Enhanced Laser Printer (ELP)
How To:
Receive jobs and
store them in PDF-Format

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Who is this document for?

This document is for a user of Enhanced Laser Printing (ELP) that wants to set up a printer device and have the received print jobs automatically converted to Portable Document Format (PDF) and stored. It is expected that the user is moderately familiar with Windows and the "ELP Control Center". It is formatted as a simple step-by-step "how to".

What is the result?

Windows Enhanced Laser Printing (W-ELP) will archive all data streams received by a shared printer queue named "WELP_PDF" or received via "raw port" (9100), storing them as a PDF-file and a PRN-file into a folder using unique identifiable filenames.

Step 1: Firewall

Make sure that port 9100 is open in the firewall for both inbound and outbound TCP traffic.
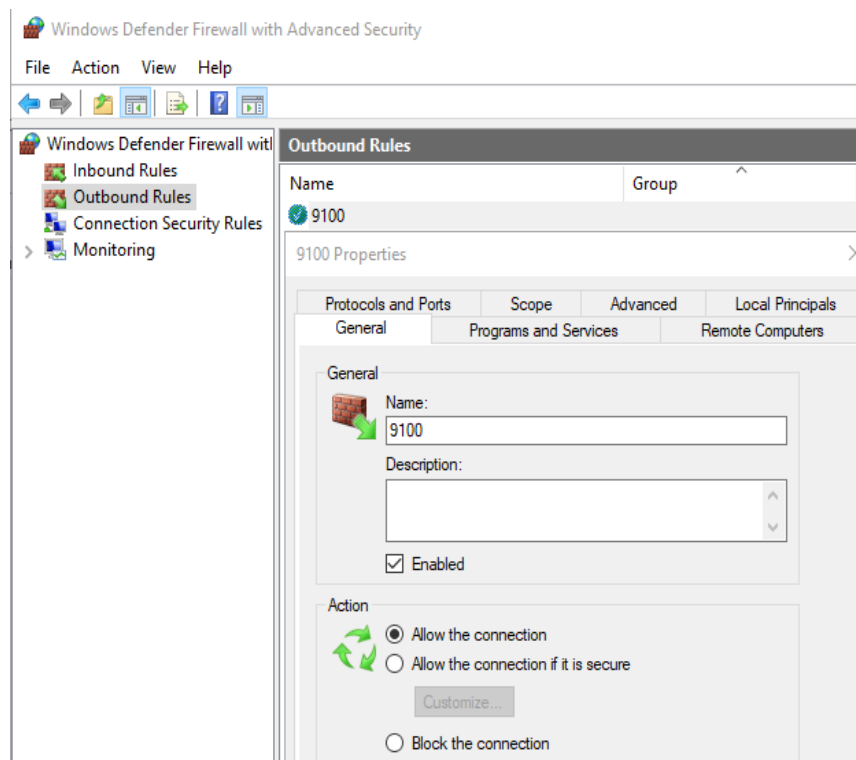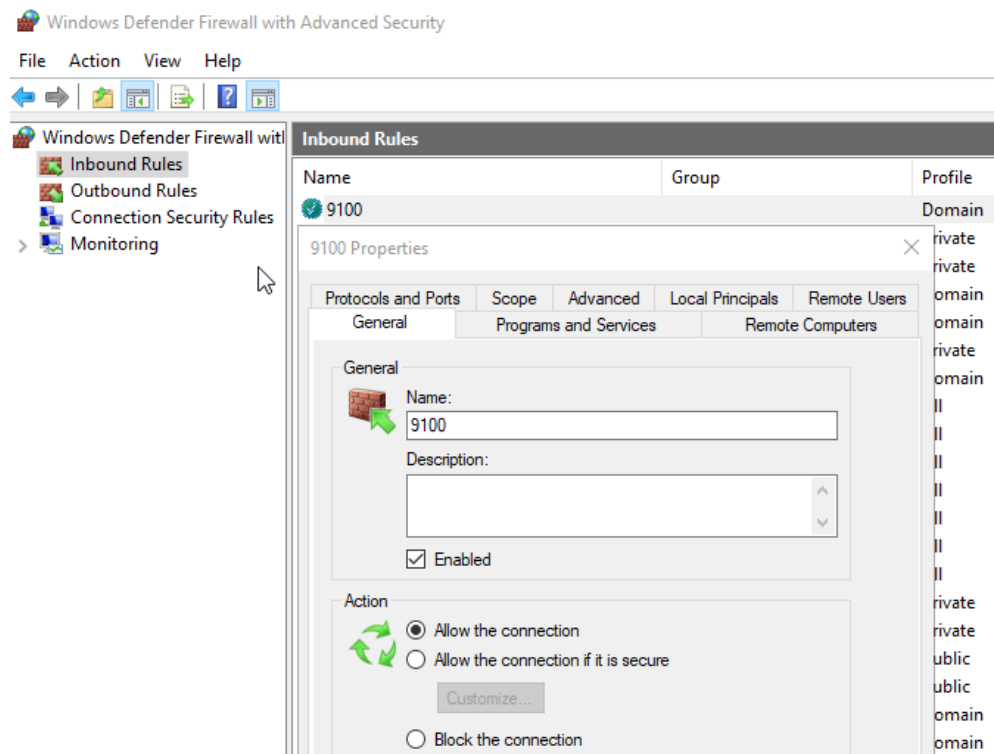
Step 2: Set up a Windows "nul" port

Open Print Management, then bring up your Print Server, (1) right click on "Ports" and choose "Add Port…", (2) choose "Local Port", (3) click on "New Port…", (4) enter "nul" (case-insensitive) as the Port name and click on "OK". Then close the Printer Ports window.
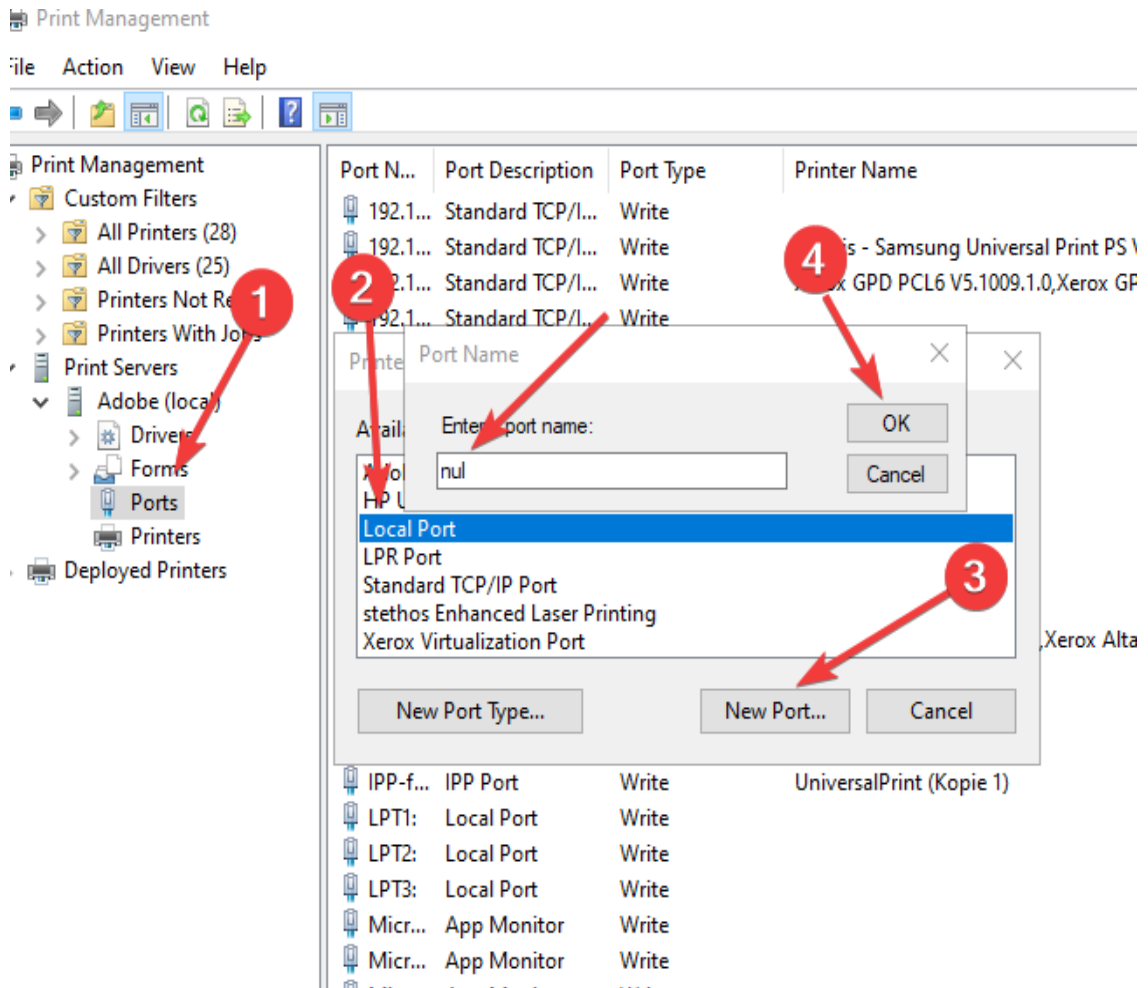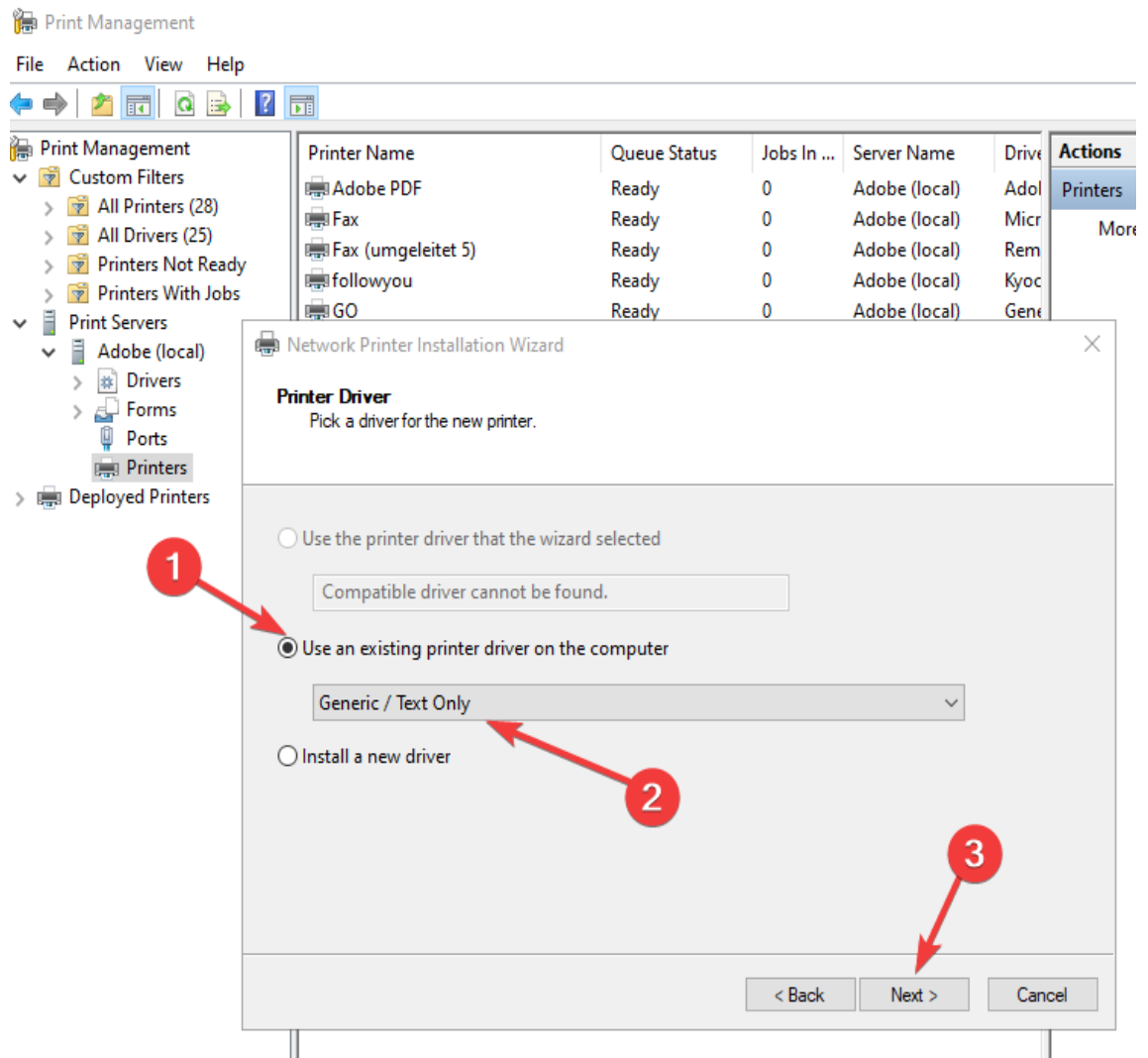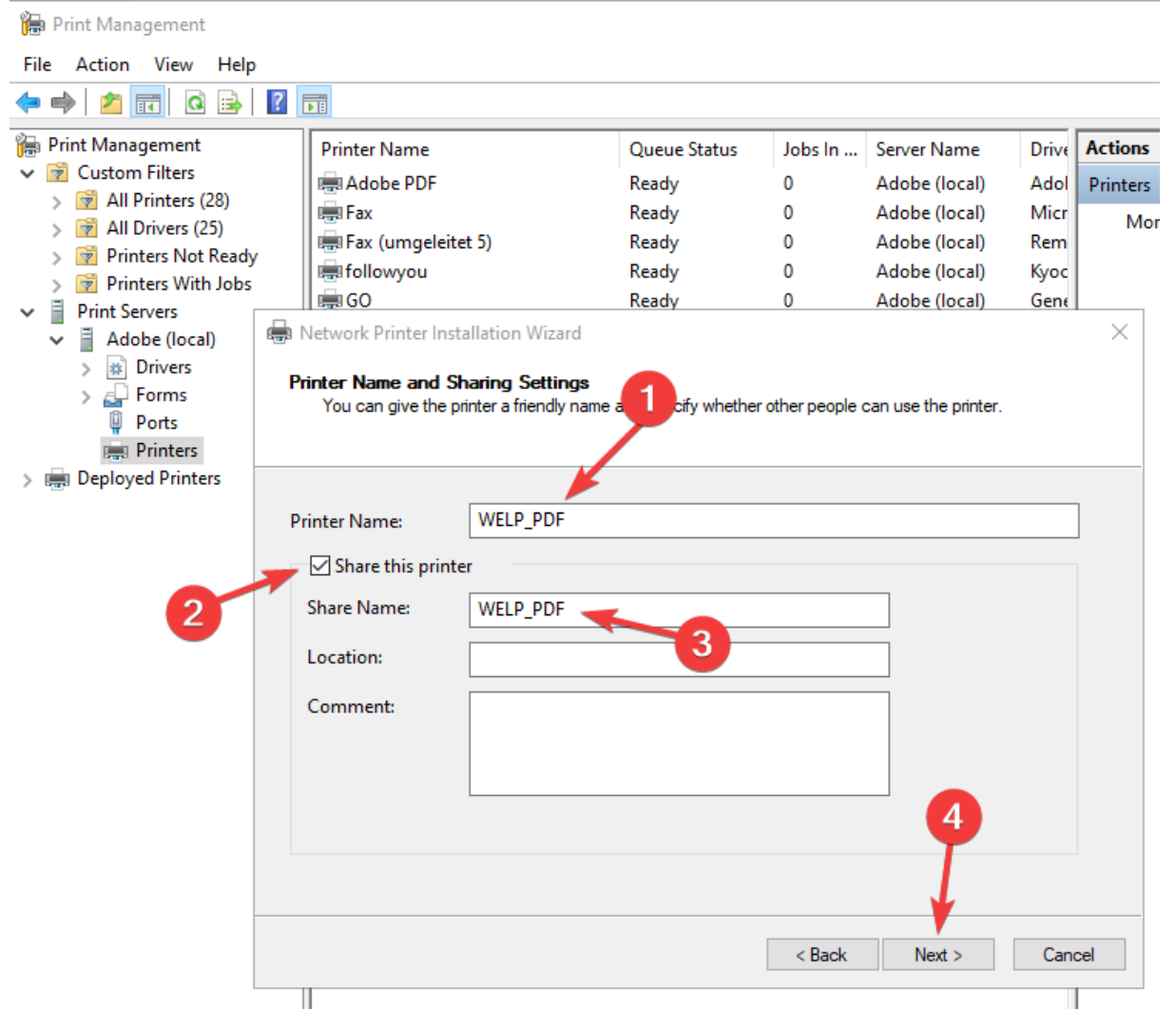
Step 3: Set up a Windows Printer queue

Open Print Management (if not already open from above), then bring up your Print Server, (1) right click on "Printers", and choose "Add Printer…", (2) select "Add a new printer using an existing port:", (3) choose the recently created nul local port, then (4) click on "Next >".
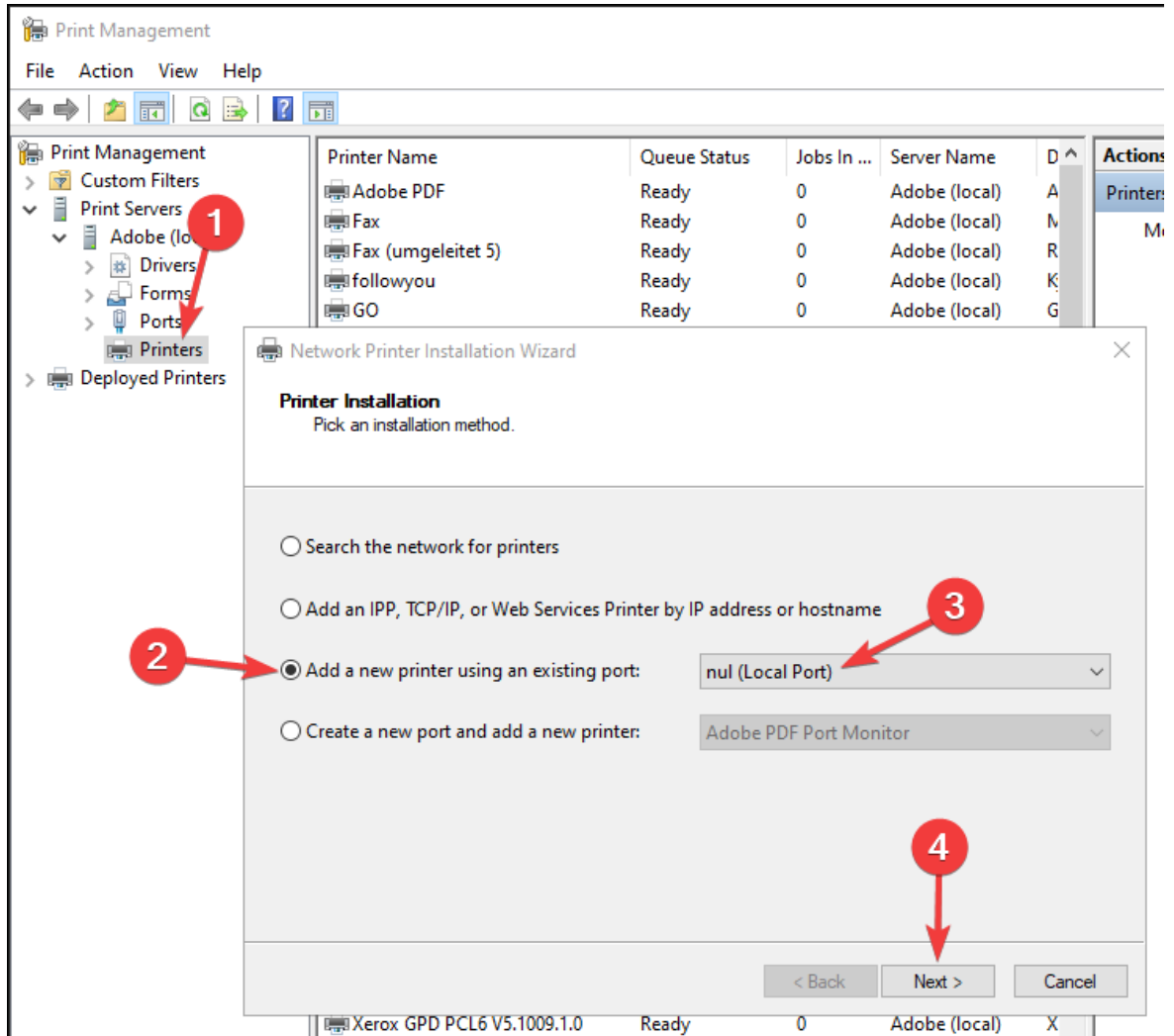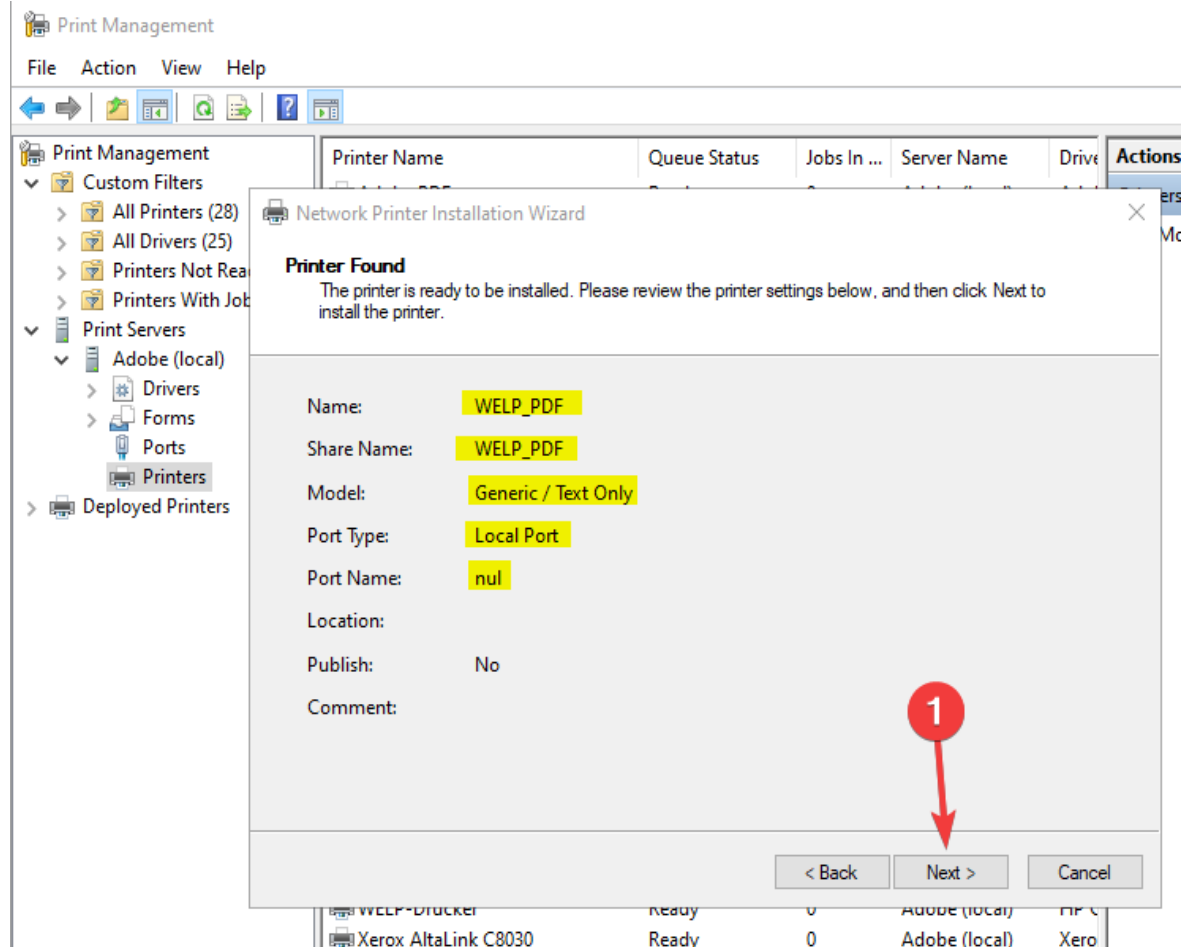
On the next step (1) select "Use an existing printer driver on the computer", (2) choose "Generic / Text Only", then (3) click on "Next >".

(1) Name the printer queue "WELP_PDF" (or other memorable name), (2) share the queue (3) with the same name then (4) click on "Next >".
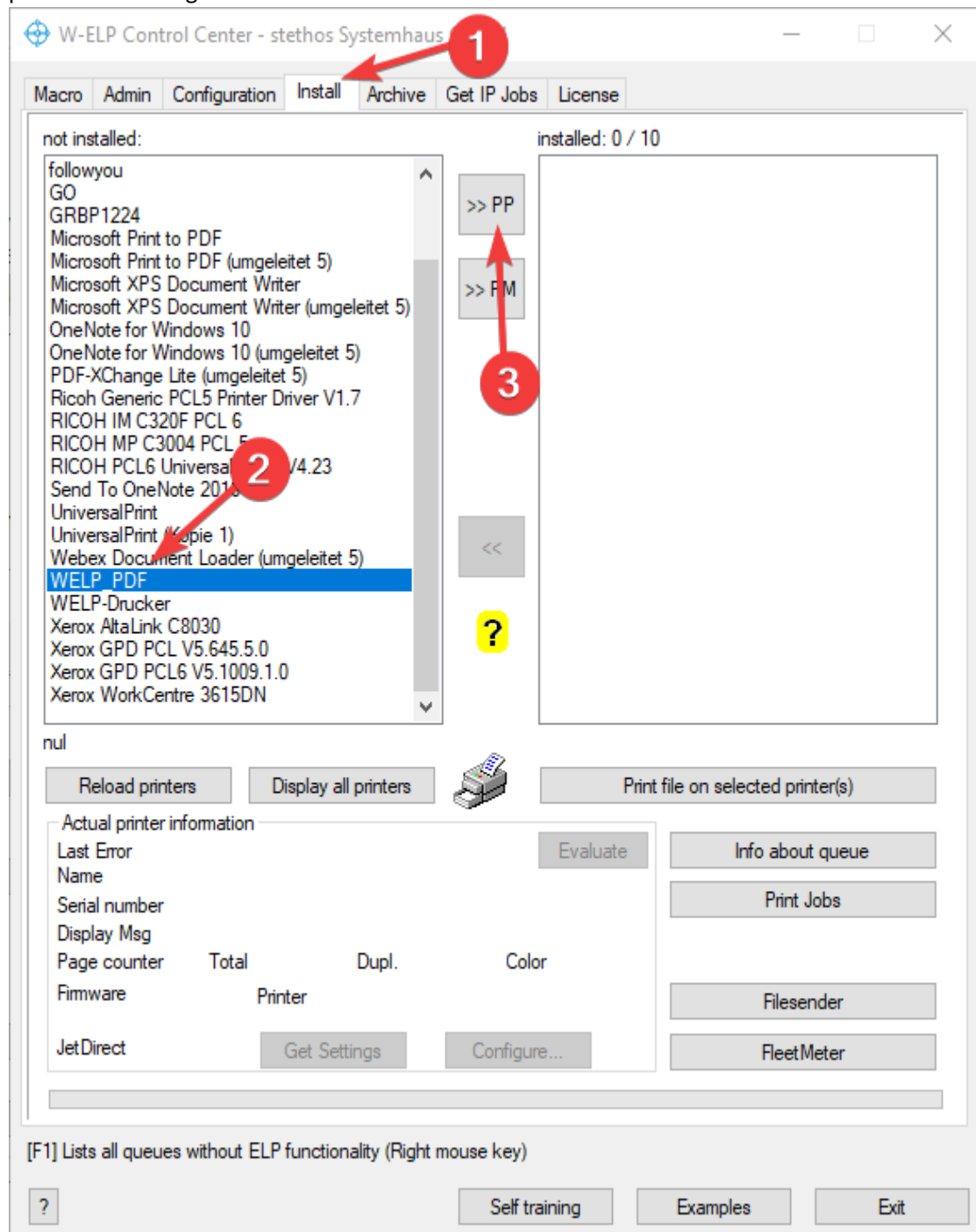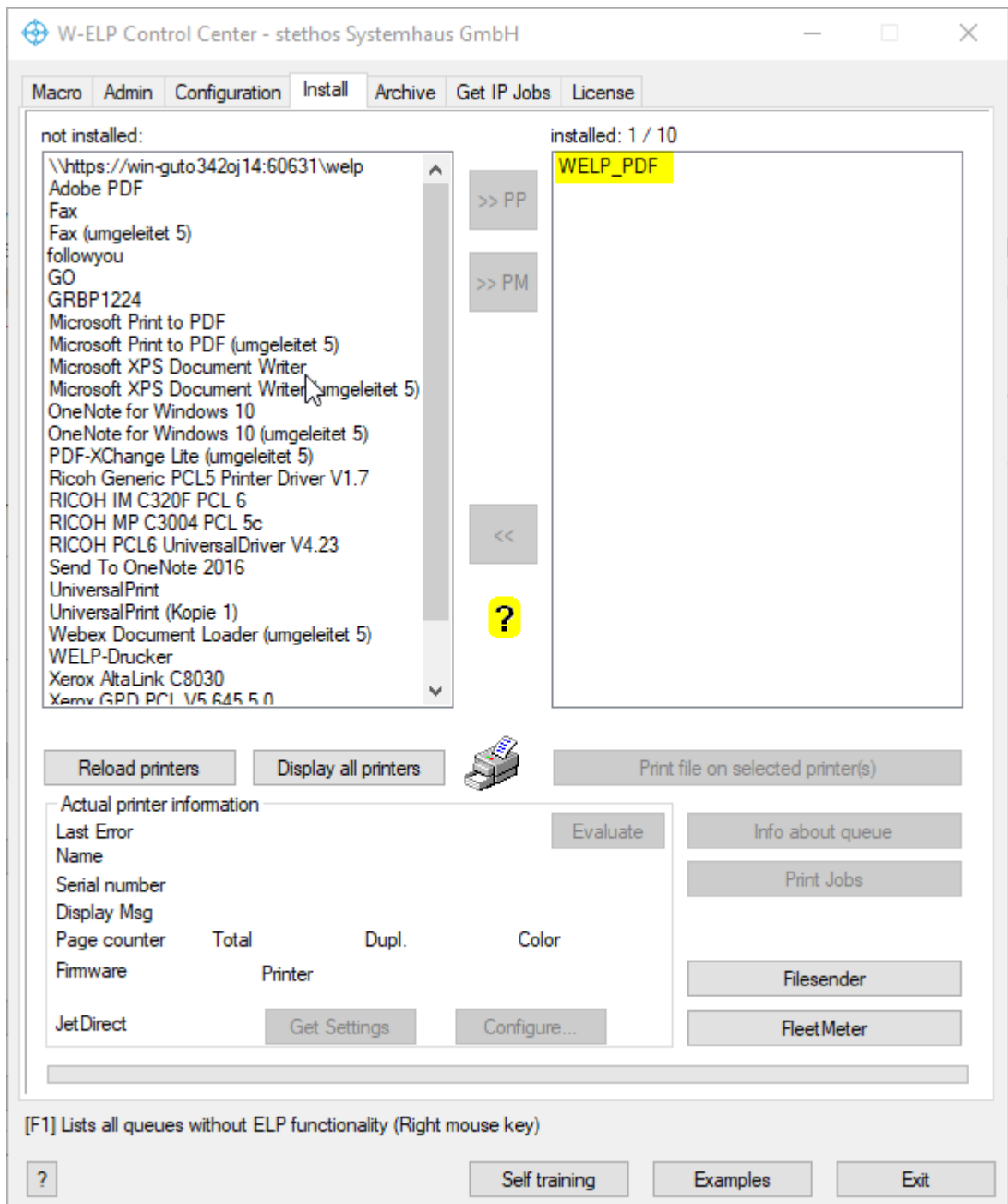
(1) Click on "Next >" again.

Finally click on "Finish".

Step 4: Activate the Queue in W-ELP

The windows printer queue defined in step 3 should now be activated in Windows Enhanced Laser Printing (W-ELP) in order for W-ELP to receive the data streams for further processing. To activate the printer queue in W-ELP open the ELP - Control Center and (1) select the "Install" tab, (2) select the printer queue named "WELP_PDF" (the name you chose in Step 3) on the left side where the not installed queues are listed and (3) click on ">> PP" to activate the W-ELP functionality via the print processor. The queue moves to the list of installed printers on the right.

W-ELP Control Center - stethos Systemhaus GmbH

Macro | Admin | Configuration | Install | Archive | Get IP Jobs | License

not installed:

```
\\https://win-guto342oj14:60631\welp
Adobe PDF
Fax
Fax (umgeleitet 5)
followyou
GO
GRBP1224
Microsoft Print to PDF
Microsoft Print to PDF (umgeleitet 5)
Microsoft XPS Document Writer
Microsoft XPS Document Writer (umgeleitet 5)
OneNote for Windows 10
OneNote for Windows 10 (umgeleitet 5)
PDF-XChange Lite (umgeleitet 5)
Ricoh Generic PCL5 Printer Driver V1.7
RICOH IM C320F PCL 6
RICOH MP C3004 PCL 5c
RICOH PCL6 UniversalDriver V4.23
Send To OneNote 2016
UniversalPrint
UniversalPrint (Kopie 1)
Webex Document Loader (umgeleitet 5)
WELP-Drucker
Xerox AltaLink C8030
Xerox GPD PCL V5.645.5.0
```

installed: 1 / 10

WELP_PDF

>> PP

>> PM

<<

?

Reload printers | Display all printers | Print file on selected printer(s)

Actual printer information

Last Error
Name
Serial number
Display Msg
Page counter   Total   Dupl.   Color
Firmware   Printer

JetDirect   Get Settings   Configure...

Evaluate

Info about queue

Print Jobs

Filesender

FleetMeter

[F1] Lists all queues without ELP functionality (Right mouse key)

? | Self training | Examples | Exit

Step 5: Set up ELP to archive the data streams

In the ELP - Control Center (1) select the "Configuration" tab then (2) click on "Rule assistant" – the Rule assistant window will open.
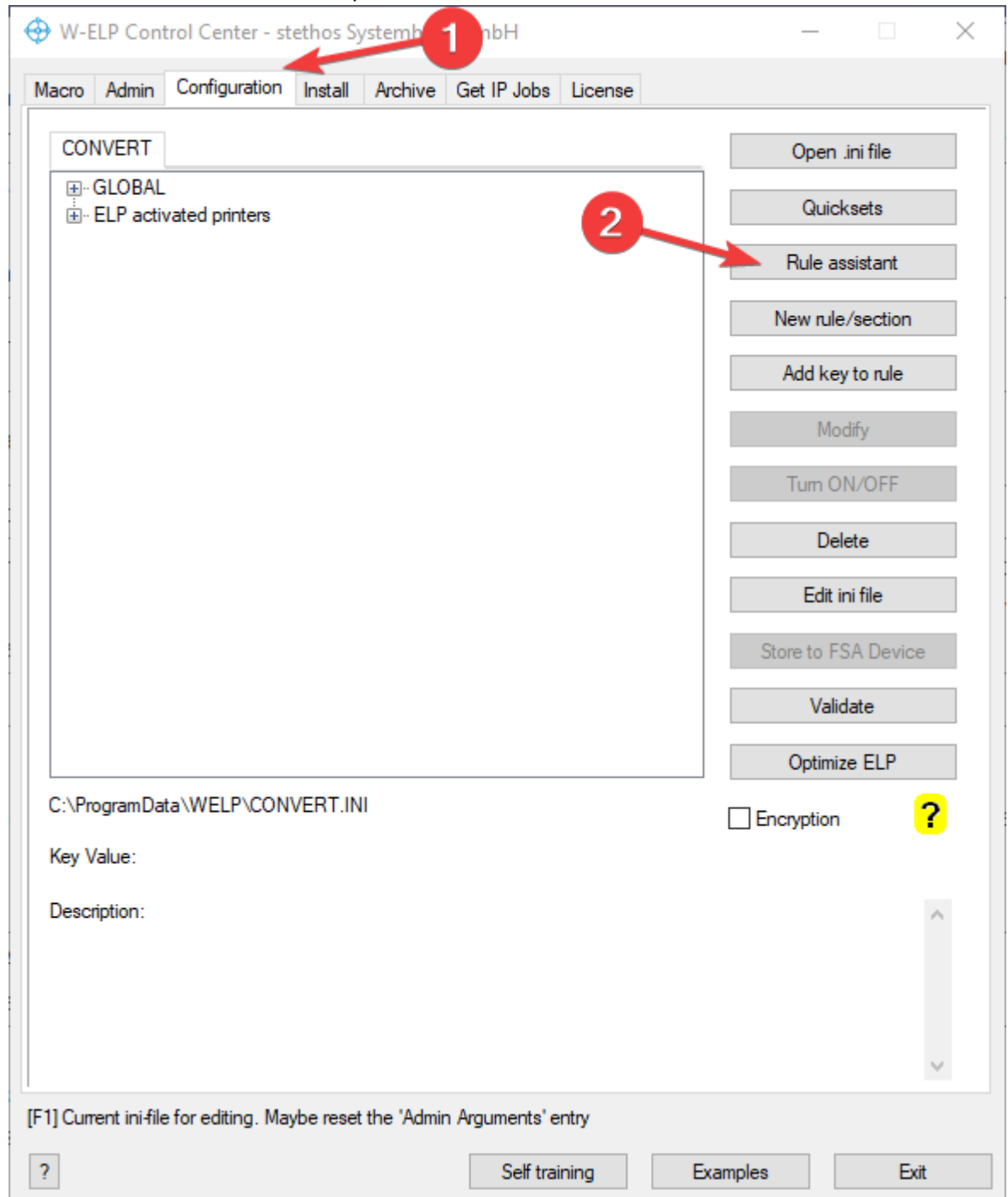
In the Rule assistant window (1) click on "Set" next to "Archiving". The Rule assistant for archiving will appear.
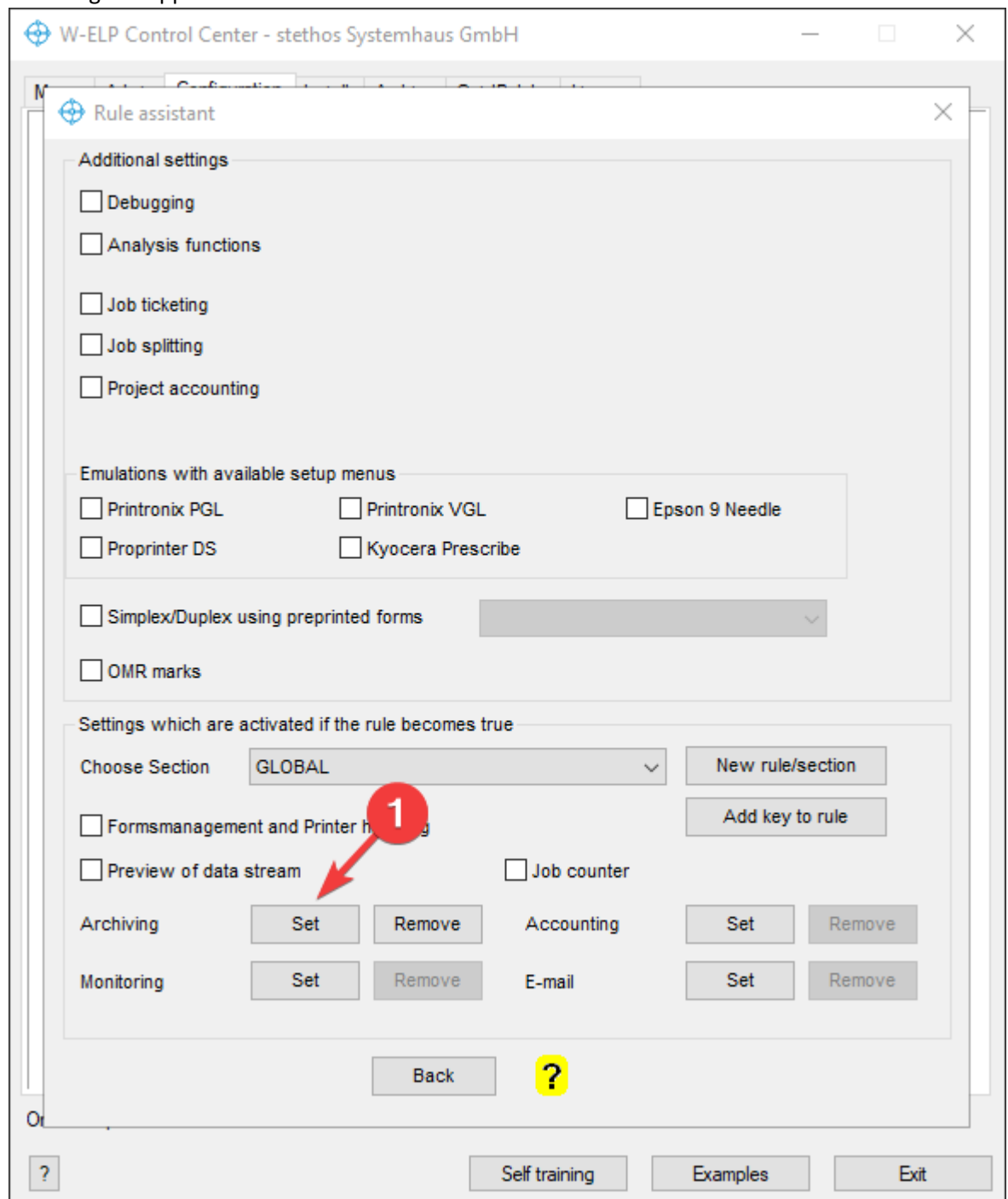
In the Rule assistant for archiving (1) select the archive mode "Outgoing data stream", (2) open the drop-down for "File type to archive" and select "Print data stream and PDF", (3) as "Archive Directory" enter "#ELP_FORMS_PATH#Archive", (4) as "Archive filename[s]" enter "#PRINTDOCNAME#_#DATESERIALLONG#", (5) enter "prn" as "File extension print data

stream, and finally (6) click on "OK".

On clicking OK, the configuration file "convert.ini" is modified so that W-ELP will archive the data streams received by the shared Queue in the folder C:\ProgramData\Welp\archive as both ".prn" and ".pdf" files. Both files will be named as the name of the printed file (if it can be extracted from the print data – otherwise a place holder is used) followed by an underscore and a "serial number" which is the date and time with milliseconds. You can choose a different directory and names if you need.

The following lines will have been inserted automatically at the beginning of the [GLOBAL] section of the file "convert.ini":

```
TIFF_ARGUMENTS=-p1 -*s3 -!e -!m -$n
PDF_MODE=4
ArchiveExt=prn
OutArchiveDir=#ELP_FORMS_PATH#Archive;#PRINTDOCNAME#_#DATESERIALLONG#
```

At this point, the shared printer queue is available, but we are not done yet!

Naively printing to the printer device may produce unexpected results as the "Generic / Text Only" does no conversion to PCL.

Step 6: Receive jobs via the "raw port" (9100)

(1) Select the tab "Get IP Jobs" and (2) enter a name for your Project, e.g. "Archive", then (3) enter "9100" as the port to listen on, (4) choose the recently activated printer queue named "WELP_PDF" from the drop-down menu of the shared printers, then (5) click on "Save" to save your Project, finally (6) click on Start port listening to start the ELP - Control Center to listening for incoming jobs on port 9100.

You can now send jobs to the raw port (9100) of the Windows host and they will be archived. Note that clicking on "Stop port listening" or closing the ELP – Control Center will cause it to stop receiving jobs on port 9100, though the shared queue will continue to function.

The configuration for receiving IP jobs is stored in the file ReadIP.ini and resides in the Work path folder (C:\ProgramData\Welp). You can manually edit the configuration with any editor like Notepad, though it is not recommended. Please use the GUI of the ELP Control Center to avoid misconfiguration. The ReadIP.ini should look something like this:

```
ReadIP.ini
1      ;New ini file generated
2
3     [Global]
4      LogOptions=0
5
6     [Archive]
7      Port=9100
8      Share=WELP_PDF
9
```

For farther information about the other settings you can refer to
https://stethos.com/de/getipjobs-tab

Your project is now ready and you can start it any time by starting the ELP – Control Center, selecting the "Get IP Jobs" tab, and clicking on "Start port listening".

Testing the raw port

You can set up a port and printer queue on any machine in the local network (including Linux and iOS) to send data to the configured Windows host as if it were a standard PCL printer listening on the raw port.

You can test that this works correctly with the "tcpsend" command line tool and a PCL-format print file.

You can download the "tcpsend" tool from here:

https://stethos.com/downloadaddon

You use the tool to send a print file to a specific host (IP-address or network name) and port.

Usage: tcpsend <host> <port-number> <filename>

Example:

C:\>tcpsend 127.0.0.1 9100 mydocument.prn

This will send the file "mydocument.prn" to the raw port on the local host (127.0.0.1 is a reserved IP-address for the host you are sending from).

Result:

You see the files that arrive on port 9100 listed on the "Get IP Jobs" tab.

W-ELP Control Center - stethos Systemhaus GmbH

Macro | Admin | Configuration | Install | Archive | **Get IP Jobs** | License

Settings

Project:

Archive

Save | Delete

New Project

IP Address:

All

Listen on port (9100):

9100

\\ADOBE\

WELP_PDF (WELP_PDF)

Archives:

Browse...

Arrival time	Size	Port	IP Address	File name
20250213 152906780	49401	9100	192.168.0.91	

☐ Close connection after UEL job terminator
☐ Disable backchannel communication

?

Stop port listening | Log options | Delete list

Show Log file

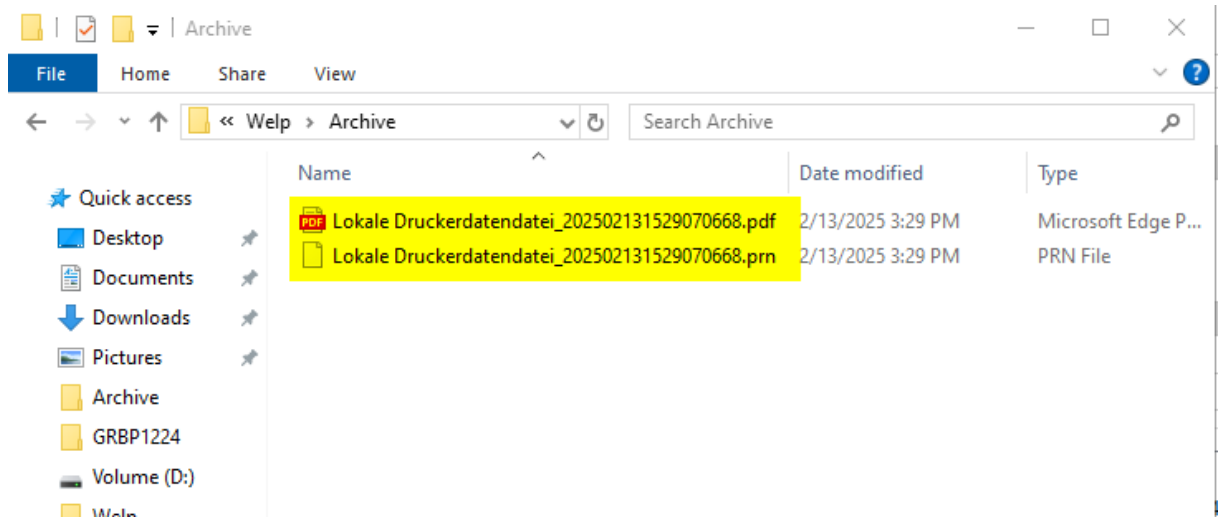[F1] List for received data files, or forwarded jobs

? | Self training | Examples | Exit

In the Folder "C:\ProgramData\Welp\Archive" you find two files for every received job one of them is a ".pdf" and the other on is a ".prn" file.

Note: if you send a print file that is not PCL-format, the conversion to PDF-Format will fail and you will only find a ".prn" file.