BENS
Universal Filter
Manual

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Contents

1 Introduction

The BENS **Universal Filter** is a filter which provides a complex search and replace function for print data of various types.

2 Installation of the Universal Filter

For installing the Filter on BENS, please proceed as follows:

- Start the BENS HTML administration tool and log on.
- Select the module *Plugins* and then click on the button *Add / Upgrade Plugin.*
- Click on the button *Explore*, mark the Filter file and click on the button *Upload*. The name of the filter then appears in the list of all filters available on BENS.

Note: *Assigning a filter to a virtual printer consumes one licence. The number of available licences can be checked using the module* **Licenses.** *The used and available licences are displayed in the column "Virtual Printers" of the displayed license table.*

2.1 Assigning the Filter to a virtual printer

Installed filters only work on virtual printers to which they were assigned. To assign the Filter to a virtual printer, proceed as follows:

- Choose the module *Virtual Printers*
- Double-click on the name of the virtual printer to come to the edit dialog.
- Select the tab *Plugins*
- Select the Plugin from the drop down list and click on **Add Plugin**.
- The selected Filter appears in the list of active filters assigned to the selected virtual printer.

2.2 Uploading a Filter configuration file

The filter **Universal** supports the use of a configuration (it is not assigned by default). The configuration file defines the kind of action the filter should do, eg. searching for one string and exchanging it by another sting. A configuration file can be created with a simple text editor like notepad or notepad++. Details about the configuration will be displayed later.

To upload a configuration file, proceed as follows:

- Choose the module **Plugins** and double-click on the appropriate filter in the the plugins list. The Plugin Window enlarges and displays all already for the selected Plugin existing configurations.
- Click on **Explore**, select the configuration file and click on **Upload**.
- The new configuration file appears in the list of all configurations available for the selected filter.

Note: *An unlimited number of configuration files may be uploaded. The same configuration files may be assigned to filters on different virtual printers.*

2.3   Assigning a configuration to a virtual printer

To assign a configuration to a virtual printer, proceed as follows:

- Choose the module *Virtual Printers.*

- Double-click on the name of the virtual printer which has to be modified.

- Select the tab **Plugins.**

- Double-click on the filter name in the field **Code Name** and select a configuration.

- Click on *SET* to make the changes permanent.

Note: *One configuration may be assigned per filter and virtual printer but different configuration files may be assigned to the same filter on different virtual printers*

2.4   Deleting a configuration file

A configuration file may be deleted only if it is not assigned to any virtual printer. If you need to delete a configuration, you have to release the assignment from all virtual printers to which this configuration has been assigned. To release the configuration from a virtual printer proceed as follows:

- Choose the module *Virtual Printers* and select the tab *Plugins*.
- Double-click on the filter name in the column **Code name**.
- Don't select any configuration file (--Select a Config--) must be visible in the Configurations list) and click on "SET"

To delete a configuration file from BENS proceed as follows:

- Choose the module *Plugins* and double-click on filter name in the column "Name".
- Click on *Delete* in the "Operations" column.

2.5   Downloading a configuration file

- Choose the module ***Plugins*** and click on the name of the filter in the column "Name".
- Click on ***Download*** in the column "Operations". Depending on the browser used, you can open the file directly or download it to the local system. After downloading, the file can be opened by any editor, such as Notepad or Notepad++ (recommended).

2.6   Changing a configuration file

- Choose the module ***Plugins*** and double-click on the name of filter to which the configuration belongs.
- Double-click on the configurations name in the column "Name".
- Make changes and click on ***Save***.

2.7   Deleting a filter

A filter may be deleted only if it is not assigned to any virtual printer. If you need to delete a filter, you have to release the assignment from all virtual printers to which this filter has been assigned. To release filter from a virtual printer proceed as follows:

- Choose the module ***Virtual Printers*** and select the tab ***Plugins***.
- Click on ***Delete*** in the "Operations" column.

To delete filter from BENS proceed as follows:

- Choose the module ***Plugins***.
- Click on the gray button in the column ***Operations*** and select the option ***Delete***.

2.8   Updating a configuration file

An existing configuration file may be updated, even if it is assigned to virtual printers:

- Existing configuration will be overwritten by uploaded configurations if the file name will match. Follow the instruction for uploading a configuration to update a configuration.

3 Syntax description of configuration files for the Universal Filter

An Universal configuration is a XML file with TAG's for different actions which are describe below.

Example of a Universal configuration file:

```
<?xmlversion="1.0"encoding="iso-8859-2"?>
<MAIN>

        <WINDOW>20000</WINDOW>

        <AUTOPJL>
                <PJLHEADER>ON/OFF</PJLHEADER>
                <PJLFOOTER>ON/OFF</PJLFOOTER>
        </AUTOPJL>

        <DEL>
                <ERA>String1</ERA>
                <ERA>String2</ERA>
        </DEL>

        <PJLADD>
                <PJL>@PJL SET DUPLEX = OFF</PJL>
                <PJL>@PJL SET PAPER = A5 </PJL>
                <PJL>@PJL SET QTY = 3 </PJL>
        </PJLADD>

        <LPRVALUES>
                <LPRUSER>@PJL SET USER = "%LPRUSER%"</LPRUSER>
                <LPRHOST>@PJL SET HOST = "%LPRHOST%"</LPRHOST>
                <LPRJOBNAME>@PJL SET JOBNAME = "%LPRJOBNAME%"</LPRJOBNAME>
                <LPRJOBDATE>@PJL SET JOBDATE = "%LPRJOBDATE%"</LPRJOBDATE>
        </LPRVALUES>

        <EXCHANGE>
                <SEARCH>SearchString</SEARCH>
                <REPLACE>NewString</REPLACE>
        </EXCHANGE>

</MAIN>
```

Description:

Texts marked in red and green are fixed statements which shall be not changed.

Texts marked in blue are values to be set for the desired action.

\<WINDOW\>	Value for the number of Bytes from the beginning of the file where the action(s) should take place. 2000 menans, that a eg. a string defined in the TAG \<SEARCH\> will be searched only in the first 2000 bytes. Set the value to 0 (zero) for processing the whole file.
\<AUTOPJL\>	Adds a PJL-Header and/or Footer automatically to the file if no one exists. **\<PJLHEADER\> ON** creates a header of no one exists, **OFF** doesn't take any action. **\<PJLFOOTER\> ON** creates a footer (END OF JOB) if no one exists, **OFF** doesn't take any action.
\<DEL\>	Defines strings to be deleted from the print file. Each string must be set in a separate TAG **ERA\>*String*\</ERA\>.** There is no limitation in the number of Strings, which can be deleted.
\<PJLADD\>	Adds defined PJL Commands to the existing PJL-Header. The header must exist, otherwise a print error will occur. If you are not sure, if the PJL-Header exists, set \<AUTOPJL\> for header and footer to "ON"
\<LPRVALUES\>	Creates PJL-Commands for the PJL-Header with obtained LPR-Values.. \<LPRUSER\> creates a PLJ-Command with the value of the LPRUSER \<LPRHOST\> creates a PJL-Command with the value of the LPRHOST \<LPRJOBNAME\> creates a PJL-Command with the value of the LPRJOBNAME \<LPRJOBDATE \> creates a PJL-Command with the value of the LPRJOBDATE \<LPRCOPY\> creates a PJL-Command with the value of the LPRCOPY The PJL-Command can be different for different printers (check the manual), but the value of the according place holder (eg. %LPRUSER%) will be exchanged by the real user name obtained from the LPR protocol. **Example:** the PJL-Command for the user name of a given printer type is: @PJL SET USER = … The Configuration contains **\<LPRUSER\>@PJL SET USER = "*%LPRUSER%*"\</LPRUSER\>** The Name of the user transfered by the LPR protocol is: *TBarencky* The following PJL-Command will be added to the PJL-Header of the print file: **\<LPRUSER\>@PJL SET USER = "TBARENCKY"\</LPRUSER\>**
\<EXCHANGE\>	Exchages a string defined with the TAG \<SEARCH\> by a string defined with the TAG \<EXCHANGE\> Note: An empty TAG \<EXCHANGE\> causes, that the search string will be deleted (same as with the TAG \<DEL\>).

4   Examples

4.1   Example 1

To be sure, that the processed input file will contain a PJL-Header, add following TAGs to the Configuration file:

```
<AUTOPJL>
        <PJLHEADER>ON</PJLHEADER>
        <PJLFOOTER>ON</PJLFOOTER>
</AUTOPJL>
```

If the PJL-Header and /or Footer already exists, no action will be taken by the filter. Otherwise a very simple PJL-Header/Footer will be added.

4.2   Example 2

To delete the PJL-Command "@PJL SET PAPER = A5" and the PCL Command <esc>&l26A from the print data, add the following TAG to the configuration file:

```
<DEL>
        <ERA>@PJL SET PAPER = A5</ERA>
        <ERA\e&l26A</ERA>
</DEL>
```

Note: the second TAG uses a special notation for the unprintable character <esc>. This notation will be described later in this manual.

4.3   Example 3

To add the PJL-Commands "@PJL SET PAPER = A3" and
"@PJL SET PAPERSOUCE = AUTO" add the following TAG to the configuration file:

```
<PJLADD>
        <PJL>@PJL SET PAPER = A3</PJL>
        <PJL>@PJL SET PAPERSOUCE = AUTO </PJL>
</PJLADD>
```

4.4 Example 4

To exchange the PCL5 command for input tray 1 with input tray 5 use the following TAG:

```
<EXCHANGE>
     <SEARCH>\e&l1H</SEARCH>
     <REPLACE>\e&l5H </REPLACE>
</EXCHANGE>
```

5 Searching and Inserting unprintable characters

5.1 Using Quotes

There are some unprintable characters, which also can be used for search and exchange using a quoted notation:

Notation	Meaning	decimal ASCII Value	Hexadecimal Value
\n	new line	10	0A
\r	carriage return	13	0D
\f	form feed	12	0C
\t	tab	09	09
\e	escape	27	1B

Note: almost each PCL5 command begins with an ESCAPE character. This equals the decimal ASCII value 27 and can be written by the notation "\e".

If you want to exchange a whole line of text including the end of line, check first if the end of line was made by a windows or by a unix/linux based program. Usually Windows uses New Line + Carriage Return when unix/linux based program uses only New Line.

5.2 Using Hexadecimal notation

Strings can also be searched and exchanged by using the hexadecimal notation. In this case each searched character in the string must be replaced by its hexadecimal representation and preceded by the quote "\x". A mixture of ASCII and hexadecimal notation is possible.

Example: sarching for <esc>&l1A

<esc> =	1B
& =	26
l =	6C
1 =	31
A =	41

Search for: \x1B\x26\x6C\x31\x41.
A partial hex notation is also possible: \x1B&l1A

6   Using wildcards.

Different wildcards can be used in search string. A wildcard is a place holder for a unknown character. Example: If you want to exchange all values in all PCL commands for paper tray with one particular value, you can use a wildcard.

6.1   The wildcard "dot" with known number of characters

The "dot" (.) can be used as a wildcard for only one character. All characters can be replaced by a dot excluding the end of line character (\n). If more than one characters will be used, then for each one a separate dot has to be used.

Example:

A value in your document: „ nr.:333-*17*-444"
the „17" is a variable value.
You want to exchange the variable value into the static value 00. Because the variable value consists of 2 characters, also 2 dots has to be used.

<SEARCH>333-**..**-444</SEARCH>

<REPLACE>333-00-444</REPLACE>

6.2   The wildcard "dot" with unknown number of characters

The "dot" (.) can be used as a wildcard for an unknown number of characters in conjuction with the character plus (+).

Example:

A value in your document: „ nr.:333-*17*-444"
the the cursive value is variable and can consists of one or more digits.
You want to exchange the variable value into the static value 00. Because the variable value consists an unknown number of characters, the plus character has to be used.

<SEARCH>333-**.+**-444</SEARCH>

<REPLACE>333-00-444</REPLACE>