

PrintSCP, DICOM Print Server by CharruaSoft

With **PrintSCP** expensive Film printing can be replaced by Windows paper printing. Now it's easy and simple to provide patients and referring physicians with hardcopies of their studies. **PrintSCP** is a DICOM Print Server; it receives images from DICOM modalities and prints them in a Windows paper printer. It is a high quality DICOM printing solution that can render photographic quality Color or Grayscale images on paper.

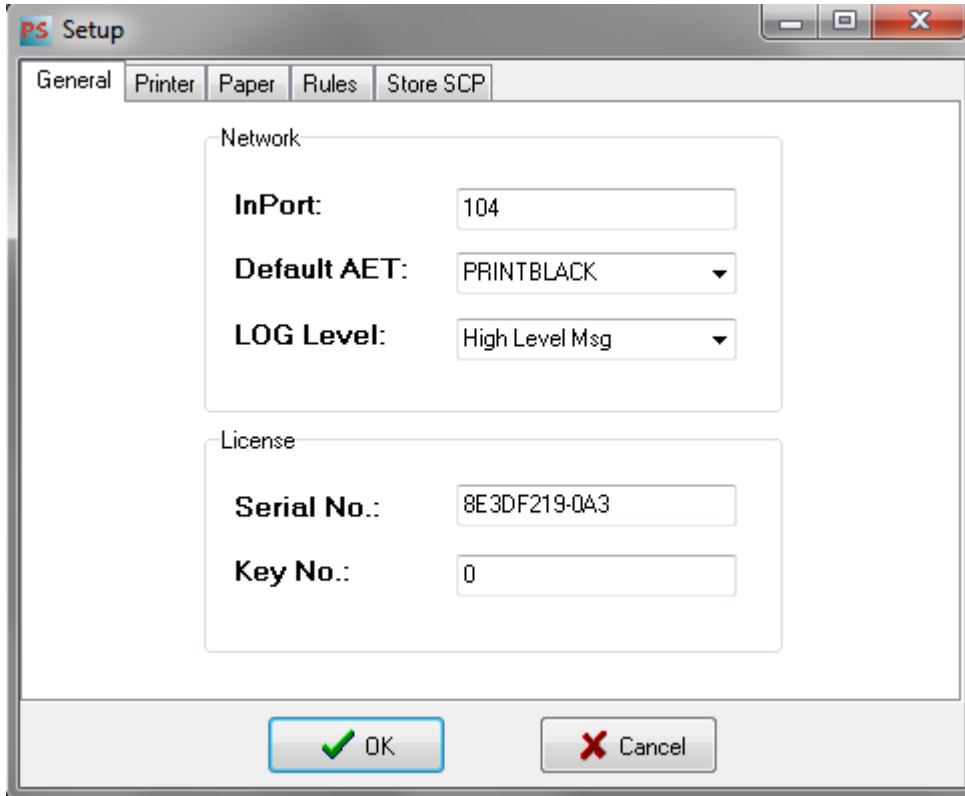
PrintSCP can handle multiple simultaneous associations, and log all the network exchange for analysis purposes. It has an extensive calibration process that allows matching precisely Display Monitor and Paper Printout for each modality. The printed page header and footer can be customized with the client's name.

PrintSCP supports both DICOM Print and DICOM Store protocols. Presentation LUT option is also supported, but a calibration file for the required printer has to be created. Images can be printed True Size selecting the corresponding option.

Main window:



Setup Window:



The screenshot shows the 'PS Setup' window with the 'General' tab selected. The window has a title bar with a minimize button, a maximize button, and a close button. Below the title bar are five tabs: 'General', 'Printer', 'Paper', 'Rules', and 'Store SCP'. The 'General' tab is active and contains two sections: 'Network' and 'License'. The 'Network' section has three fields: 'InPort' with the value '104', 'Default AET' with a dropdown menu showing 'PRINTBLACK', and 'LOG Level' with a dropdown menu showing 'High Level Msg'. The 'License' section has two fields: 'Serial No.' with the value '8E3DF219-0A3' and 'Key No.' with the value '0'. At the bottom of the window are two buttons: 'OK' with a green checkmark icon and 'Cancel' with a red X icon.

Section	Field	Value
Network	InPort:	104
	Default AET:	PRINTBLACK
	LOG Level:	High Level Msg
License	Serial No.:	8E3DF219-0A3
	Key No.:	0

The installation process is very simple and it's very easy to use and setup.

InPort: is the TCP/IP Port for the PrintSCP server.

Default AET: is the printer used by default.

LOG Level: allows choosing a debugging level for logging.

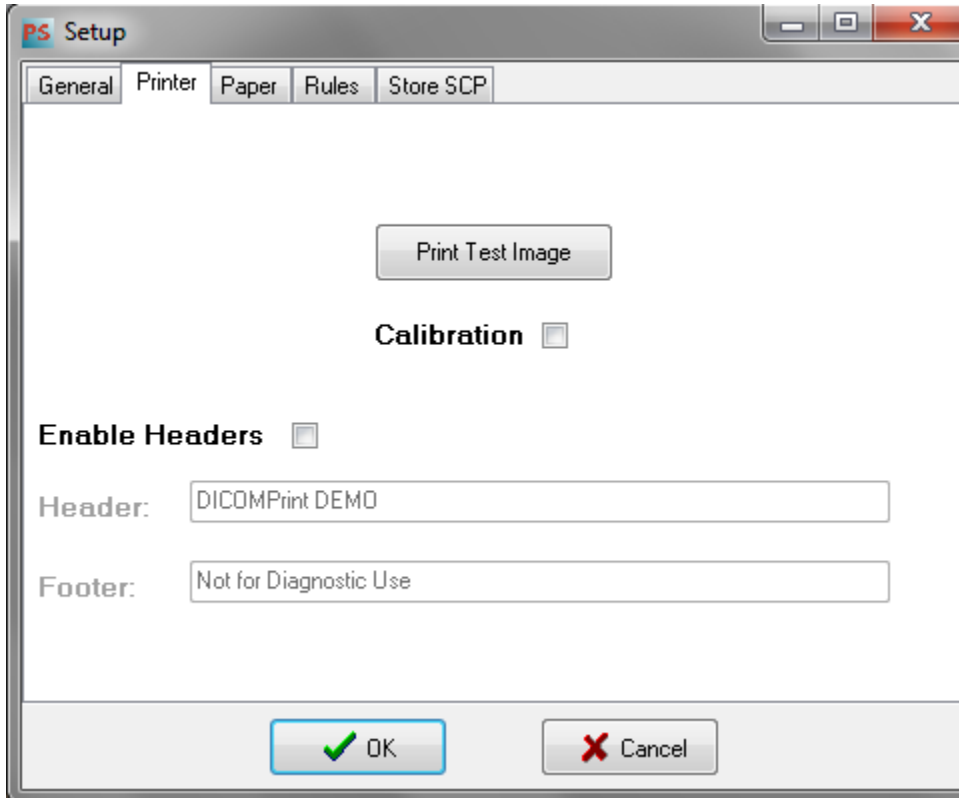
Options:

- Only Error LOG, saves only errors.
- High Level Msg, saves some information on the printing process.
- Tag Level Msg, saves all DICOM tags exchanged in the association.

Serial Number: Number Identifying the computer where PrintSCP is installed.

Key No.: A licensing key for activating the application.

Printer Page:



Print Test Image button: Prints a calibration image for adjusting values.
Calibration Checkbox: When this option is checked, sending an image for printing from any modality will print a 3x3 matrix varying gamma and contrast.

Enable Headers CheckBox: Enables/Disables Header/Footer option.
Header: Page Header (can only be set on the licensed applications).
Footer: Page Footer.

Paper Page:

Film Size	Paper Size
14INX17IN	A4
14INX14IN	A4
11INX17IN	A4
8_5INX11IN	A4
8INX10IN	A4
DEFAULT	A4

In this page the relation between Film Size and Paper size can be set. Any of the pre-defined Film Size ID can be set to be printed on any paper size, only if this paper size is available for the selected printer driver.

Rules Page:

The screenshot shows the 'PS Setup' dialog box with the 'Rules' tab selected. The dialog has a title bar with 'PS Setup' and standard window controls. Below the title bar are five tabs: 'General', 'Printer', 'Paper', 'Rules', and 'Store SCP'. The 'Rules' tab contains a table with four columns: 'Printer AET', 'Printer Name', 'Gamma', and 'Contrast'. There are three rows of data. The first row, 'PRINTBLACK', is highlighted in blue. Below the table are three buttons: 'Add', 'Edit', and 'Delete'. At the bottom of the dialog are two buttons: 'OK' (with a green checkmark icon) and 'Cancel' (with a red X icon).

Printer AET	Printer Name	Gamma	Contrast
PRINTBLACK	JPEG	1.00	0
ARROBA	PDFCreator	1.00	0
PRINTSCP3	PDFCreator	1.00	0

Buttons: Add, Edit, Delete, OK, Cancel

PrintSCP has a flexible system of printing rules, any number of printers can be added, and for each printer rule there are several parameters that can be set. Clicking on Add or Edit will open the configuration window:

Rule Configuration

Printer Settings

AET: PRINTSCP

Printer: PDFCreator

Paper Size: CLIENT

☐ True Size Print

Image Processing

Gamma: 1.00

Contrast: 0

Saturation: 0

Filter: None

Forced Colors

Color Printing: CLIENT

Border: CLIENT

Empty Image: CLIENT

OK Cancel

Printer Settings:

AET: is the printer Application Entity Title.

Name: is Windows printer name, there is a JPEG printer that will create images on a filmbox folder under the application folder.

Paper Size: Client will use the paper tab conversion; otherwise it will use the selected paper size.

True Size CheckBox: Checking this box will allow to print images in true size form if the sending application supports this option.

Image Processing:

Gamma Value: values lower than 1.00 darkens the image, values higher than 1.00 lighten the image.

Contrast: values higher than 0 will give higher contrast, values lower than 0 will give lower contrast.

Saturation: This will only work for color images. Changes the image saturation level.

Filter: It will apply a sharpen or smooth filter to the image.

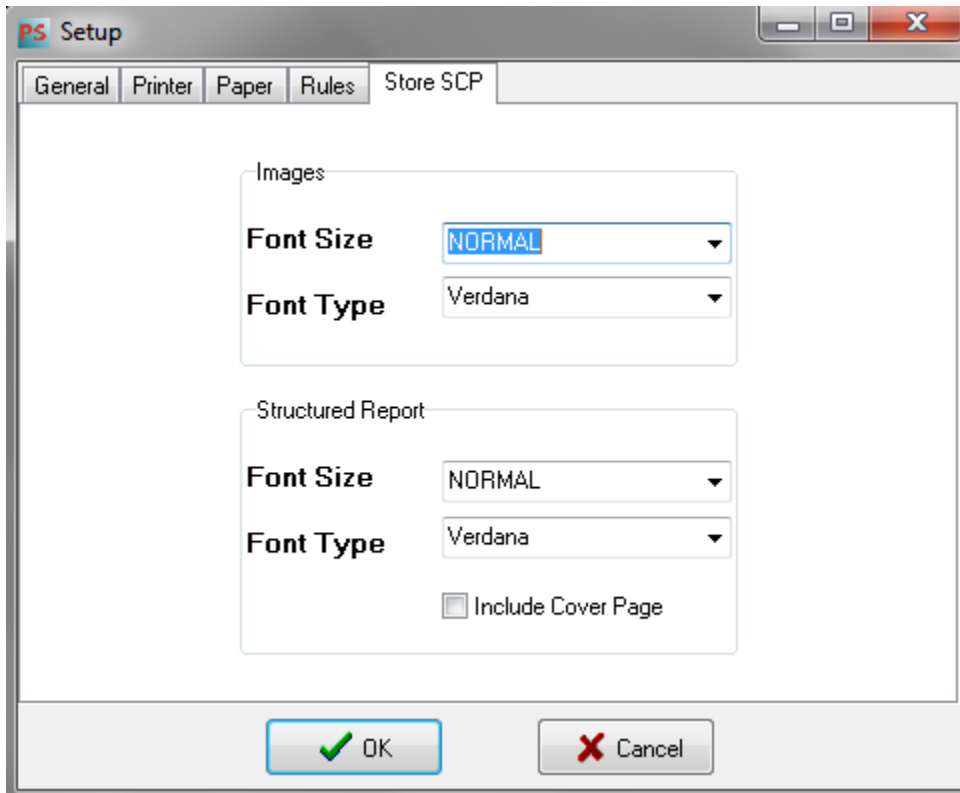
Forced Colors:

Color Printing: Options are CLIENT, COLOR, B&W or DRIVER.

Border: will set Film Border to CLIENT, BLACK or WHITE.

Empty Image: Options are CLIENT, BLACK, or WHITE.

Store SCP Page:



As this version supports Store SCP option, in this page the Font Size and Font Type for both Images and DICOM Structured reports can be selected.

A Cover page can be included for SR checking on the "Include Cover Page" checkbox.

Calibration Option:

Programming an AET = "CALIBRATION" in the Print SCU and sending one image, prints a calibration sheet with 3x3 matrix and different gamma and contrast values. This option allows the best output to be chosen visually.