Suchy MIPS
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BENS G3

Carbon Copy Filter

Manual

Suchy MIPS

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Content

1. Functional Specification:

The CarbonCopy filter enables the automatic creation of print job copies, either as a whole or as single pages thereof (like a carbon copy function). Via corresponding settings in the configuration file it can, in addition, be specified which of the different paper input trays are accessed for that job.

The CarbonCopy filter supports the following modes:

CarbonCopy **Creating single page copies (function 1).**

Example: Creating 3 copies of a four-page print job.
Input: 1,2,3,4
Output: 1,1,1,2,2,2,3,3,3,4,4,4.

SplitPages **Creating single page copies, whereby each stack of copies is created as a complete print job with an additional function, as for example stapling, (function 2).**

Example: Creating 3 copies of a four-page print job.
Each copy has to be stapled.
Input: 1,2,3,4
Output: 1,1,1<Staple><Job End>, 2,2,2< Staple ><Job End>, 3,3,3< Staple ><Job End>, 4,4,4< Staple ><Job End>

CopyBundle **Creating whole print jobs (function 3).**

Example: Creating 3 copies of a whole four-page print job.
Input: 1,2,3,4
Output: 1,2,3,4,1,2,3,4,1,2,3,4.

SplitBundle **Creating whole print jobs, whereby each stack of copies is created as a complete print job with an additional function, as for example stapling (function 4).**

Example: Creating 3 copies of a whole four-page print job.
Each copy has to be stapled.
Input: 1,2,3,4
Output: 1,2,3,4 <Staple><Job End>, 1,2,3,4 < Staple ><Job End>,1,2,3,4 <Staple ><Job End>

With each of the functions stated above it can additionally be determined which of the paper input trays is used for printing. For example, for creating copies of single pages, a different input tray can be defined for each separate page.

Details about controlling the functions will be outlined in the following paragraphs.

2. Installation of the Filter

For installing the macro filter on BENS, please proceed as follows:

Filter

- Start the BENS HTML administration tool.
- Select ***Configuration*** → ***Filters*** from the menu and then click on the button ***Add Filter.***
- Click on the button ***Search***, mark the macro filter file we included in our delivery and click on the button ***Save***. The name of the filter then appears in the list of all filters available on BENS.

Configuration

- Please adjust the included XML configuration file according to your own requirements, following the instructions set down in the ensuing pages.
- Select ***Configuration*** → ***Filters*** from the menu and then click on the name of the filter.
- Click on the button ***Add config file***.
- Click on the button ***Search*** and select the corresponding XML file.
- Enter a name for the configuration file in the field ***Config file description*** (the file name will not be adopted automatically).
- To finish this process, click on the button ***Update config file***. The configuration file will then appear in the list of all configuration files for this filter.

3. Implementation of the Filter

BENS will only employ the uploaded filter when it is activated for a virtual printer. In order to activate a filter for a virtual printer, please proceed as follows:

- Select ***Configuration*** → ***Virtual Printers*** from the menu.
- Click on the name of the virtual printer for which you wish to activate the filter.
- From the combobox **Add filter** select the name of the filter. The filter name will then appear in the list for the filters activated for the currently used virtual printer.
- Then select the suitable configuration from the combobox **Filter config**.
- The activation of the filter is now concluded.

Note: A filter can only be used when it was activated for a virtual printer.

The filter can only be used on those virtual printers on which it was activated.

Each virtual printer requires a license for the activation. When there are no licenses left, an error message will be displayed on activation.

The licenses are not assigned to specific virtual printers. When you delete a filter from the virtual printer, a license will be released, enabling you to reactivate the filter on another virtual printer.

4. Example and Description of a Configuration File:

For a better legibility, single paragraphs of the configuration file were highlighted in colour. Only the values marked in **bold/green** may be altered.

```
<?xml version="1.0" encoding="iso-8859-2"?>
 <CarbonCopy version="1.0">

    <Copies> 4 </Copies>
    <CopyBundle>NO</CopyBundle>
    <SplitPages>NO</SplitPages>
    <SplitBundle>NO</SplitBundle>

    <InTray>&l1H</InTray>
    <InTray>&l3H</InTray>
    <InTray>&l4H</InTray>
    <InTray>&l13H</InTray>

    <AddPJL>@PJL SET STAPEL LEFT </AddPJL>
    <AddPJLCR>NO</AddPJLCR>
    <AutoPJLFooter>YES</AutoPJLFooter>
    <ESC>!</ESC>
    <PJLFooter>!%-12345X</PJLFooter>
    <PJLFooter>@PJL EOJ</PJLFooter>
    <PJLFooter>!%-12345X</PJLFooter>
    <ErrToStdout>NO</ErrStdout>
</CarbonCopy>
```

4.1. <Copies>

<Copies> **Value** </Copies>
Number of copies to be created automatically.

4.2. CarbonCopy (function 1)

Each page is copied immediately by CarbonCopy. The number of copies is defined with the tag <Copies>. If the number of copies is 3, a file with 4 pages will be copied as follows: 1,1,1,2,2,2,3,3,3,4,4,4.

CarbonCopy is activated when the values of the tags <SplitPages>, <CopyBundle> and <SplitBundle> are set to “NO”.

With the tag <AddPJL> it can be defined additional functions (e.g. stapling the complete output).

This tag determines whether single pages or complete print jobs are copied. The permitted values are „**NO**“ and „**YES**“.

NO: Each page output is copied immediately. When 3 copies are defined, each input defining the pages 1,2,3,4 creates the output 1,1,1,2,2,2,3,3,3,4,4,4.

YES: Copies of whole print jobs are created. When 3 copies are defined, the input 1,2,3,4 creates the output 1,2,3,4,1,2,3,4,1,2,3,4. In this case, the values for <CopyBundle> and <SplitBundle> have to be set on „NO“, as each of the functions CopyBundle, SplitPages or SplitBundle can only be used once at a time.

4.3. <SplitPages> (function 2)

<SplitPages>**YES**</SplitPages>

This tag determines whether copies of separate pages are created and bundled in a single job.

This makes sense, when for example each stack of copies additionally gets stapled or punched. When using this function, different tags (<AddPJL>) can determine which of the job functions apply for each stack of copies (e.g. stapling).

If, for example, a four-page print job is created with 3 copies per page and each stack of copies is stapled, each input defining the pages 1,2,3,4 is created as the following output:

1,1,1<Staple><Job End>, 2,2,2< Staple ><Job End>, 3,3,3< Staple ><Job End>, 4,4,4< Staple ><Job End

The permitted values are „**NO**“ and „**YES**“.

NO: This function is not used.

YES: This function is used. In this case, the values for <CopyBundle> and <SplitBundle> have to be set to „NO“, as the each of the functions CopyBundle, SplitPages or SplitBundle can only be used once at a time. When using this function, it has to be defined with tag <AddPJL> which of the printer functions (e.g. stacking or punching) apply for that stack of copies.

4.4. <CopyBundle> (function 3)

<CopyBundle>**YES**</CopyBundle>

This tag determines whether single pages or complete print jobs are copied. The permitted values are „**NO**“ and „**YES**“.

NO: Each page output is copied immediately. When 3 copies are defined, each input defining the pages 1,2,3,4 creates the output 1,1,1,2,2,2,3,3,3,4,4,4.

YES: Copies of whole print jobs are created. When 3 copies are defined, the input 1,2,3,4 creates the output 1,2,3,4,1,2,3,4,1,2,3,4. In this case, the values for <CopyBundle> and <SplitBundle> have to be set on „NO“, as each of the functions CopyBundle, SplitPages or SplitBundle can only be used once at a time.

4.5. <SplitBundle> (function 4)

<SplitBundle>**YES**</SplitBundle>

This tag determines whether copies of single jobs are created and also bundled in single jobs. This makes sense, when, for example, each stack of copies is additionally stapled or punched. When using this function, other tags (<AddPJL>) can determine which job functions apply for the stack of copies (e.g. stapling).
If, for example, a four-page print job is created with 3 copies per print job and each of the stacks of copies is stapled, then each input defining the pages 1,2,3,4 is created as the following output:
1,2,3,4<Staple><Job End>, 1,2,3,4< Staple ><Job End>,1,2,3,4< Staple ><Job End>.

The permitted values are „**NO**“ and „**YES**“.

NO: This function is not used.

YES: This function is used. In this case, the values for <CopyBundle> and <SplitPages> have to be set on „NO“ as each of the functions CopyBundle, SplitPages or SplitBundle can only be used once at a time. When using this function, it has to be defined with tag <AddPJL> which of the printer functions (e.g. stapling or punching) apply for that stack of copies.

4.6. Paper input trays

To specify the paper input trays used by a filter function the tag <InTray> or <Bundle_xxx> have to be used.

The tag <InTray> may be used by all filter functions, the tags <Bundle_xxx) are only valid for filter function 3 and 4.

If no paper input tray is specified, the printer’s default input tray will be used.

4.6.1. <InTray>

<InTray>**&l1H**</InTray>
<InTray>**&l3H**</InTray>
<InTray>**&l4H**</InTray>
<InTray>**&l13H**</InTray>

This tag determines which of the paper input trays is used for printing a particular page. The value for this tag has to be entered as a PCL command for the corresponding tray of the target device (without a leading escape character). For more details please refer to the printer manual or ask your printer support service.

When using the functions 1 and 2 (here, copies of single pages are created), the number of tags has to correspond to the number of copies defined in the tag <Copy> (the number can be higher but must not be lower). For each copy, the corresponding input tray has to be defined. If the same tray is used for all copies, the same value has to be entered in each tag.

If all the tags are completely deleted, the entries from the printing file are used.

When using the functions 3 and 4 (here, copies of whole print jobs are created), these tags are not used for the single copies (for this, the tags <BundleInTray> are provided), but for the single pages of the print job. As the number of pages is not known beforehand, it can happen that the number of pages in a job is higher than the defined InTray tags. In this case, the pages for which no InTray tags were predefined are drawn from the tray that was last defined. Example: trays 2 and 4 are defined. The print job consists of 4 pages. Page 1 is drawn from tray 2, page 2 from tray 4 and the pages 3 and 4 are drawn from tray 4, as well.

When with functions 3 and 4 no InTray tags come into use, then either the tags have to be deleted or the same tray has to be defined in each tag. Apart from this, the use of BundleInTray tags entirely overrules the InTray text.

4.6.2. <BundleInTrayFirstPage>

<BundleInTrayFirstPage>**&l1H**</BundleInTrayFirstPage >

This tag is solely used for the functions 3 and 4 with which copies of entire print jobs are created. With this tag it is determined from which tray the paper for the first page of the print job is drawn. This tag is only used for jobs consisting of more than one page. The tag <BundleIntrayOnePageDoc> is reserved for one-page jobs.

4.6.3. <BundleInTrayFollowingPage>

<BundleInTrayFollowingPage>**&l2H**</BundleInTrayFollowingPage >

This tag is solely used for the functions 3 and 4 with which copies of entire print jobs are created. With this tag it is determined from which tray the paper for the following pages (after the first page) is drawn. This tag is only used for jobs consisting of more than two pages. The tag <BundleInTrayTwoPagesDoc> is reserved for two-page jobs. However, this tag is not meant for the documents' last page. The tray for the documents' last page is determined with tag <BundleInTrayLastPage>.

.

4.6.4. <BundleInTrayLastPage>

<BundleInTrayLastPage>**&I3H**</BundleInTrayLastPage >

This tag is solely used for the functions 3 and 4 with which copies of entire print jobs are created. With this tag it is determined from which tray the paper for the last page is drawn. This tag is only meant for print jobs with more than two pages. The tag <BundleInTrayTwoPagesDoc> is reserved for two-page documents.

4.6.5. <BundleInTrayOnePageDoc>

<BundleInTrayOnePageDoc>**&I3H**</ BundleInTrayOnePageDoc>

This tag is solely used for the functions 3 and 4 with which copies of entire print jobs are created. With this tag it is determined from which tray the paper for the one-page print jobs is drawn.

4.6.6. <BundleInTrayTwoPagesDoc>

<BundleInTrayTwoPagesDoc>**&I3H**</ BundleInTrayTwoPagesDoc>

This tag is solely used for the functions 3 and 4 with which copies of entire print jobs are created. With this tag it is determined from which tray the paper for the second page of a second-page print jobs is drawn.

4.7. <AddPJL>

<AddPJL>**@PJL SET STAPEL LEFT** </AddPJL>

This tag inserts PJL commands into the PJL Header of each print job. This way, print jobs can for example be stapled, punched, etc. Several different tags of this kind can be defined.

4.8. <AddPJLCR>

<AddPJLCR>**NO**</AddPJLCR>

This tag determines whether the PJL command entered with this tag ends only with Linefeed or with Linefeed/Carriage Return.

NO: (Standard) Only LF is put out at the end of the PJL command.

YES: LF/CR is put out at the end of the PJL command.

4.9. The document footer

Some printers detect the end of a print job only in the case the print job contains a PJL footer. If this footer is missing, a footer may be specified via the XML configuration file (tags <ESC>, <PJLFooter> or may be automatically generated by the filter function: <Escape>%-12345X@PJL EOJ<Escape>%-12345X..

This tag determines which character has to be entered into the commands for the PJL-Footer as PCL-Escape (dec. 27). The character '~' (dec. 126) is not allowed, because this character may possibly lead to an additional printed page.

4.9.1. <AutoPJLFooter>

<AutoPJLFooter>**YES**</AutoPJLFooter>

This tag determines whether after each print job a PJL-Footer is automatically put out. Some printing systems can only recognize the end of a print job if this is explicitly declared with a PJL command. If that is not the case, some functions, such as for example stapling or punching are not carried out.

NO: No PJL-Footer is put out.

YES: A PJL-Footer is put out. In this case, the PJL commands to be inserted into the Footer have to be defined with the tag <PJLFooter>.

4.9.2. <ESC>

<ESC>**?**</ESC>

This tag determines which character has to be entered into the commands for the PJL-Footer as PCL-Escape (dec. 27). The character '~' (dec. 126) is not allowed, because this character may possibly lead to an additional printed page.

4.9.3. <PJLFooter>

<PJLFooter>**!%-12345X**</PJLFooter>
<PJLFooter>**@PJL EOJ**</PJLFooter>
<PJLFooter>**!%-12345X**</PJLFooter>

This tag determines which PJL commands are added at the end of all print jobs. The number of possible commands is not limited. These PJL commands are only used if the tag <AutoPJLFooter> shows the value „YES".

4.10. <ErrToStdout>

<ErrToStdout>**NO**</ErrStdout>

This tag determines whether or not a log file is created.

NO: No log file is created.

YES: A log file is created in case an error has occurred.

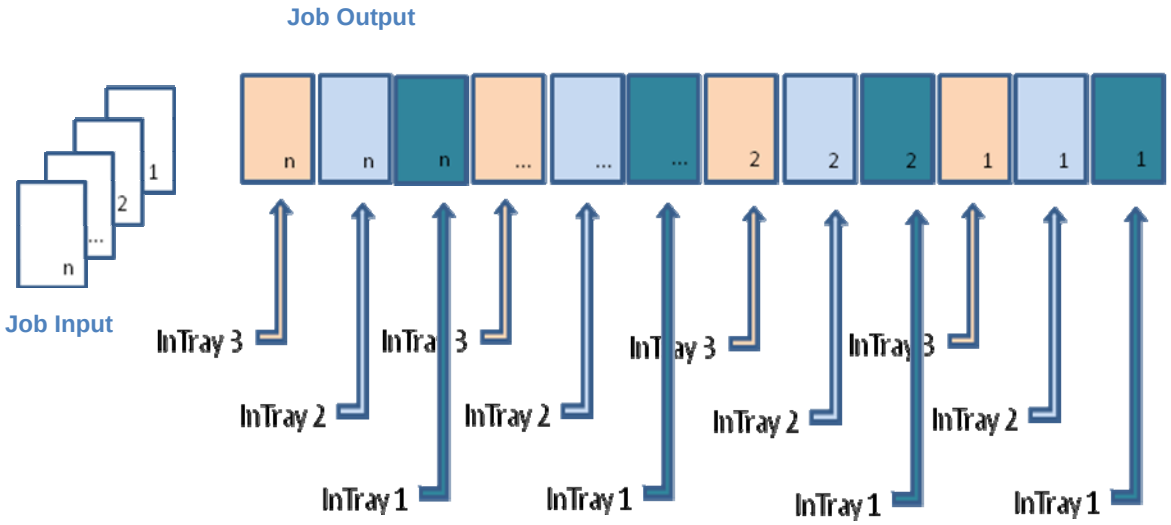
LOG: A log file is always created.

5. Examples for CarbonCopy Print Jobs:

In this chapter, some examples for frequently occurring jobs are introduced together with the corresponding configurations.

5.1. Example 1

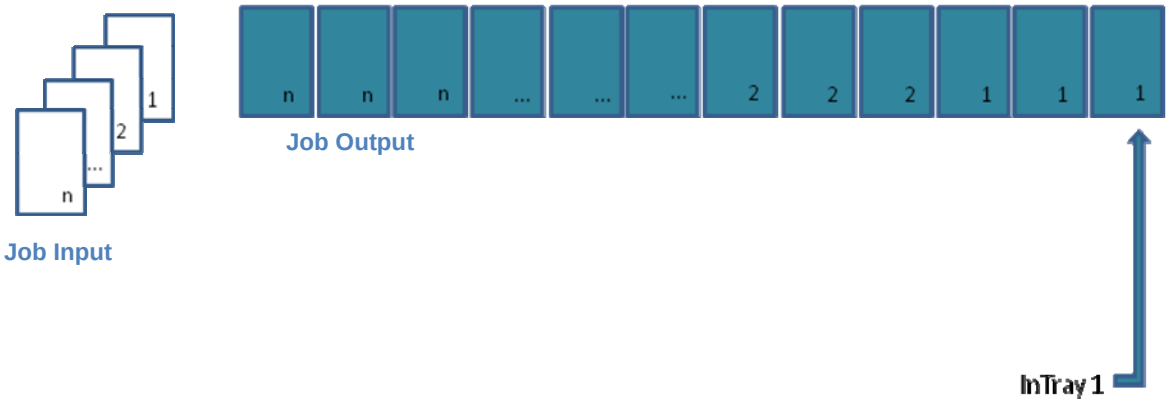
Job: 3 copies are created from each page of a print job. For copy 1, the paper from input tray 1 is used, for copy 2 the paper from input tray 2 is used and for copy 3 the paper from input tray 3 is used.




```
<?xml version="1.0" encoding="iso-8859-2"?>
 <CarbonCopy version="1.0">

    <Copies> 3 </Copies>
    <CopyBundle>NO</CopyBundle>
    <SplitPages>NO</SplitPages>
    <SplitBundle>NO</SplitBundle>

    <InTray>&I1H</InTray>
    <InTray>&I2H</InTray>
    <InTray>&I3H</InTray>

    <AddPJL>@PJL SET STAPEL LEFT </AddPJL>
    <AddPJLCR>NO</AddPJLCR>
    <AutoPJLFooter>YES</AutoPJLFooter>
    <ESC>?</ESC>
    <PJLFooter>?%-12345X</PJLFooter>
    <PJLFooter>@PJL EOJ</PJLFooter>
    <PJLFooter>?%-12345X</PJLFooter>
    <ErrToStdout>NO</ErrStdout>
</CarbonCopy>
```

5.2. Example 2

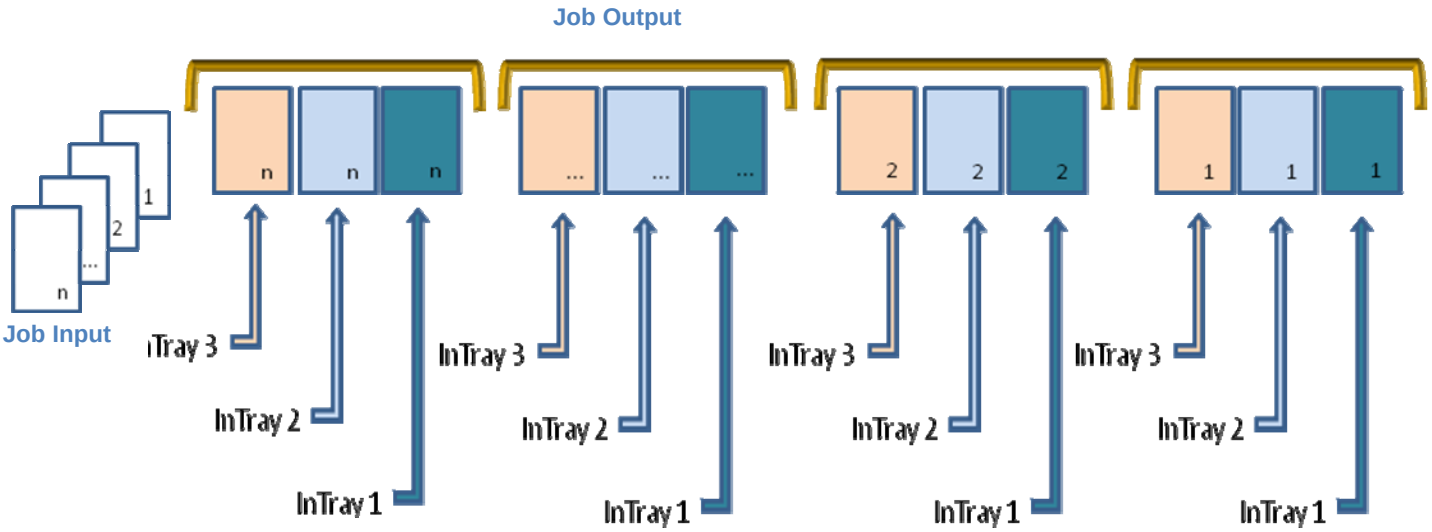
Job: 3 copies are created from each page of a job. The paper from input tray 1 is used for all copies.




```
<?xml version="1.0" encoding="iso-8859-2"?>
 <CarbonCopy version="1.0">

    <Copies> 3 </Copies>
    <CopyBundle>NO</CopyBundle>
    <SplitPages>NO</SplitPages>
    <SplitBundle>NO</SplitBundle>

    <InTray>&l1H</InTray>
    <InTray>&l1H</InTray>
    <InTray>&l1H</InTray>

    <AddPJLCR>NO</AddPJLCR>
    <AutoPJLFooter>YES</AutoPJLFooter>
    <ESC>?</ESC>
    <PJLFooter>?%-12345X</PJLFooter>
    <PJLFooter>@PJL EOJ</PJLFooter>
    <PJLFooter>?%-12345X</PJLFooter>
    <ErrToStdout>NO</ErrStdout>
</CarbonCopy>
```

5.3. Example 3

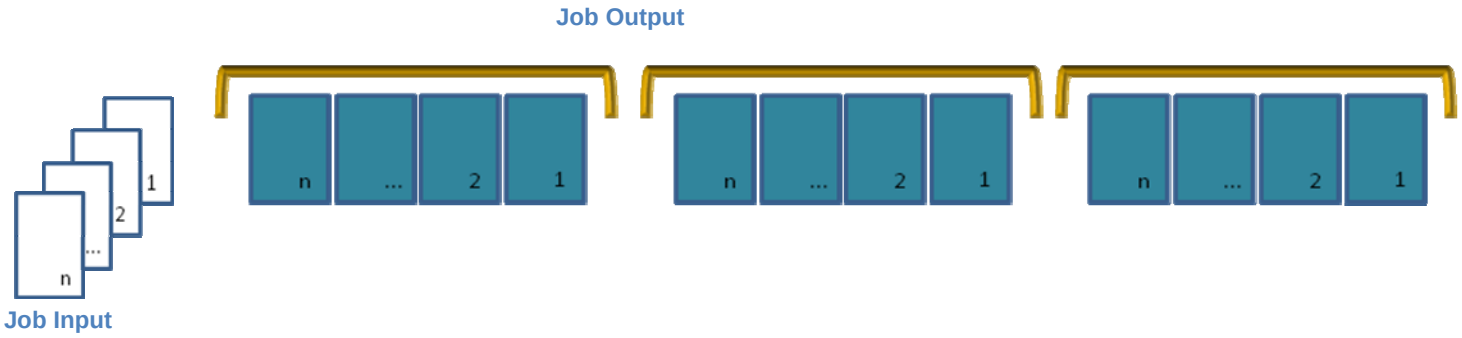
Job: 3 copies are created from each page of a job. For copy 1 the paper from input tray 1 is used, for copy 2 the paper from input tray 2 is used and for copy 3 the paper from input tray 3 is used. Each stack of copies is stapled.




```
<?xml version="1.0" encoding="iso-8859-2"?>
 <CarbonCopy version="1.0">

    <Copies> 3 </Copies>
    <CopyBundle>NO</CopyBundle>
    <SplitPages>YES</SplitPages>
    <SplitBundle>NO</SplitBundle>

    <InTray>&I1H</InTray>
    <InTray>&I2H</InTray>
    <InTray>&I3H</InTray>

    <AddPJL>@PJL SET STAPEL LEFT </AddPJL>
    <AddPJLCR>NO</AddPJLCR>
    <AutoPJLFooter>YES</AutoPJLFooter>
    <ESC>?</ESC>
    <PJLFooter>?%-12345X</PJLFooter>
    <PJLFooter>@PJL EOJ</PJLFooter>
    <PJLFooter>?%-12345X</PJLFooter>
    <ErrToStdout>NO</ErrStdout>
</CarbonCopy>
```

5.4. Example 4

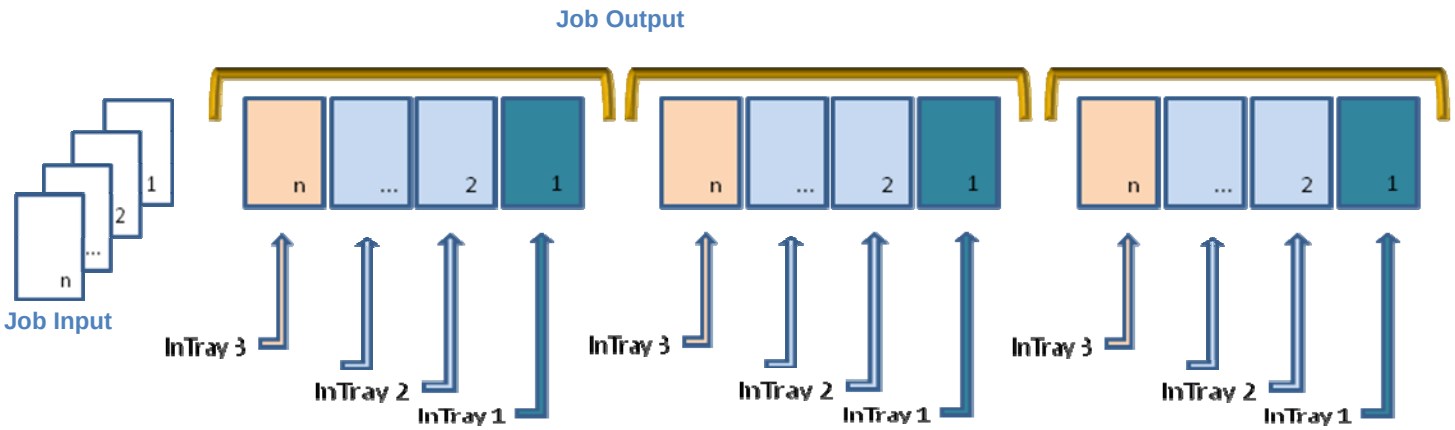
Job: One job is printed 3 consecutive times. Each job is stapled. Either the standard paper input tray or the paper tray stated in the print data is used.




```
<?xml version="1.0" encoding="iso-8859-2"?>
 <CarbonCopy version="1.0">

    <Copies> 3 </Copies>
    <CopyBundle>YES</CopyBundle>
    <SplitPages>NO</SplitPages>
    <SplitBundle>NO</SplitBundle>


    <AddPJL>@PJL SET STAPEL LEFT </AddPJL>
    <AddPJLCR>NO</AddPJLCR>
    <AutoPJLFooter>YES</AutoPJLFooter>
    <ESC>?</ESC>
    <PJLFooter>?%-12345X</PJLFooter>
    <PJLFooter>@PJL EOJ</PJLFooter>
    <PJLFooter>?%-12345X</PJLFooter>
    <ErrToStdout>NO</ErrStdout>
</CarbonCopy>
```

5.5. Example 5

Job: One job is printed 3 consecutive times. Each job is stapled. For the first page the paper from input tray 1 is used. For the following pages the paper from input tray 2 is used and for the last page the paper from input tray 3 is used.




```
<?xml version="1.0" encoding="iso-8859-2"?>
 <CarbonCopy version="1.0">

    <Copies> 3 </Copies>
    <CopyBundle>NO</CopyBundle>
    <SplitPages>NO</SplitPages>
    <SplitBundle>YES</SplitBundle>

    <BundleInTrayFirstPage>&I1H</BundleInTrayFirstPage >
    <BundleInTrayFollowingPage>&I2H</BundleInTrayFollowingPage
    <BundleInTrayLastPage>&I3H</BundleInTrayLastPage >


    <AddPJL>@PJL SET STAPEL LEFT </AddPJL>
    <AddPJLCR>NO</AddPJLCR>
    <AutoPJLFooter>YES</AutoPJLFooter>
    <ESC>?</ESC>
    <PJLFooter>?%-12345X</PJLFooter>
    <PJLFooter>@PJL EOJ</PJLFooter>
    <PJLFooter>?%-12345X</PJLFooter>
    <ErrToStdout>NO</ErrStdout>
</CarbonCopy>
```