Generic Drivers

TECHNOTE

Caldera RIP **Version 10.1 –** June the 3rd 2015
Version: February the 11th 2015.

This document explains how to use the different Generic Printer Drivers.

State of the Art

In order to expand supported printers range, Caldera has introduced Generic Drivers.

PRT Format

The PRT format driver are mainly addressing Chinese electronics based printer drivers, you will see later on in this document, that there are 3 driver types for this.

TIFF Format

TIFF is quite extensively used as a file-format for Controller based printers, these drivers enable the use of a configurable generic TIFF Halftone or Contone, separated or contiguous format.

Each and single of these drivers are so called "Generic", meaning that they will need to be configured to fit the requirements of the printer , the default available modes paper sizes and resolutions are just examples (the can be found under manufacturer Misc (Extranet / Usernet)).

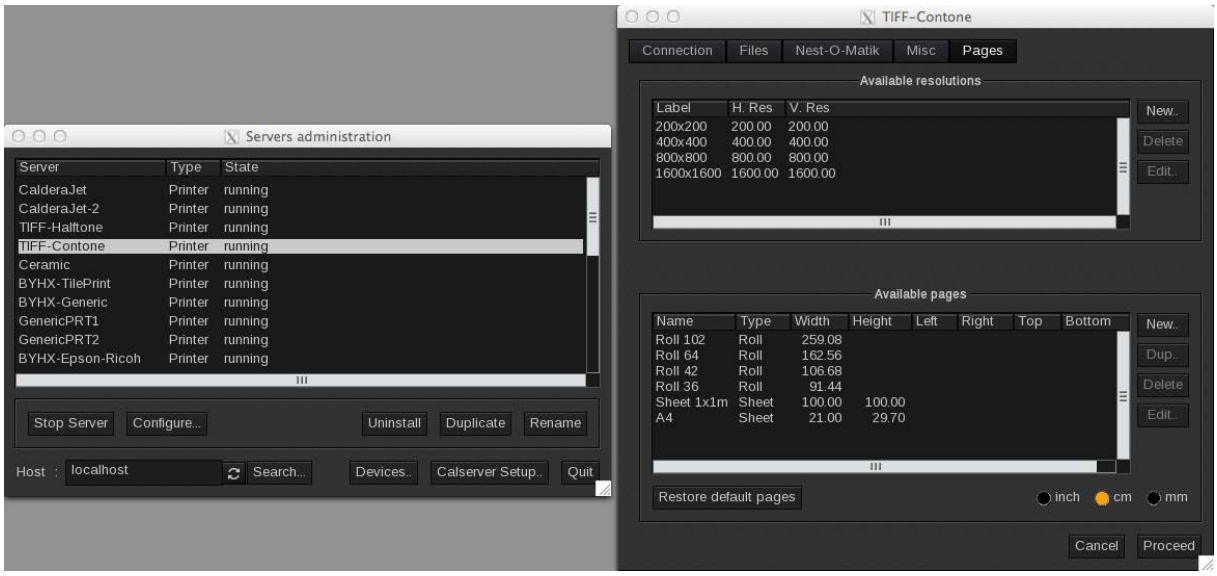
- Paper sizes
- Resolutions
- Amount of Drops
- Supported Color-Modes

The TIFF generic drivers

TIFF Contone

This driver:

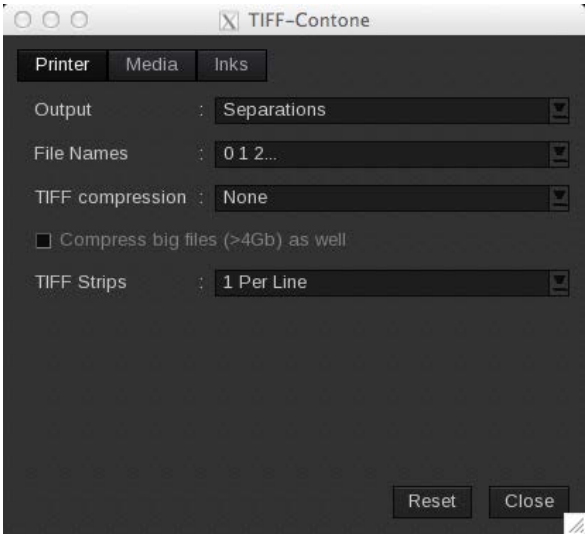
- Produces TIFF Contone (8 Bits) files.
- Is File format based.
- Paper sizes and Resolutions can be configured via **Server-admin**.



It supports:

- Spot-Colors (White / Varnish).
- Custom-InkSet (Additional colorants: Orange, Green, Blue...).
- Composite (1 output file), or separated (1 file per color), TIFF.
- Ink-Reordering.

Options:



Printer Tab

- **Output**:
  - *Separations*: One file per color, name can be configured see **File Names**
  - *Composite:* One output file.
- **File Names***:* Output file names can be configured in case *Separations* is used.
  - _0,_1,_2...
  - _1,_2,_3...
  - _C,_M,_Y...
  - _Cyan,_Magenta,_Yellow...
  - ...
- **TIFF compression**: self-explanatory
- **TIFF strip size**: Default 1 Per Line.

Inks Tab:

- **Ink reordering** is supported to assign each Color to a Layer.
- Empty Layers are supported as well.

TIFF Halftone

This driver:

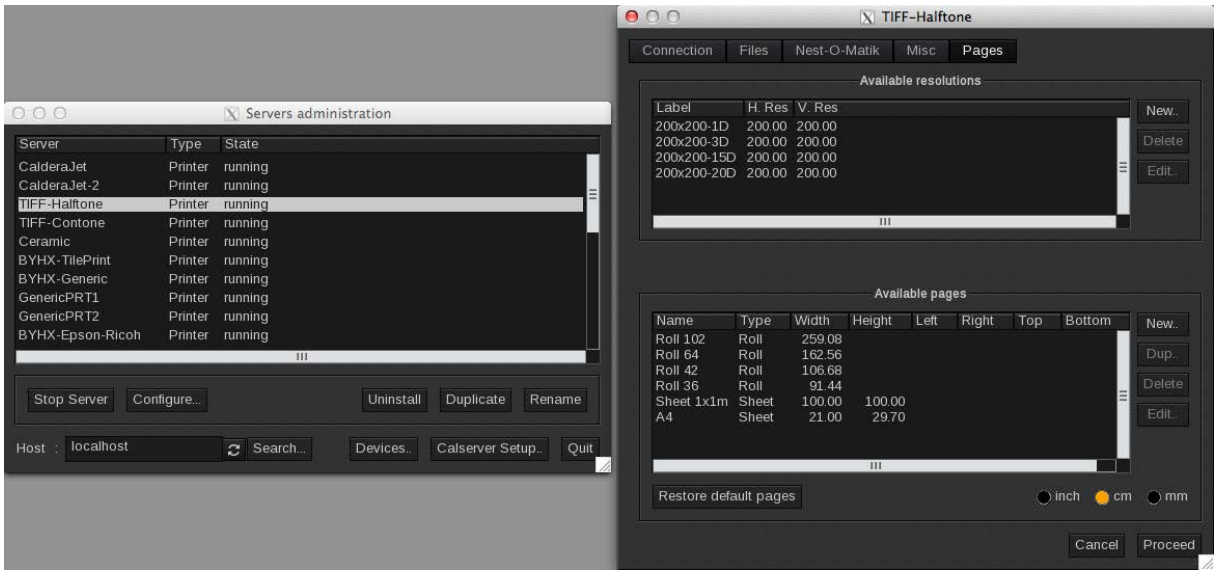
- Produces TIFF Halftone (1, 2, 4 Bits) files.
- Is File format based.
- Paper sizes and Resolutions can be configured via Server-admin.

Resolutions have a particular form:

Xx**Y**-**Z**D

X = X resolution
Y = Y resolution
Z = Number of drops.

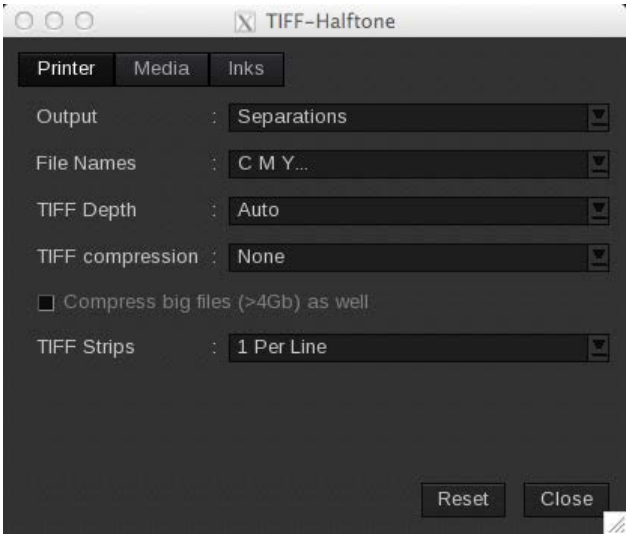
For example: 300x300-3D = 300x300 dpi 3 Drop sizes (2 Bits).
300x300-1D = 300x300 dpi 1 Drop (Binary).



This driver supports:

- Spot-Colors (White / Varnish).
- Custom-InkSet (Additional colorants: Orange, Green, Blue...).
- Composite (1 output file), or separated (1 file per color), TIFF.
- Ink-Reordering.

Options:



Printer Tab

- **Output**:
  - *Separations*: One file per color, name can be configured see **File Names**
  - *Composite:* One output file.
- **File Names***:* Output file names can be configured in case *Separations* is used.
  - _0,_1,_2...
  - _1,_2,_3...
  - _C,_M,_Y...
  - _Cyan,_Magenta,_Yellow...
  - ...
- **TIFF compression**: self-explanatory
- **TIFF depth**: depth of the file
  - Auto, the depth of based on the name of the resolution
  - xBPP, depth is forced to xBits-Per-Pixel
- **TIFF strip size**: Default 1 Per Line.

Inks Tab:

- **Ink reordering** is supported to assign each Color to a Layer.
- Empty Layers are supported as well.

The PRT generic drivers

GenericPRT 1, 2

There are actually 2 driver types, addressing different kind of electronics, GenericPRT1 or GenericPRT2 have to be used or tested.

The driver:

- Produces PRT Halftone (1, 2, 4 Bits) files.
- Is File format based.

No direct USB Support, Windows PRT printing tool required.

- Paper sizes and Resolutions can be configured via Server-admin.

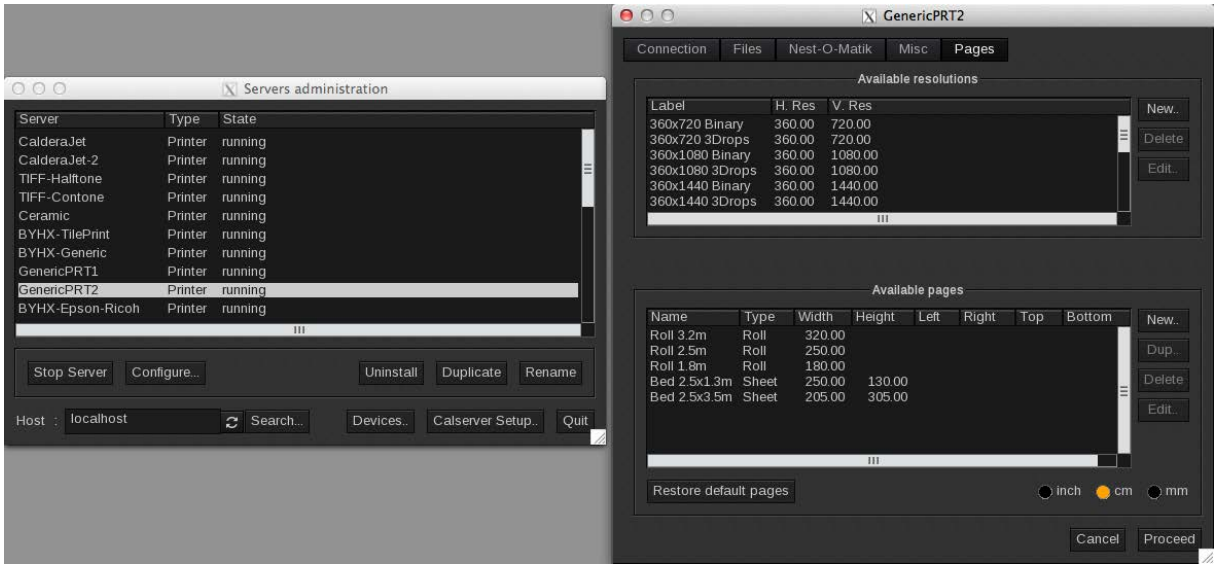
Resolutions have a particular form:

Xx**Y**-**Z**D or **X**x**Y** **Z**Drops

X = X resolution
Y = Y resolution
Z = Number of drops.

For example: 300x300-3D = 300x300 dpi 3 Drop sizes (2 Bits).
300x300 1Drop = 300x300 dpi 1 Drop (Binary).

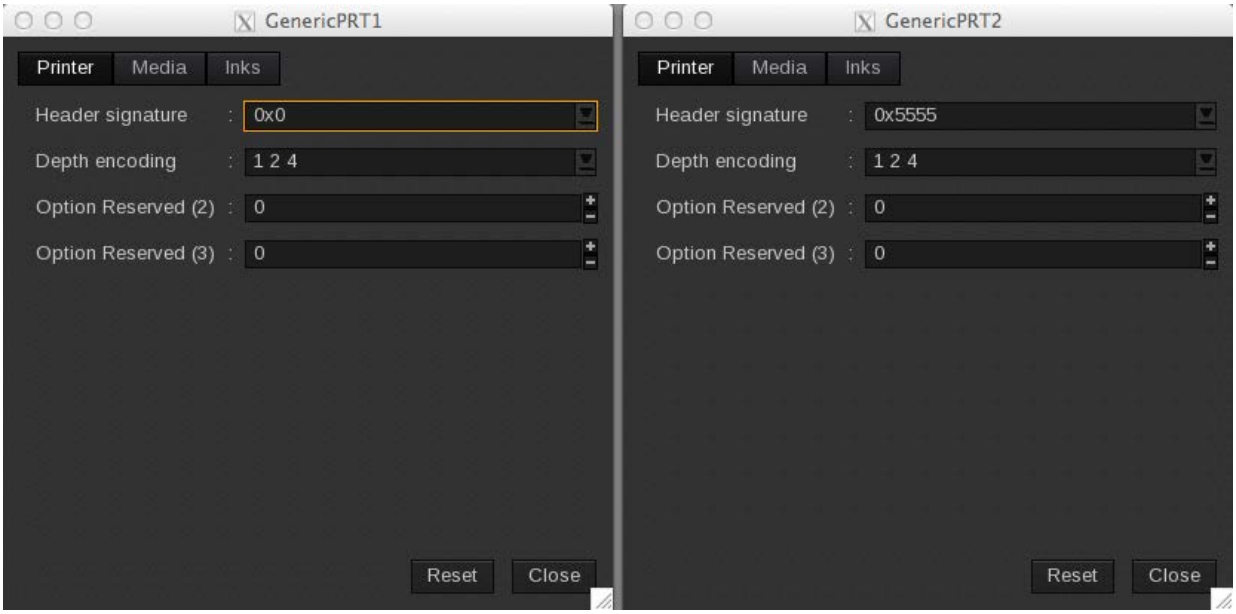
- Quality (x Pass) can be chosen, but might not be supported by the printer itself.



This driver supports:

- Spot-Colors (White / Varnish).
- Custom-InkSet (Additional colorants: Orange, Green, Blue...).
- Composite (1 output file), or separated (1 file per color), TIFF.
- Ink-Reordering.

Options:



Printer Tab

- **Header signature**:
  - Different values are selectable, the default is recommended
- **Depth encoding**: For grayscale support, some require (electronic dependent).
  - 1 2 4 : value = Number of Bits-Per-Pixel
  - 0 1 2 : value = Number of Bits-Per-Pixel -1
- **Option Reserved (2)**: Internal use
- **Option Reserved (3)**: Internal use

BYHX-Generic and BYHX-Epson-Ricoh

There are actually 2 driver types, designed to be used with printer using BYHX electronics, BYHX-Generic (Any type of head), BYHX-Epson-Ricoh (Epson or Ricoh Heads).

BYHX-Generic

The driver:

- Produces PRT Halftone (1, 2, 4 Bits) files.
- Is File format based.

No direct USB Support, Windows PRT printing tool required.

- Paper sizes and Resolutions can be configured via Server-admin.

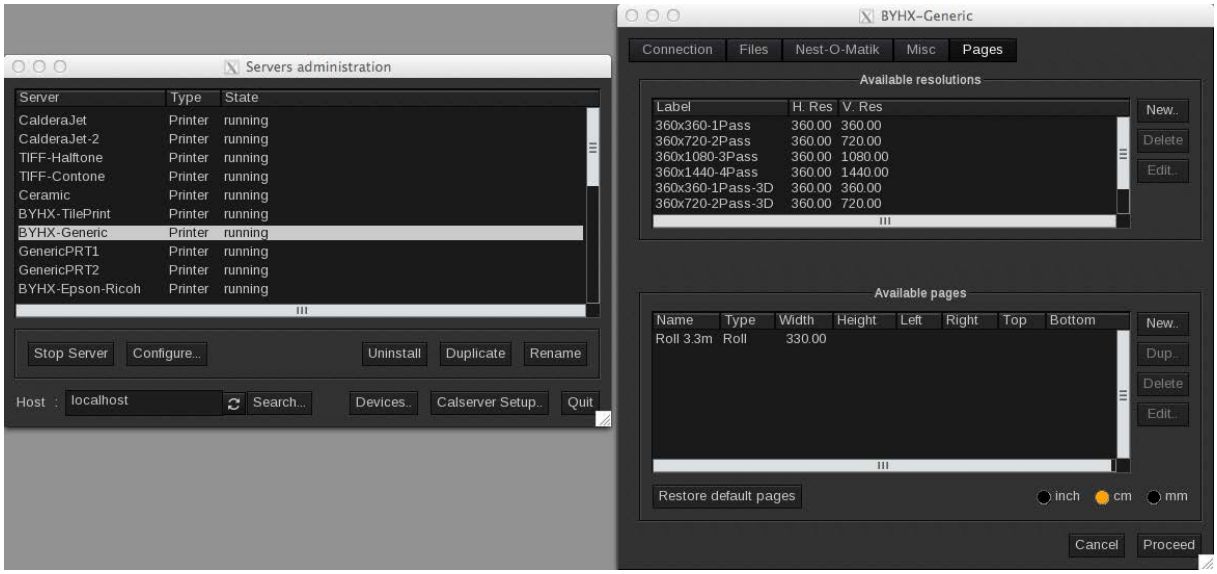
Resolutions have a particular form:

Xx**Y**-**N**Pass-**Z**D

X = X resolution
Y = Y resolution
N = Number of passes
Z = Number of drops.

For example: 300x300-2Pass-3D = 300x300 dpi 2 Pass 3 Drop sizes (2 Bits).
300x300-1Pass-1Drop = 300x300 dpi 1 Pass 1 Drop (Binary).

- Quality (Uni-Bi-Speed) can be chosen, but might not be supported by the printer itself.



This driver supports:

- Spot-Colors (White / Varnish).
- Custom-InkSet (Additional colorants: Orange, Green, Blue...).
- Composite (1 output file), or separated (1 file per color), TIFF.
- Ink-Reordering.

BYHX-Epson-Ricoh

The driver:

- Produces PRT Halftone (1, 2, 4 Bits) files.
- Is File format based.

No direct USB Support, Windows PRT printing tool required.

- Paper sizes and Resolutions can be configured via Server-admin.

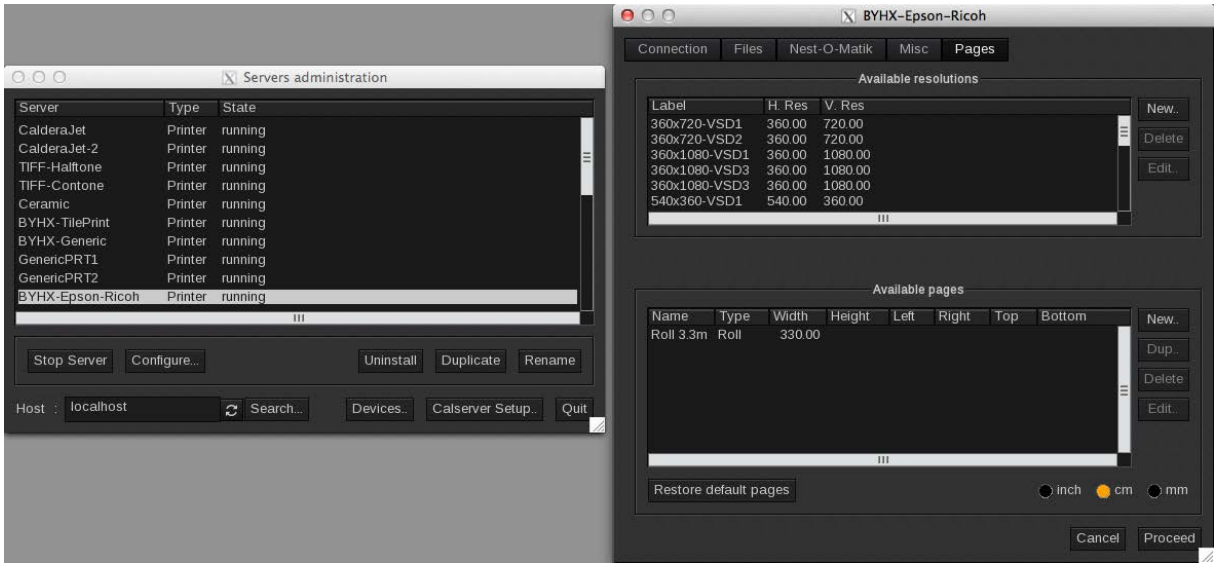
Resolutions have a particular form:

Xx**Y**-VSD**Z**

X = X resolution
Y = Y resolution
Z = VSD Mode (Epson)

For example: 360x720-VSD1 = 360x720 dpi VSD1 (2 Bits).
360x360 = 360x360 dpi (2 Bits Ricoh, VSD Auto select).

- Quality (Uni-Bi-Speed, pass) can be chosen, but might not be supported by the printer itself.



This driver supports:

- Spot-Colors (White / Varnish).
- Custom-InkSet (Additional colorants: Orange, Green, Blue...).
- Composite (1 output file), or separated (1 file per color), TIFF.
- Ink-Reordering.

Creating Custom drivers

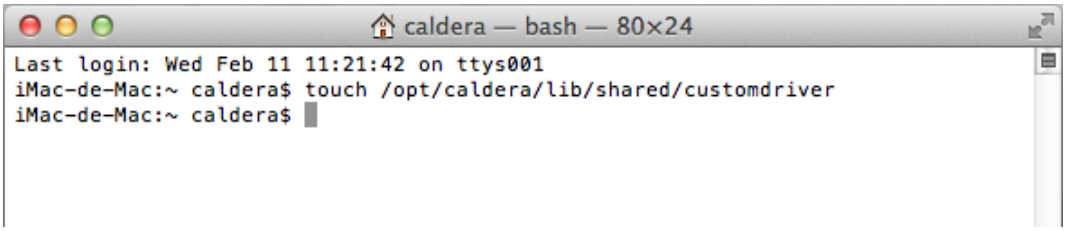
All generic drivers

Since V10 and at least Build 150204 a new mechanism to build Custom driver has been added.
This enables to pre-configure a driver according to the needs (Resolution, Paper size, profiles, name ...), and to create a calpatch ready to be installed.
The mechanism is disabled by default. To enable it, do the following:

1. Open a terminal window:
   - On Mac: under Application / Utilities
   - On Linux: Start / Caldera Shortcuts / Terminal
2. Type the following command

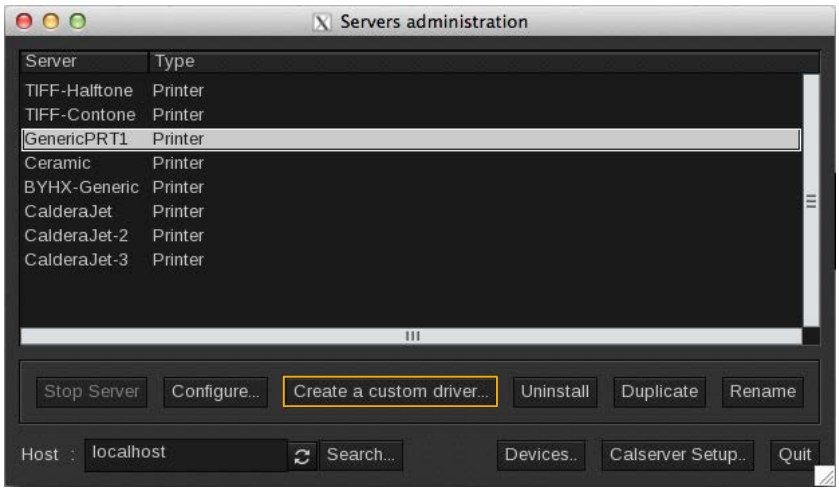
   touch /opt/caldera/lib/shared/customdriver

The command will not return any message or error.

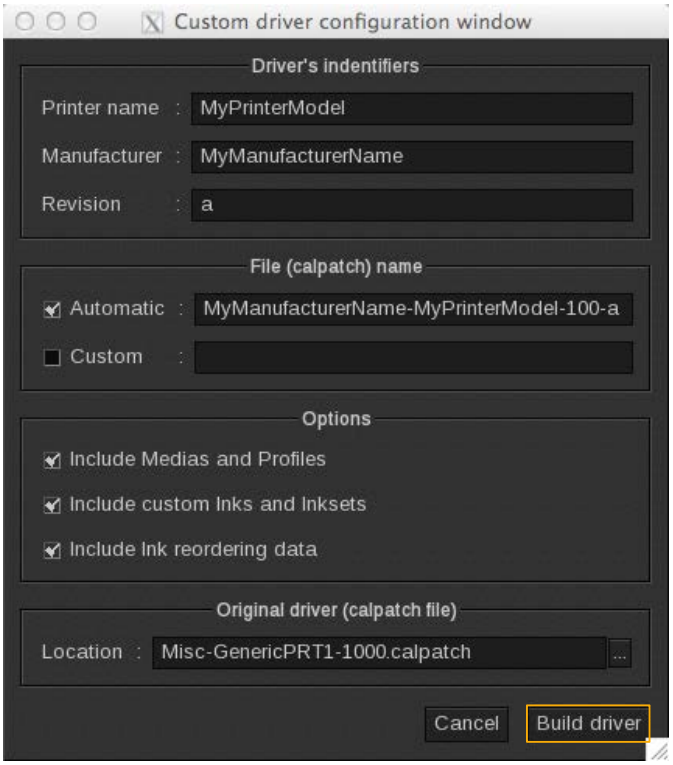


You can now export custom drivers:

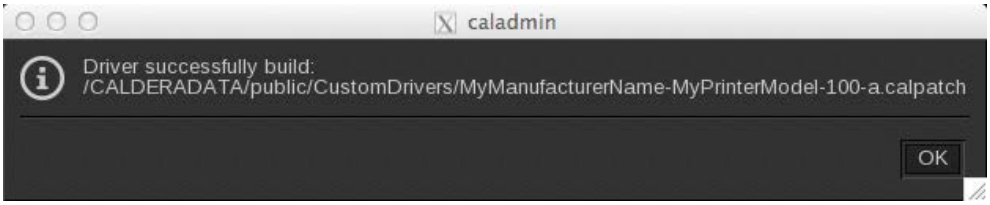
1. Open server-admin (**Special** menu).
2. Select the driver to export
3. Press the "**Create a custom driver**" button



4. Enter your *Printer name* / *Manufacturer* / *Revision*. The driver will be named automatically
5. Check all export **Options** needed (media / profiles / ink-set / ink-reordering).
6. Select the **location** of the original generic driver calpatch.



7. Press the "**Build driver**" button. The location of the new driver will be displayed.



8. This driver can now be used for both Linux or Mac, and installed as a regular driver