ScanPlus 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, ScanPlus supports the functionality to apply the current image view settings to all scanned or imported images in a batch.

3.3.2.1.1 Defining Scaling Settings

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

To define scaling settings:

1. From the ScanPlus 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.

3.3.2.1.2 Defining Orientation Settings

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

To define orientation settings:

1. From the ScanPlus 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 orienting 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.

   Use the **Replace Image w/ New Orientation** button to replace the original image on the server with the currently displayed image. This applies and saves the orientation of the displayed image to the original image on the server.

   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).

3.3.2.1.3 Defining Miscellaneous File View Settings

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

To change how images are displayed:

1. From the ScanPlus window in production mode, select **Settings**.
2. In the **Settings** window, 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.

3.3.2.2 Changing Tree View Settings

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

3.3.2.2.1 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 ScanPlus 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.

3.3.2.2.2 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 ScanPlus window in production mode, select **Settings**.
2. In the **Settings** window, 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.

3.3.2.2.3 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 ScanPlus 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

ScanPlus 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

ScanPlus 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 ScanPlus 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 ScanPlus 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 ScanPlus.
3. Immediately after the type of report is selected, ScanPlus will automatically generate and display the report in the preview window at the bottom of the **Summary Report** window.
4. Once the report is generated, the ScanPlus 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 ScanPlus 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 3-3: 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.
Batch open time	Time when the batch was opened.
Number of pages	Actual number of pages or images in the batch.
Number of scanned pages	The number of the page nodes added since the batch was opened. This also includes images that had been scanned but then deleted.
Number of scanned sheets	The number of scanned sheets. When scanning in duplex mode, a sheet is two sides of a physical sheet. When scanning in simplex mode, a sheet is a single side of a physical sheet.
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, ScanPlus displays the - symbol.
Batch processing time	Hours and minutes passed since the batch was opened.

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

Table 3-4: 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 3-5: Information Displayed for Include Detailed Information in Report

Element	Description
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.
Batch open time	Time when the batch was opened.
Number of pages	Actual number of pages in the batch.
Number of scanned pages	The number of the page nodes added since the batch was opened. This also includes images that had been scanned but then deleted.
Number of scanned sheets	The number of scanned sheets.
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.

Element	Description
Expected number of pages	The expected number of pages according to the batch configuration. If this number is not configured, ScanPlus displays the - symbol.
Batch processing time	Hours and minutes passed since the batch was opened.

3.4.3 Printing Summary Reports

The ScanPlus 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 ScanPlus 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 ScanPlus application, select the **Automatically print the scan report when the application exits** checkbox.

3.4.4 Configuring Page Setup for Reports

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

To configure page setup for a report:

1. From the ScanPlus window in production mode, select **Summary**.
2. Select **Page Setup** in the **Actions** panel.
3. In the **Page Setup** window, 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

ScanPlus 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 batches.

A page is defined as a single-sided image, which is scanned or imported into an Intelligent Capture Server by modules such as Scan, ScanPlus, Standard Import, Web Service Input, and Ricoh GlobalScan Plug-in. For every page scanned or imported in simplex mode, one page is counted. For every page scanned or imported in duplex mode, two pages are counted. Each single-sided page is counted once when it enters the system.

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. ScanPlus displays the page in its **Image** pane and offers the following set of options:
   - **Accept Page / Continue**: ScanPlus adds the page to the open batch or file and scans the next page.
   - **Rescan Page**: ScanPlus 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**: ScanPlus adds the page to the open batch or file and then returns to the standard control buttons.
   - **Reject Page / Quit**: ScanPlus 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.
4. When the operator is finished previewing pages, select the appropriate quit option. ScanPlus returns to the standard control buttons: **Finish Batch**, **Scan Pages**, **Preview Pages**, and **Import Pages**.

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 3-6: Image and Document File Formats

Image Format 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* **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.	• *DOC* • *HTM* • *HTML* • *PDF* • *RTF* • *TXT* (*ANSI*, *UTF*) • *XLS* • *XML* **Note:** Graphical files are recognized at the file format level. This means that ScanPlus does not use file extensions and uses PixTools to read a file extension. For document file formats, ScanPlus 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 ScanPlus production window, create a batch or open an existing batch.
2. Select **Import Pages** from the **Actions** panel.
3. Navigate to the batch in the directory window, select one or more files to import using the **Add** button, then click **Open**.

Note: When selecting several files to import, the last file selected in the set is the first file that is imported. Therefore, to import files in sequential order, select the files individually from last to first.

Remove files by selecting them and selecting **Remove** or **Remove All**. ScanPlus shows each imported image in the **Tree View** window.

4. Select **Finish 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 Indexing while Scanning or Importing Documents

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

To type index information:

1. Create or open the batch that has indexing fields.
2. From the ScanPlus window, select **Index**.
3. Start scanning or importing pages. When ScanPlus acquires the first page, it displays the predefined indexing fields on the **Index** tab. ScanPlus places focus in the first field and highlights its corresponding zone on the image. If the **Zoom to zone** feature was selected during setup, then the index zone is zoomed during production.
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. ScanPlus 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, ScanPlus 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, ScanPlus displays a thumbnail image for each batch page and a folder icon for each higher level node in the tree. ScanPlus 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, 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 enables you to jump to the first or last page of the batch, select a page by number to view (note that when using this option, 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 3-7: 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. ScanPlus 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. ScanPlus 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 ScanPlus 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**. ScanPlus 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** option on the **Level** context menu. During scanning, the tree is locked and nodes cannot be deleted. Stop scanning before deleting nodes. Depending on how ScanPlus 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**. ScanPlus inserts the pages directly after the selected node. If you select a level 1 node and then select **Start scanning**, **Preview Pages**, or **Import Files**, ScanPlus 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, ScanPlus creates a new 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 option. ScanPlus creates a new 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 Scanning** option. 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 ScanPlus 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 ScanPlus 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.)
Refreshing nodes in the tree	Refreshing ScanPlus 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 File 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 context menu of the **File View** panel. A description of the **File View** toolbar commands is provided in "File View Panel" on page 82. You can customize these file view settings and the changes are applied only to the images in the currently opened batches. 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 3-8: 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. ScanPlus 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).
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.

Action	Instructions
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**. Select the page orientation from the sub-menu. Use the **Replace Image w/New Orientation** button to apply the currently selected orientation to the original image, and save the rotated image back to the server.
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.
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 enable ScanPlus to run faster. Note that a width of 4 thumbnails usually will allow ScanPlus 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 no 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.

Table 3-9: File View Panel

Element	Description
Zoom Out icon	Reduces the size of the page displayed in the **Image** pane.
Custom scale icon	Increases or decreases the size of the page displayed in the **Image** pane. Use the list box to specify the size.
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.

Chapter 4

Reference

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

4.1 Command Line Arguments

This table lists command line parameters that you can use to start ScanPlus.

Table 4-1: Scanplus Command Line Parameters

Argument	Description
`ScanPlus\QuickModuleHost.exe -modulename:Emc.InputAccel.Scan`	Starts the module executable. Example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -modulename:Emc.InputAccel.Scan`
`-autostart`	Starts the module in Run All Batches mode immediately after you log onto the Intelligent Capture Server. Example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -autostart -modulename:emc.inputaccel.scan`
`-open:batch`	Opens the specified batch. Example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -open:MyBatch -modulename:emc.inputaccel.scan`
`-create:batch:process`	Creates a batch using the specified name based on the specified process. Example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -create:NewBatch:Form01 -modulename:emc.inputaccel.scan`

Argument	Description
`-login:`	Logs onto the Intelligent Capture Server. You can either log into the current domain, or log into the any other domain to which your network is connected. To log into the: • Credentials of current logged-in user: After the `-login` parameter, type an asterisk `*` followed by an `@` symbol and the Intelligent Capture Server. Example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -login:*@server8 -modulename:emc.inputaccel.scan` • Specified domain: After the `-login` parameter, type the following arguments separated by commas (except the domain parameter, which must be followed by a backslash): – `domain\`: Name of the domain to which the Intelligent Capture Server belongs. – `user`: User name for the specified domain. – `password`: User's password for the specified domain. – `@server`: Machine name of the computer running the Intelligent Capture Server. Example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -login:honor\johndoe,od1e43@homeoffice -modulename:emc.inputaccel.scan` **Note:** If you do not specify all of the listed arguments, the Intelligent Capture Server will prompt you for any missing information during login.

Argument	Description
`-department:`	Receives tasks from the specified department(s). To receive tasks from: • One department: After the `-department:` parameter, type the name of the department from which you want to receive tasks. Example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -department:sanjose -modulename:emc.inputaccel.scan` • Multiple departments: After the `-department:` parameter, type the names of all of the departments from which you want to receive tasks. Separate the names with commas, using no spaces between the comma and the next name. Example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -department:sanjose,dallas,london` • All departments: After the `-department:` parameter, type an asterisk. Example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -department:* -modulename:emc.inputaccel.scan`

Argument	Description
`-trace[:<filename>]`	Adds debug information for the module to a default log file (if a filename is not specified) or to the specified file. If a log file already exists, then new log information is appended to the existing file. The information recorded is used only for debugging purposes and also available in Intelligent Capture Administrator. The default log file is located in the `LocalApplicationData` folder of the current user: `EMC\InputAccel\6.0\Logs\` by default. The default log file is named using the *DLL* name of the module. For example, the default log file created for ScanPlus is called `Emc.InputAccel.Scan.log` and located in `EMC\InputAccel\6.0\Logs\Emc.InputAccel.Scan.log`.

You can combine the command line parameters described in this table. For example: `C:\Program Files (x86)\InputAccel\Client\binnt\x64\QuickModuleHost.exe -autostart -login:networkdomain\johndoe, password@server1-department:sanjose,dallas,london`

4.2 Keyboard Shortcuts and Access Keys

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.

4.2.1 ScanPlus Keyboard Shortcuts

The following keyboard shortcuts are available in this module.

Table 4-2: ScanPlus Keyboard Shortcuts

Shortcut	Action
F1	Help window
F2	Scan summary view
F3	Display the ScanPlus production window
F4	Close the batch
F7	Display a preview of the page
F8	Import image and document files
CTRL+S	Start/Stop/Resume scan process
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

Shortcut	Action
PAGE UP	Move focus up one screen of visible items (resets current selection)
PAGE DOWN	Move focus down one screen of visible items (resets current selection)
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
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

4.3 IA Values

The topics in this section describe IA values that can be used with this application.

4.3.1 Input IA Values

ScanPlus has no input values.

4.3.2 Output IA Values

ScanPlus does not receive input files like most other modules. Imported images are not considered input files. ScanPlus produces the first output files in a batch.

Table 4-3: Output File IA Values

IA Value	Description

`OutputImage`
`OutputImage2`
`OutputImage3`
(File, Output)
	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.
	`OutputImage2` and `OutputImage3` are used with MultiStream scanners. In addition, `OutputImage3` is only used with scanners that support 3 streams per image. If you are using a non-MultiStream scanner, ScanPlus only saves images to the `OutputImage` IA Value. Otherwise, you can control which image stream (color, binary, grayscale) is stored to which output image IA Value using options in the **Scanner** window of ScanPlus setup.
	Note: One module can display images produced by another module by changing the value of `OutputImage` in the *IPP*. Each `OutputImage` to which an image stream has been assigned results in ScanPlus saving a separate set of stage files. The first image stream is assigned to stage files having a file name extension of ""1; each additional image stream, if any, results in a set of stage files with a file name extension incremented by 1.

IA Value	Description
DisableLocalCache	Indicates whether local image caching on ScanPlus 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.

The ScanPlus module outputs data to a variety of statistical IA Values during processing, as described in the table below. Note that 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.

Table 4-4: Statistical IA Values

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

IA Value	Description

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

`Time`
`Time2`
`Time3`
String, Output
	Time that `OutputImage` was scanned in a formatted string.
	Time that `OutputImage2` was scanned in a formatted string.
	Time that `OutputImage3` was scanned in a formatted string.

`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 with the given `ScanEpoch` second at which the page was scanned.
	Note: This is not the amount of time it took to scan the page. This is meant to be used in conjunction with `ScanEpoch` to provide accurate Time-of-day information.

IA Value	Description
ScanOperator ScanOperator2 ScanOperator3 (String, Output)	User name of the operator who scanned the page.
ScanMachine ScanMachine2 ScanMachine3 (String, Output)	Name of the machine on which the page was scanned.
Level_0_KeyEntry_0 Level_0_KeyEntry_1 Level_0_KeyEntry_2 Level_0_KeyEntry_3 Level_0_KeyEntry_4 (Long, Output)	These contain the Key Entry Indexing information provided by the user at scan time.
BlankPage (Long, Output)	1 means the page was detected as blank; 0 means the page is not blank.
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. your Kodak scanner documentation for more information about Image Addresses.

IA Value	Description
`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.

`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.
`BarText0` (String, Output)	The text of the barcode.

IA Value	Description
BarType0 (Long, Output)	The number representing the type of barcode found. Possible values are: '1=Interleaved 2 of 5 '2=Code 39 '4=Code 128 '8=CODABAR '16=*UPCA* '32=*EAN* 8 '64=CODE 93 '128=*UPCE* '256=EAN 13 '512=*ISBN* Add on 2 '1024=ISBN Add on 5
BarX0 BarY0 BarDX0 BarDY0 (Long, Output)	Location of the barcode in Image Coordinates.

IA Value	Description
BarText1 (String, Output) BarType1 BarX1 BarY1 BarDX1 BarDY1 (Long, Output) BarText2 (String, Output) BarType2 BarX2 BarY2 BarDX2 BarDY2 (Long, Output) BarText3 (String, Output) BarType3 BarX3 BarY3 BarDX3 BarDY3 (Long, Output) BarText4 (String, Output) BarType4 BarX4 BarY4	Barcode values that are same as a Barcode 0.

IA Value	Description
BarDX4 BarDY4 (Long, Output) BarText5 (String, Output) BarType5 BarX5 BarY5 BarDX5 BarDY5 (Long, Output) BarText6 (String, Output) BarType6 BarX6 BarY6 BarDX6 BarDY6 (Long, Output) BarText7 (String, Output) BarType7 BarX7 BarY7 BarDX7 BarDY7 (Long, Output) BarText8 (String, Output)	

IA Value	Description
BarType8 BarX8 BarY8 BarDX8 BarDY8 (Long, Output) BarText9 (String, Output) BarType9 BarX9 BarY9 BarDX9 BarDY9 (Long, Output)	
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 setup. You can access your scanners processing options by selecting the **More** button in ScanPlus **Scanner** tab.
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.

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.

`ImageSamplesPerPixel`
`ImageSamplesPerPixel2`
`ImageSamplesPerPixel3`
(Long, Output)
	Image information.

`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.

`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`

`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`

`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
	TAG_COMPRESSION_LZW = 5

`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

`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

`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 does not apply any restrictions on the number of the values associated with each the level.

IA Value	Description
`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.
`NumberOfImportedFiles` (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.
`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.

IA Value	Description
`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.
`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.

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.

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

CALS

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

CMP

Bitmap graphics (Lead compression)

DCX

Multipage *PCX* file extension

DLL

Dynamic Link Library

dpi

Dots Per Inch

EAN

European Article Number

gif

Graphic Interchange Format

HTM

HTML file extension.

HTML

HyperText Markup Language

IPP

Integrated ProcessFlow Project

ISBN

International Standard Book Number

ISIS

Image and Scanner Interface Specification

JBG

JBIG file extension

JBIG

Joint Bi-level Image Experts Group

JP2

Joint Photographic Experts Group 2000

JPEG

Joint Photographic Experts Group

MB

megabyte

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

UPC-A

Universal Product Code, 12-digit common version

UPC-E

Universal Product Code, 6-digit zero compressed version

UTF

Unicode Transformation Format

XLS

Microsoft Office Excel file extension

XML

Extensible Markup Language