

# Trap section of the Refine process template

The **Trap** section of the refine process template determines how Prinergy handles trapping in input files.

## JTP

Specifies the JTP (job ticket processor) that Prinergy will use for trapping.

**Note:** You set up JTPs using Prinergy Administrator.

## Trap Settings

### Retrap Trapped Pages

Instructs the system to retrap pages that have already been trapped in Prinergy. This does not delete traps created in upstream software.

### Trap Time-out

Manages job throughput by setting a time limit on the trapping step of the refine process. If the site production schedule requires that there be a maximum time limit on trapping files, any files that exceed the time limit can either be reviewed in the Prinergy PDF Trap Editor plug-in in Acrobat or trapped at a time when no other jobs are in the queue.

The default setting for **Trap Time-out** is 0 seconds—that is, no expiration time for the trap step. Any other setting for **Trap Time-out** would typically factor in the demands of the shop schedule and the complexity of the file being trapped.

**Note:** This option is available only if the Trapper JTP is selected in the **JTP** box.

### Trap Tiling Pattern

Traps all of the internal objects in a tiling pattern. Trapping a tiling pattern can result in too much complexity and can slow down trapping, so this option can be turned off. The **Trap Tiling Pattern** check box is selected by default. The rest of the file is also trapped.

**Note:** This option is available only if the Trapper JTP is selected in the **JTP** box.

## Size

### Width/Height

Specifies the width and height of a trap.

Type in the values for width and height, and then choose a unit of measure.

### Line Splits

Controls the size of traps that extend into stroked objects.

Strokes with a width of up to  $<x>\%$  of the trap width specified will get an inside trap with half the stroke width.

As a result, the system avoids a third color in the stroke center that is a different color than the trap colors.

Range: 0% to 10,000.0%

For example:

Default line split	=	200.0%
Stroke width	=	0.4 pt
Trap width	=	0.25 pt
Result	=	Inside trap width of 0.2 pt

Here, the trap width multiplied by the line split value is greater than the stroke width divided by the two inside traps,  $(0.25 \times 2) > (0.4/2)$ , so the inside traps are forced to shrink to half the stroke width, or 0.2 pt.

If the line split is more than 200.0%, and the trap width is greater than the stroke width divided by two, then the trap width is forced to be half of the stroke width.

If the line split is 0.0%, the feature is disabled and there is no change to the trap width; trapping into the stroke is like trapping into any other object.

## Geometry

### Line Joins

Determines the shape of the corner between two trap segments—that is, where the lines join. You can select one of the following styles:

- **Bevel**
- **Round**
- **Miter**

### Miter Limit

Determines whether a mitered trap will shorten to a bevel shape. Available when you select **Miter** for the **Line Joins** option.

Range: 100% to 10,000%

Default: 500.0%

## 3 Color Joins

Determines the shape of a trap where three or more objects meet. You can select one of the following shapes:

- **Mitered Corners**
- **Clipped Chokes**

### Trap Trimming

Reduces the size and shape of traps that extend into small objects.

Where a regular trap can get too close to another object such as white knockout text, the trap is trimmed back to the center point of the object that is accepting the trap. This can result in a trap with a variable width along its length.

In the **Trap Trimming** box, select **Automatic** to have the trap trimming feature re-examine any traps created in this job and reduce them as needed.

**Note:** This option is available only with the **Advanced Trapping** option.

## Cutbacks

### Create Cutbacks

Select to create a trap where multi-colored objects border with white areas of the page. This prevents mis-registration artifacts from being visible along white edges and helps keep knockout (reversed) text from filling in.

### Create Cutbacks when Primary tint value is above

Determines the minimum primary tint value at which cutbacks should be created.

### Create Cutbacks when Primary ink Neutral Density is above

Determines the minimum primary ink neutral density value at which cutbacks should be created.

### Cutbacks width percentage of global trap width

Determines relative width of global traps that should be taken up by the cutbacks.

## Images

### Trap to

Controls whether or not images trap to objects and/or images trap to images. Select the **Objects** check box to trap images to objects; clear this check box to disable this feature. This feature lets images trap to other objects such as trapping vector images to raster data. A small image area around a vector object is sampled to determine the average color value of the trap object.

And/or:

Select the **Images** check box to trap images to images; clear this check box to disable this feature.

### Direction

Controls the placement of traps between an image and an object and/or an image and another image. Select one of the following options:

- **Automatic**—determines the best direction based on the general rule of trapping light colors into dark colors
- **Center**—causes the trap to span the border between the two items that require a trap, regardless of the light to dark relationship
- **Into image**—creates a trap between an image and an object by spreading the object into the image
- **Into object**—creates a trap between an image and an object by spreading the image into the object

### Bitmaps

Controls how a complex bitmap or masked image is to be trapped. Select one of the following options:

- **Trap All Bitmaps**—traps all colorized bitmaps and masked images with vector traps, no matter how complex the bitmaps are. This can take some time (even hours) to complete, because to trap a page containing colorized bitmap images, the trapper must trace the outline of all of the nonwhite pixels to create vectors to use as traps.
- **Ignore Complex Bitmaps**—converts and traps colorized bitmap images except for too-complex bitmaps. Complexity is determined by an estimate of how long it would take to create vector outlines for a given bitmap.
- **Ignore All Bitmaps**—does not trap any bitmap images. Tags all bitmaps and masked images as complex bitmaps.

Any bitmaps tagged as complex bitmaps can be trapped manually using the Prinergy PDF Trap Editor software.

Copydot images are ignored for trapping.

## Trap Resolution

Reduces file size by resampling any image data in the trap area to a lower resolution.

Range: 10 to 10,000 dpi

Recommended setting: **100 dpi**

## Trap

Prinergy can create a trap when the file meets all of the following conditions:

- The difference between two separations, relative to the lower of the two, exceeds the value in the **Relative Step Limit** box in opposite directions.
- The sum of common neutral densities for all separations is less than the value in the **Common Density Limit** box.
- The absolute difference in the amount of colorants between two objects is greater than the **Minimum Absolute Step Limit**.

## Step Limit

Determines whether a trap will be generated between adjacent colors (objects) depending on the relative difference (in %) in their amounts of colorants (inks). If the relative difference in amounts of colorants between two objects is less than the relative step limit specified, then no traps are generated.

The **Color Settings** section lets you override this setting for specific colors.

A setting of 100 disables trapping.

Range: 1% to 100%

Default: 25.0%

## Minimum Absolute Step Limit

Determines that no traps will be generated between adjacent colors (objects) if the absolute difference in the amount of colorants between two objects is less than the absolute step limit.

This limit is intended to prevent traps between very light colors or colors with very small color steps as found in blends. For a trap to occur, the difference between amounts of colorants (separations) must be greater than this **Minimum Absolute Step Limit** and the value set for the relative step limit.

Range: 1% to 100%

Default: 5.0%

### **Common Density Limit**

Determines whether a trap will be generated between adjacent objects that have common colors. If the two objects have enough common color, a trap is not required.

If a color is to be trapped based on the **Step Limit** value, the neutral density of the shared color is calculated and compared to the **Common Density Limit** value. If the shared neutral density is greater than the limit, no trapping occurs.

A setting of 3.294 is approximately equivalent to the sum of 100% of each of the CMYK inks. A trap is always created if you type a value greater than or equal to 3.294.

Range: 0.001 to 10.0

Default: 0.5

### **Centerline Trap Limit**

Determines whether centerline traps are created between objects with similar values for neutral density. The system compares the neutral densities of two adjacent colors and creates a centerline trap when the neutral density of the lighter area is greater than the neutral density of the darker area multiplied by the **Centerline Trap Limit** value.

**Note:** You cannot add a centerline trap between black or opaque inks.

A setting of 0 results in almost all centerline traps. A setting of 100 results in no centerline traps unless adjacent objects have exactly the same value for neutral density.

Range: 1% to 100%

Default: 100%

### **Trap Color Scaling**

Lightens the intensity of the trap color.

Trap color scaling helps to make traps in sensitive trapping situations less noticeable, for example, when trapping pastels. Scaling reduces the visibility of traps by reducing the amount of each component ink relative to its contribution to the trap color.

The system applies the **Trap Color Scaling** value to the separation values of the trap that originates from the lighter color (when neutral densities are compared).

A setting of 0 makes the traps invisible because all separations of the trap color become equal to the darker color. A setting of 100 turns **Trap Color Scaling** off.

Range: 0 to 100%

Default: 100%

The **Trap Color Scaling** option in the **Color Settings** section lets you override this setting for specific colors.

### **Ignore overprint density limit**

Traps will not be created for overprinting objects when their Neutral Density is above X. X is a decimal value with 3 digits with a range of 0-10.

A value of 0 means to ignore all overprints and a value of 10 means to ignore no overprints. The default value of 10 is set to match the legacy behavior when this feature did not exist.

## Keepaway Mode

Applies an opaque white trap to eligible color intersections. An eligible color intersection is one that is between adjacent objects painted by different inks. That is, each object is painted by at least one ink that does not paint the other.

A keepaway trap is also called a *knockout* trap or a *reverse* trap.

Keepaway mode is used in packaging trapping.

## Black

These options determine how Prinergy handles black and rich black. You can set a particular separation to **Treat Color as Black** in the Prinergy Color Editor. This option is available with the PDF Trapper JTP.

## Black Width Scaling

Calculates the black trap width as a percentage of the **Trap Width** value. The additional margin ensures that any support screens for a rich black don't peek out from under the black.

A 100% setting pulls back an object's color separations, except for the black, the same distance as the trap width used on the rest of the page. Traps to black objects are the same size as other traps.

A less than 100% setting produces narrower traps. For example, a 50% scale means that traps to black objects will be 50% smaller than the usual trap width.

A greater than 100% setting produces wider traps. For example, a 200% scale means that traps to black objects will be twice the size of the usual trap width.

Range: 1% to 1000%

Default: 100%

## Black Color Limit

Determines the minimum screen percentage at which the trapping engine considers black to be 100%, and therefore applies black trapping rules.

Black trapping rules include:

- Traps to objects defined as black are affected by **Black Width Scaling**.
- Colors placed underneath overprinting black solid objects form rich blacks. In areas where a rich black borders an unpainted object such as the substrate, the color under the black will be kept back from the border.
- The rules above do not apply unless the tint of the black objects is greater than or equal to the **Black Color Limit**.

A setting of 0 means that all screen percentages of the color black are considered black. A setting of 100 means that only solid black is considered black.

Range: 1% to 100%

Default: 95%

### **Black Density Limit**

Determines the neutral density value at which the trap engine considers an ink to be black, and therefore applies black trapping rules.

Any ink set to a density higher than black causes the black to be treated as the lighter color. The black spreads into the higher density color. You may want to set a metallic ink density higher than black so that it traps correctly.

A setting of 10.0 means that no ink is considered black.

Range: 0.00 to 10.00

Default: 1.6

### **Overprint Black Strokes...Up To**

Sets all black strokes with a width of up to  $\langle n.n \rangle$  pt to overprint instead of trapping them. This overprint also applies to all strokes colored with spot colors whose neutral density is higher than the **Black Density Limit**.

Select this check box to enable this feature, and then specify a stroke width or accept the default. Clear the check box to disable this feature.

Range: 1 to 100 points

**Note:** This option is available only if the Trapper JTP is selected in the **JTP** box.

### **Overprint Black Graphics**

Sets all black vector graphics to overprint instead of trapping them. This overprint also applies to vector graphics colored with spot colors whose neutral density is higher than the **Black Density Limit**.

Select the **Overprint Black Graphic** check box to enable this feature; clear the check box to disable this feature.

### **Overprint Black Bitmaps**

Sets all black bitmap graphics to overprint instead of trapping them. This overprint also applies to bitmap graphics colored with spot colors whose neutral density is higher than the **Black Density Limit**.

Select the **Overprint Black Bitmaps** check box to enable this feature; clear the check box to disable this feature.

**Note:** This option is available only if the Trapper JTP is selected in the **JTP** box.

### **Text**

You may want to handle text created with small font sizes differently where readability might be affected by applying standard trapping rules. In some cases, overprinting or smaller trap sizes provide better results.

### **Overprint Black Text Limit**

Overprints black text with a point size less than or equal to this value.

A setting of 0 points causes all text to be treated the same as other objects. A setting of 100 causes all text sized less than or equal to 100 points to be overprinted rather than trapped.

You may want to choose a point size equal to your body text to make headlines trap normally and body text overprint.

Range: 0 to 1000 pt

Default: 12 pt

Note: This setting also affects Rich Black text.

### **Small Text Size Limit**

Determines at what point size text traps should be scaled. The scale percentage is set in the **Small Text Width Scaling (%)** box.

**Note:** Overprint cannot be used with colored text because overprinting changes the color of the text. For small colored text, you may want to set a smaller trap size.

A setting of 0 means that no text traps are scaled. A setting of 100 means that traps are scaled for all text sized less than or equal to 100 points. Scaling traps for text that is 6 points or smaller (the default value) can significantly improve readability.

Range: 0 to 100 pt

Default: 6 pt

### **Small Text Width Scaling**

Calculates the width of a small text trap as a percentage of the **Trap Width** value. Scaled traps are applied to text objects based on the value of **Small Text Size Limit**.

Range: 0 to 1000%

Default: 75%

### **Text Grouping**

Groups text objects when trapping. All of the characters in a group will have the same trap direction and color.

Choose from the following grouping options—none, characters, words (default), lines.

Grouping by units larger than characters—such as words and lines—speeds up trapping and can sometimes give better visual results. Grouping by characters gives the most flexibility since each character can then have a different trap direction and color, depending on its background. A setting of none will keep the text groupings that are set up when the file is converted to PDF.

**Note:** This option is available only if the Trapper JTP is selected in the **JTP** box.

### **Color Settings**

The **Color Settings** area lets you override some of the global settings by entering values for individual colors.

### **Ink Set**

Specifies color settings for ink sets.

Select an ink set in the list. The neutral densities for the process colors change to those specified by the ink set.

### **Neutral Density**

Specifies the neutral density value for each process color.

### **Step Limit**

Determines whether a trap will be generated between adjacent colors (objects) depending on the relative difference (in %) in their amounts of colorants (inks). If the relative difference in amounts of colorants between two objects is less than the relative step limit specified, then no traps are generated.

A setting of 0 removes **Step Limit** as a criteria for trapping. A setting of 100 disables trapping.

Range: 0 to 100%

There is also an absolute threshold of 5% to prevent traps between very light colors. See **Minimum Absolute Step Limit**.

### **Trap Color Scaling**

Lightens the intensity of the trap color for a particular separation.

Trap color scaling helps to make traps in sensitive trapping situations less noticeable, for example, when trapping pastels. Scaling reduces the visibility of traps by reducing the amount of each component ink relative to its contribution to the trap color.

The system applies the **Trap Color Scaling** value to the separation values of the trap that originates from the lighter color (when neutral densities are compared).

A setting of 0 makes the traps invisible because all separations of the trap color become equal to the darker color. A setting of 100 switches off **Trap Color Scaling**.

Range: 0 to 100%