# Phoenix2Switch

Phoenix automation offers seamless integration with Enfocus Switch via the Phoenix2Switch app, available in the Enfocus Appstore. This app provides two modes for automating the Plan Imposition AI tool in Phoenix: through CSV import and directly from artwork files. In both modes, you have full control over all product properties, Plan settings, and export actions through Switch properties.

All properties support variables and script expressions, allowing you to dynamically control imposition behavior, presses, materials, etc. using metadata or other information attached to the artwork files. This customization can drastically reduce the overall complexity of your flows and eliminate the need to create and manage templates manually.

In addition, the libraries and export presets you define in Phoenix are directly accessible from the app. Selecting from library will give you an up-to-date list of the library item or preset in Phoenix.

## Compatibility

Phoenix 7.0.4 or higher - Automate and Imposition AI modules

Switch 2017 update 1 or higher

Phoenix can run on the same computer as Switch or it can run on a separate computer that is network accessible from the computer running Switch. Unless your workload is light, it is recommended to run Phoenix separately from Switch to ensure consistent performance of both systems.

## Application discovery details

For a full description of Phoenix, refer to the Phoenix documentation on the Enfocus website: *https://www.enfocus.com/en/support/manuals/phoenix2switch-manuals*

## Getting started

Before you can start using the Phoenix2Switch app, make sure to start the Switch Connector in Phoenix:

1. In Phoenix, navigate to **Windows** > **Automate**. The Automate panel should appear in the upper-left area of Phoenix.
2. If the Automate panel does not include the Switch Connector, open the list in the upper left corner of the panel and select **Add Switch Connector**.
3. Now right-click the Switch Connector entry in the Automate Panel and click **Start** . Switch can now access Phoenix automation.

> **Note:** If you would like the Switch Connector to start automatically when Phoenix launches, select **Auto Start** from the context menu. This is strongly recommended when you are primarily driving Phoenix from Switch.

## Connections

Phoenix2Switch requires at least one incoming connection and one outgoing connection.

Outgoing connections have a *Data* property that defines the type of data to send to this connection:

- **Input files**, i.e. copies of original input jobs. This value triggers a subordinate property: *Move*, which determines when input files will move along this outgoing connection:

  - On error
  - On (plan) success
  - Always

- **Output files** that are generated by Phoenix after the Plan tool creates a plan. This value triggers a number of subordinate properties:

| Property | Description |
|---|---|
| Include phoenix project | Whether to include a saved Phoenix project file (.phx) allowing you to open the generated project in Phoenix. |
| Include imposed PDF | Whether to generate an imposed PDF of the completed plan. When set to Yes, optionally select a PDF Export *Preset*. When not specified, the preset defaults to **Factory Default PDF Export**. |
| Include imposed JDF | Whether to generate an imposed JDF of the completed plan. When set to Yes, optionally specify a JDF *Preset* used to control export behavior and content of imposed JDFs. When not specified, the preset defaults to **Factory Default JDF Export**. |
| Include cutting JDF | Whether to generate cutting JDF data. Optionally specify a *Preset*. |
| Include PDF die layout | Whether to generate PDF die layouts of the completed plan. When set to Yes, optionally specify a *Preset* used to control the export behavior of the PDF die layout. When not specified, the preset defaults to **PDF Default Preset**. |
| Include CF2 die layout | Whether to generate a CF2 die layout of the completed plan. When set to Yes, optionally specify a *Preset* used to control the export behavior of the CF2 die layout. |
| Include DXF die layout | Whether to generate a DXF die layout of the completed plan. When set to Yes, optionally specify a *Preset* used to control the export behavior of the DXF die layout. |

| Property | Description |
|---|---|
| Include ZCC cutting layout | Whether to generate Zund Cut Center cutting layouts of the completed plan. |
| | When set to Yes, optionally specify a *Preset* used to control the export behavior of the ZCC export. |
| Include PDF vector separation | Whether to generate PDF vector separation output for the completed plan. |
| | When set to Yes, optionally specify a *Preset* used to control the export behavior of PDF vector separation export. |
| Include cover sheet | Whether to generate PDF cover sheets for all layouts in the completed plan |
| | When set to Yes, optionally specify a *Preset* used to control the cover sheet export behavior. |
| Include tiling report | Whether to generate a tiling report of the completed plan when the plan involves tiled products. |
| | When set to Yes, specify a *Preset* used to control the content of the generated tiling report. |
| Include PDF report | Whether to generate a PDF report of the completed plan. |
| | When set to Yes, optionally specify a *Preset* used to control the content of the generated PDF report. When not specified, the preset defaults to **PDF Report Default Preset**. |
| Include XML report | Whether to generate a XML report of the completed plan. |
| | When set to Yes, optionally specify a *Preset* used to control the content of the generated XML report. When not specified, the preset defaults to **Report Default Preset**. |
| Include JSON report | Whether to generate a JSON report of the completed plan. |
| | When set to Yes, optionally specify a *Preset* used to control the content of the generated JSON report. When not specified, the preset defaults to **JSON Report Default Preset**. |
| Include CSV Report | Whether to generate a CSV report of the completed plan. |
| | When set to Yes, optionally specify a *Preset* used to control the content of the generated CSV report. When not specified, the preset defaults to **CSV Report Default Preset**. |

| Property | Description |
|---|---|
| Collect files in jobfolder | On Yes, outgoing files are collected into a job folder and passed as a single job, otherwise files are passed along individually as separate jobs.<br><br>**Note:** AAbsolute and relative path JDF output will ignore this option and always collect files into a job folder to ensure the generated "Content" sub-folder is kept together with the JDF file(s). |
| XML dataset name | Name of XML report dataset that gets attached to each output file or job folder. |

## App Properties

| Property | Description |
|---|---|
| Element type | The flow element type: Phoenix2Switch<br><br>This property is useful to identify renamed flow elements. It cannot be changed. |
| Name | The name of the flow element displayed in the canvas |
| Description | A description of the flow element displayed in the canvas. This description is also shown in the tooltip that appears when moving your cursor over the flow element |
| Phoenix project ID | Optional ID to use for the Phoenix project during plan and export.<br><br>**Note:** If not defined, a unique ID will be generated automatically based on the unique prefix of the incoming Switch job. This ID is also used as the file/folder name for output data. |
| Project Custom Properties | Optional custom properties to apply to the project. |
| Host | Location of the Phoenix instance the app will be connecting. Options are:<br><br>• **Local**:<br><br>• **Remote** This option triggers the following subordinate properties:<br><br>  • *Hostname*: Hostname or IP address of Phoenix that the app is connecting to. If not specified, the app will assume Phoenix is running on the same computer as Switch.<br><br>  • *File input mode*:<br><br>    • **Upload**: Jobs will be uploaded from an input folder to Phoenix |

| Property | Description |
|---|---|
| | • **Network Share**: Phoenix will access the files in the input folder directly via network share. You must enter the *Input share path*, i.e. the full path of the input folder as it is accessed from the remote machine where Phoenix is running. For example, if the input folder is a network share, this property should define the full network share path to this input folder so Phoenix can access the files. |
| Port | TCP Port number Phoenix Switch Connector is listening on. The default port used by Phoenix is 8022. |
| Things | Optional list of things in Phoenix to include during planning. When no things are specified, all presses in your Things library are used.<br><br>To query the current Things library in Phoenix, use the Select many from library option. |
| Sheets | Whether to use all available sheets for the given product stocks and presses during planning or limit sheets used to a specific list.<br><br>When **Select** is chosen, you must specify the list of selected sheets to restrict planning to. Each sheet name must have the following format: STOCK_NAME/GRADE_NAME/SHEET_NAME<br><br>For example, "PVC/224 gsm/501 x 365mm Long" |
| Rolls | Whether to use all available rolls for the given product stocks and presses during planning or limit rolls used to a specific list.<br><br>When **Select** is chosen, you must specify the list of selected rolls to restrict planning to. Each roll name must have the following format: STOCK_NAME/GRADE_NAME/ROLL_NAME<br><br>For example, "PVC/224 gsm/700mm" |
| Templates | Optional list of templates in the Phoenix Templates library to include during planning when your ganging profile includes the Templates strategy. When no templates are selected, all templates in your library are used.<br><br>To query the current Templates library in Phoenix, use the Select many from library option. |
| Imposition AI profile | Optional Imposition AI profile to use during planning. When not specified the 'Default' profile is used. |
| Stop plan after N minutes | Number of minutes to let the Plan tool find optimal layouts for the current set of orders.<br><br>**Note:** Switch has a limit on the time allowed during processing. You may need to increase this limit in the |

| Property | Description |
|---|---|
| | Switch User preferences to allow Plan to run for longer time periods. |
| Concurrency timeout | Maximum number of minutes to attempt to connect to Phoenix when the maximum number of allowed concurrent requests has been reached. Value must be 1 or greater. |
| Sort Plan Result | Allows you to sort the plan result by one of the following:<br><br>• Cost<br>• Waste<br>• Time<br>• Layouts |
| Input mode | Input mode for this app. Options are:<br><br>• **Direct** mode: Incoming artwork files are collected until a trigger condition is reached at which point the Plan tool is started. This option triggers a lot of extra properties, which are described in the *table* below.<br><br>• **CSV Import** mode: A single CSV file with all product order information is expected and will start Plan immediately. This option triggers 2 subordinate properties:<br><br>  • *CSV import preset*: CSV Import Preset to use while importing CSV file. If not specified, the default Phoenix CSV Import preset is used.<br><br>  • *Base folder path*: Optional base folder path used to interpret relative file paths within the CSV file. If not specified, all paths are assumed to be full absolute paths.<br><br>• **Phoenix Job** mode: A single Phoenix job file (PHX) is imported. This option triggers the *Run plan* subordinate property:<br><br>  • If set to Yes, the Plan tool is run.<br>  • If set to No, the job is directly exported through the outgoing connections. Choose this option for jobs that have already been laid out. This can be useful in cases where an existing job has been modified and needs to be output for printing, cutting, etc.<br><br>**Note:** If the Phoenix Job mode is being used with Phoenix running remotely (Host -> Remote), then Phoenix 6.1.1 or above is required. When running locally, any version at or above Phoenix 6.0 will work. |

**Direct input mode - subordinate properties**

In the table below, you can find a description of all subordinate properties that are triggered when in the app properties *Input mode* is set to **Direct**.

| Properties | Description |
|---|---|
| Plan every N files | The total number of incoming job files needed before starting a plan.<br><br>A value of 0 means this option is disabled. |
| Plan after N minutes | Start planning current set of products N minutes after the first product arrived regardless of whether the required number of products has been reached.<br><br>A value of 0 means this option is disabled. |
| Plan on condition | Plan is started whenever this condition is true, even if the required number of products have not arrived.<br><br>This condition is re-evaluated for each new job in the context of that job. A value of None means this option is disabled. |
| Plan identifier | A string value evaluated in the context of each incoming job that determines which jobs belong together.<br><br>If not set, all incoming jobs are handled together.<br><br>If set, plans will include only jobs with the same Plan Identifier and the Plan N Files property will also count only other jobs with matching Plan Identifier values.<br><br>A value of None means this option is disabled. |
| File sort method | The order in which to sort products within jobs based on the incoming file name. Options are:<br><br>• None<br>• Alphabetically<br>• Reverse |
| Product name | Name of the product in Phoenix. |
| Product stock | Stock material of product. Stock can be entered manually, by variable/script, or by selecting a stock in the current Stock Library in Phoenix.When plans include products with different stocks, Phoenix will ensure products are placed on sheets with matching stocks and that products with different stocks are not mixed in the same layout. |
| Stock grade | Optional grade of product stock. When not defined, the first grade for the given stock is used. |
| Grain direction | Grain direction requirement of this product. |
| Quantity | Number of orders needed to be fulfilled for this product. |
| Minimum Overruns (%) | Minimum overrun percentage allowed above or below ordered amount. When not specified, minimum overrun defaults to 0%. Percent sign (%) is optional and negative percentages are allowed (e.g. -10%). |
| Maximum Overruns (%) | Maximum overrun percentage allowed above ordered amount. When not specified, maximum overrun defaults to 100%. Percent sign (%) is optional and only positive values are allowed. |

| Properties | Description |
|---|---|
| Product type | Type of product to create: <br><br> • **Flat**: Subordinate properties: <br><br>    • *Die design*: Type of die design used to define the die line shape of product. Default is Line Type Mappings where artwork spot colors and/or PDf layers specified in Phoenix define the various die line types. <br><br>      • **Tool Type Mappings**: Tool Type Mappings from Phoenix are used. <br><br>        • *Scaling*: Optional scaling factor (horizontal/vertical scaling). <br><br>      • **Die Design Library**: <br><br>        • *Name*: Full path of die design in the Die Designs Library including folders and design name separated by forward slash ('/'). <br><br>        • *Scaling*: Optional scaling factor (horizontal/vertical scaling). <br><br>      • **Artwork layers**: <br><br>        • *Cut layer*: Layer name in the PDF to use for product cut lines. This is a required field. <br><br>        • *Crease layer*: Optional layer name in the PDF to use for product crease lines. <br><br>        • *Bleed layer*: Optional layer name in the PDF to use for product bleed mask. <br><br>        • *Scaling*: Optional scaling factor (horizontal/vertical scaling). <br><br>      • **Artwork inks**: <br><br>        • *Cut ink*: Spot color name in the PDF to use for product cut lines. This is a required field. <br><br>        • *Crease ink*: Optional spot color name in the PDF to use for product crease lines. <br><br>        • *Bleed ink*: Optional spot color name in the PDF to use for product bleed mask. <br><br>        • *Scaling*: Optional scaling factor (horizontal/vertical scaling). <br><br>      • **Artwork Trimbox**: Trimbox from the artwork is used. <br><br>        • *Scaling*: Optional scaling factor (horizontal/vertical scaling). |

| Properties | Description |
|---|---|
| | • **CAD**:<br><br>    • *CAD file*: CAD file containing 1-up die of product when 'CAD' dieshape type is selected.<br><br>    • *CAD design name*: Optional name of 1-up CAD design in CAD file when 'CAD' dieshape type is selected.If not speficied the first 1-up die defined in the CAD file is used.<br><br>    • *Scaling*: Optional scaling factor (horizontal/vertical scaling).<br><br>• **Custom Size**:<br><br>    • *Width*: Width of rectangular product.<br><br>    • *Height*: Height of rectangular product.<br><br>    Units may be specified (e.g. 200mm) and if omitted, Phoenix default units are assumed.<br><br>• *Autosnap*: Artwork to product dieshape autosnap mode; used when product dieshape type is CAD or Custom Size.<br><br>• *Multi-page file handling*: This option affects how multi-page artwork files are interpreted in direct mode:<br><br>    • **One product per file**: A single product is always created for each artwork file regardless of the number of pages.<br><br>    • **One product per page**: One single-sided product is created for each page in the artwork file. You can choose to copy or to mirror artwork on the front side of the flat product to the back side.<br><br>    • **One double-sided product every two pages**: A product will be created for every two pages with the first page used as the front artwork and the second page used as the back artwork of the product. If the artwork file has an odd number of pages, the last page will create a single-sided product.For example, if a 5 page PDF file comes in, this option will create 2 double-sided products and 1 single-sided product. Pages 1 and 2 will be used as the front and back of the first product respectively and pages 3 and 4 used as the front and back of the second product. Page 5 will be used as the front of the final single-sided product.<br><br>• *Shape handling*: Shape handling mode to use when finding closed path shapes from the dielines in the |

| Properties | Description |
|---|---|
| | artwork. 'Multiple' mode will create a new product for each closed path shape detected in the artwork. |

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- *Product templates*: Requires Phoenix 6.0 or higher. Optional list of templates to restrict this product to when ganging with templates from the Templates library. When unset, all available templates that this product shape matches will be attempted during ganging. To query the current Templates library in Phoenix use the Select many from library option.

- *Colors*: Page colors for front side of flat products or all pages of bound and folded products.

- *Back colors*: Page back colors for back side of flat products.
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- **Tiled**: Subordinate properties:

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- *Die design*: See higher (first property of product type = Flat)

- *Autosnap*:

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- **Automatic**

- **Autosnap with ink**: *Front/Back autosnap with ink*: Spot color name in the PDF to use as dieshape when aligning artwork to product die on the front/back side of the product

- **Autosnap with layer**: *Front/Back autosnap with layer*: Layer name in the PDF to use as dieshape when aligning to product die on the front/back side of the product.
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- *Shape handling*: Shape handling mode to use when finding closed path shapes from the dielines in the artwork. 'Multiple' mode will create a new product for each closed path shape detected in the artwork.

- *Tiling Preset:* Tiling preset to use. If left empty, the tiling properties should be set using the properties below. If a value is specified for the tiling preset, it will override the tiling properties set below.

- *Start corner*: The corner of the artwork where the first tile is to be placed. This property plus tile order define the exact order tiles are to be placed.

- *Tile order*: This property plus start corner define the exact order tiles are to be placed.
</div>

| Properties | Description |
|---|---|
| | • *Horizontal/Vertical tiling*: Rule for splitting up artwork into tiles in the horizontal/vertical direction. Used to divide the artwork into multiple items to be produced separately.<br><br>  • **None**: No tiling in this direction.<br><br>  • **Fixed number**:<br>    • *Number of tiles*: Tiles are evenly spaced across the width of the artwork.<br>    • *Uniform final size*: When defining a fixed number of tiles, enabling this option ensures the final tile sizes are uniform in the horizontal/vertical direction regardless of gap or overlap settings. When not enabled, inner and edge tile sizes can differ because uniform tile sizes are then calculated before gap or overlap rules are applied.<br>    • *Tiling method*: Tiling method to use in horizontal/vertical direction in any: Gap or Overlap.<br><br>  • **Fixed size**:<br>    • *Tile width/height*: Fixed width/height of tiles in horizontal/vertical direction.<br>    • *Tiling method - Gap*: Gap distance between tiles in the horizontal direction. *Extension* refers to the amount of extra artwork content beyond the tile gap edge to extend in the horizontal direction. *Extension direction* is the rule defining which horizontal direction(s) the gap is extended for each tile.<br>    • *Tiling method - Overlap*: Distance beyond tile edge to extend the tile horizontally to create overlap. *Overlap rule* refers to the rule defining what horizontal edge(s) of tiles will overlap with neighboring tiles. *No-image* refers to the width of the section at the end of the overlap where no artwork content is allowed. This no image section can be used for example to create a glue strip area on the tile piece.<br><br>  • **Variable sizes**:<br>    • *Tile widths/heights*: List of all tile widths/heights in the horizontal/vertical direction.<br>    • *Tiling method*: See higher: Fixed Size.<br><br>• *Colors*: Page colors for front side of flat products or all pages of bound and folded products. |

| Properties | Description |
|---|---|
| | • *Back colors*: Page back colors for back side of flat products.<br><br>• **Bound**: Subordinate properties:<br><br>  • *Folding patterns*: List of folding patterns to use for bound work.<br><br>  • *Binding method*: Binding method to use for bound work, either Perfect Bound or Saddle Stitch. If Saddle Stitch, select Pages per section - Number of pages per section (e.g. Smyth sewn) for multi-section bound work<br><br>  • *Binding edge*: Page binding edge for bound work.<br><br>  • *Jog edge*: Jog edge for bound work. When set, this edge must be perpendicular to the binding edge. Setting jog to Bottom for left- or right-bound work results in 'Foot to Foot' page orientation.<br><br>  • *Reading order*: Reading order of pages in bound work.For Calendar, choose Self cover - Whether bound part includes a cover or not.<br><br>  • *Spine trim*: Spine trim amount in bound signatures.<br><br>  • *Jog trim*: Jog trim amount in bound signatures.<br><br>  • *Face trim*: Face trim amount in bound signatures.<br><br>  • *Non-jog trim*: Non-jog trim amount in bound signatures.<br><br>  • *Lip type*: Lip type for determining where lip gets added to bound signatures.<br><br>  • *Lip*: Lip amount to add to bound signatures.<br><br>  • *N-up*: Number of N-ups which can be a value of 1, 2, or 3 with 1 signifying normal non N-up repeated signatures. If N-up greater than 1, select the N-up gap - Gap spacing to apply between N-up repeat pages.<br><br>  • *Creep*: Type of creep to apply to bound signatures. Options are:<br><br>    • **Inward**: You must define the method to use for performing creep on bound signatures and the creep calculation mode to use to determine the creep amount to apply. The amount can be total or per-page based on the calculation mode.<br><br>    • **Outward**: See Inward. |

| Properties | Description |
|---|---|
| | • **Both**: See Inward. |
| | • **Custom**: The transition indicates the percentage from the inner most signatures towards the spine when to change creep direction from inward to outward. For the other properties, see Inward. |
| | • *Page bleed*: Bleed margins of individual pages in bound and folded products |
| | • *Colors*: colors for front side of flat products or all pages of bound and folded products. |
| | • **Folded**: Subordinate properties: |
| |    • *Folding patterns*: List of folding patterns to use for bound work. |
| |    • *Page bleed*: Bleed margins of individual pages in bound and folded products. |
| |    • *Colors*: Page colors for front side of flat products or all pages of bound and folded products. |
| Group name | Optional product group. When specified, the Plan tool will group products with same group values together. |
| Due date | Optional product due date. When specified, the Plan tool will group products with same due dates together. |
| Priority | Optional priority to assign to product from 1 to 10, with 1 being highest priority. If the value of this property is set to "Default", then the default product priority in the Phoenix product preferences is used. |
| Front marks | Optional list of marks from the Phoenix marks library to apply to the front side of this product. |
| Back marks | Optional list of marks from the Phoenix marks library to apply to the back side of this product. |
| Rotation | Type of rotation this product is allowed to use during planning:<br><br>• **Any**<br><br>• **None**<br><br>• **Orthogonal**<br><br>• **Custom**: This triggers an extra property, *Allowed rotations*: Comma-delimited list of allowed rotations, for example "0,90". When specified, allowed rotation overrides the default behavior of aligning product and sheet grain directions during planning, ensuring products are only placed in the defined allowed rotation(s). |

| Properties | Description |
|---|---|
| Bleed type | Type of bleed mask to apply to this product's artwork:<br><br>• **Margins**: You should define different bleed margins for each side of the product. Units may be specified (e.g. 3mm) and if omitted, Phoenix default units are assumed.<br><br>• **Contour**: Creates a uniform offset path from the product shape. Triggers a subordinate property, *Bleed*: Bleed offset to generate from product die shape. If not specified or "Default", then default job bleed offset is used as defined in Preferences > Job in Phoenix. Units may be specified (e.g. 3mm) and if omitted, Phoenix default units are assumed.<br><br>• **None**: This option will not apply a bleed mask. |
| Spacing type | Product spacing type used when placing products in layouts during Plan. Options:<br><br>• **Margins**: Specify the spacing distance required on top/bottom/right and left edge of the product. Units may be specified (e.g. 3mm) and if omitted, Phoenix default units are assumed.<br><br>• **From Bleed**: Spacing is based on bleed.<br><br>• **Uniform**: Uniform spacing offset to apply to product dieshape. Units may be specified (e.g. 3mm) and if omitted, Phoenix default units are assumed. |
| Offcut | Optional offcut margins to apply to the sides of product components. If Margins is chosen, you must specify the offcut amount to add to the top/bottom/right/left edge of the product component. |
| Color Analysis | Product color analysis mode:<br><br>• **Default**<br><br>• **Fast**: Phoenix evaluates without rasterizing.<br><br>• **Raster**: Phoenix auto-computes ink coverage percentages in product artwork by rasterizing each separation of the artwork and analyzing the raster data. |
| Notes | Optional notes to attach to the product notes property. |
| Description | Optional description to attach to the product notes property. |
| Custom properties | Optional custom properties to apply to the product. |