



KONICA MINOLTA

# LINUX CUPS DRIVER

## User Guide

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## Conventions used in this document

In this document several conventions for source code, filenames, application names, commands and user input are used:

Source code is printed like this. Default terms in source code examples, which has to be adapted by users, are printed the same but in brackets, like [this]

*Filenames and folder names are printed like this.*

**Commands are printed like this.**

Commands that have to be executed as root are preceded by a '#' character.

Commands that can be executed as user are preceded by a '\$' character.

**Application names are printed like this.**

In this Document the word 'driver' is used as a summarizing term for PPD files, a set of a PPD file and a filter or other driver related files. It is used whenever the exact type of driver does not matter.

## Description

This document describes the features, requirements and restriction of the Konica Minolta drivers for use. It also contains the installation instructions.

The KONICA MINOLTA BEU CUPS Driver that comes with this package will provide security related features like Secure Print, Authentication, etc...

The driver consists of PPD files for each product and a Perl based filter. The PPDs will use custom input fields to allow the user to enter username, password, etc. as free text.

The PPD files are designed as Multilanguage versions. The language will follow the "locale settings" of the system or application. If the language is not included in the PPD, English will be used as default.

Currently supported languages: English, French, Italian, German and Spanish

*Print dialog with custom inputs:*

The screenshot shows a 'Print' dialog box with the 'Advanced' tab selected. The 'Output Method' is set to 'Secure Print'. Below it, the 'Secure Print ID' is 'secid' and the 'Secure Print Password' is masked with dots. The 'Box Number' is 'None' and the 'File Name' is 'None'. Under the 'Account Track' section, the 'Account Track' checkbox is unchecked, the 'Department Code' is 'None', and the 'Password' is masked with dots. At the bottom, there are 'Print Preview', 'Cancel', and 'Print' buttons.

## Features

- Secure Print
- BoxPrint
- ID&Print
- SafeQ (support for using different user name)
- Authentication
- PSES Authentication
- AccountTrack
- CopySecurity
- Date/Time Stamp
- Page Number Stamp
- page logging in CUPS

## Requirements

- Common Unix Printing System (CUPS) version 1.3 or higher
- Perl Interpreter (in most Linux distributions already installed by default)

## Restrictions

Custom input fields are not supported by all applications. Most GTK Applications can handle it, whereas for example OpenOffice has its own printer settings dialog which does not support custom inputs.

A workaround for these cases is described later in this document.

## Installation

### Automatic Installation

This Konica Minolta driver package for CUPS contains an install script for automatic installation. This script will install all needed files, PPD files and the filter, to the designated CUPS folders and applies the required permissions.

To use the install script and the filter a working Perl interpreter has to be installed.

The interpreter binaries are considered to be installed as `/usr/bin/perl`. This is the default location on most systems. If it is installed in another location on your system, please adapt the first line of the install script to fit your needs. Several settings, such as directory and path names are parsed out of the file `/etc/cups/cupsd.conf` directly by the install script.

If the `cupsd.conf` file is placed in a different location, please specify the location when executing the install script.

1. Extract the driver package  
To extract the driver package open a terminal, such as **xterm** or the **KDE terminal**.  
Extract the package with the command:  

```
$ tar -xvzf [package.tgz]
```
2. Call installation script (root privileges are needed here)

Inside the new directory execute the command:

```
# ./install.pl
```

In some older driver packages use the command

```
# ./install
```

If the cupsd.conf file is in a different location, please specify it

```
# ./install.pl /here/and/there/cupsd.conf
```

If the cupsd.conf file has a different name, please specify it

```
# ./install.pl /here/and/there/cups_configuration
```

3. Restart the CUPS server (root privileges are needed here)

Restart the CUPS server with the command:

```
# /etc/init.d/cups restart    or    # /etc/init.d/cupsys restart
```

This command might vary depending on the Linux distribution you are using

4. Driver installation finished

The driver installation is finished. You can now install printers with the CUPS web interface or your preferred CUPS printer administration tool.

## Manual Installation

The files provided with the CUPS driver package can also be installed manually.

It is not enough to install only the PPD files, also installation of the filter is necessary to use the KM specific functions of the driver.

### A. Install the PPD file

Installation of the PPD file is working correspondent to any other PPD file.

1. Extract the driver package

To extract the driver package open a terminal, such as **xterm** or the **KDE terminal**.

Extract the package with the command:

```
$ tar -xvzf [package.tgz]
```

2. Copy the PPD files to the CUPS PPD directory

The default folder on most Linux distributions is

```
/usr/share/cups/model
```

In some distributions following folders may be used

```
/usr/share/ppd/custom
```

or

```
/usr/share/foomatic/db/source/PPD/Custom/
```

Otherwise the path can be found in CUPS configuration file `/etc/cups/cupsd.conf`

The `DataDir` directive will point to a location, where to find a sub folder the model files.

After copying make sure the permissions of the files are set to 644.

### B. Install the filter

You need to have root privileges to copy the filter.

The default folder on most Linux distributions is

*/usr/lib/cups/filter.*

Otherwise the path can be found in CUPS configuration file */etc/cups/cupsd.conf*

The `ServerBin` directive will point to a location, where to find a sub folder for the filter files.

After copying make sure the permissions of the file are set to 755.

### C. Restart CUPS

(root privileges are needed here)

Restart the CUPS server with the command:

```
# /etc/init.d/cups restart
```

or

```
# /etc/init.d/cupsys restart
```

This command might vary depending on the Linux distribution you are using

The driver installation is finished. You can now install printers with the CUPS web interface or your preferred CUPS printer administration tool.

### Add printer to CUPS

After the driver has been installed and CUPS has been restarted, you can add the printer to the system. The correct PPD files of this driver package can be identified by the “BEU” in the model name.



Add Printer - CUPS 1.5.3 - Iceweasel

Iceweasel
Add Printer - CUPS 1.5.3
localhost:631/admin
Google
Home Administration Classes Online Help Jobs Printers Search Help

## Add Printer

**Name:** C364

**Description:**

**Location:**

**Connection:** socket://XXXXXX:9100

**Sharing:** Do Not Share This Printer

**Make:** KONICA MINOLTA

**Model:**

KONICA MINOLTA 652/602SeriesPS(P)BEU v1.0 (en, fr, it, de, es)
KONICA MINOLTA 750/600 PS(P) (en)
KONICA MINOLTA 1050 PS(P) (en)
KONICA MINOLTA bizhub C35 PPD BEU v1.0 (en, fr, it, de, es)
KONICA MINOLTA C250 PS(P) (en)
KONICA MINOLTA C252 PS(P) (en)
KONICA MINOLTA C351 PS(P) (en)
KONICA MINOLTA C352/C300 PS(P) (en)
KONICA MINOLTA C360SeriesPS(P)BEU v1.0 (en, fr, it, de, es)
KONICA MINOLTA C364SeriesPS(P)BEU v1.0 (en, fr, it, de, es)

**Or Provide a PPD File:**

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## Workaround

... for applications that do not support custom input fields in their printer driver dialog.

### Workaround 1

The filter contains additional code to read from a settings file named *KMdrv.txt* which is located in the user's home folder. It is expected that the home folder name matches the username which is transferred to CUPS.

To enable this function the filter (*KMbeuEmpPS.pl*) needs to be modified. Following lines need to be changed and verified:

```
# my $usesettingsfile=1;
# my $homefolderspath="/home";
```

Within the settings file following settings can be defined:

- OutputMethod
- SecurePrintID
- SecurePrintPassword
- BoxNumber
- BoxFileName
- SafeQUser
- AccountTrack
  - DepartmentCode
  - AccountPassword
- Authentication
  - AuthenticationUsername
  - AuthenticationPassword

The settings file is an ASCII text file, which contains lines for each setting in the format:

option=value

For example: to enable Secure Print, with Secure Print ID=secid and password=pass the settings file has to contain these lines.

```
OutputMethod=Secure
SecurePrintID=secid
SecurePrintPassword=pass
```

Or alternative the output method can be selected in the print dialog, and then only the SecurePrintID and SecurePrintPassword are required to be defined in the file.

A sample settings file *KMdrv.txt* listing all possible parameters is included in this driver package.



#### Attention!

**If this function is enabled and the settings file exists in the user's home folder, the settings from that file will override the settings made in the printer dialog.**

**These settings will be applied to all printers that use the filter from this driver package.**

After modifying the filter file, it might be necessary to restart the CUPS demon:

```
# /etc/init.d/cups restart
```

## Workaround 2

Modify the PPD file for each printer and add the required value as additional parameter. Depending on the syntax, the additional parameters will be shown different in the printer dialog.

The PPD files for the installed printers are located by default in the folder */etc/cups/PPD*

```
*KMSecID [SecurePrint ID]/[Displayed Text]: " "
```

This will show the [Displayed Text] in the print dialog, but will use [SecurePrint ID] as value for the filter. This syntax can be used if the real value should be hidden in the print dialog, e.g. for setting passwords in PPD file.

```
*KMSecID [SecurePrint ID]: " "
```

This will use the [SecurePrint ID] for display in the print dialog and as value for the filter. With this syntax, the used value is also the text displayed in the print dialog.

Following sample code shows the additional added parameters (lines in red colour) for individual Secure Print ID and password:

```
*% =====
*%   Secure Print ID
*% =====
*OpenUI *KMSecID/Secure Print ID: PickOne
*OrderDependency: 10 AnySetup *KMSecID
*DefaultKMSecID: None
*KMSecID None: " "
*KMSecID secid/private: " "
*CloseUI: *KMSecID

*% Custom PostScript KMSecID option
*CustomKMSecID True: " "
*ParamCustomKMSecID Username: 1 string 1 16

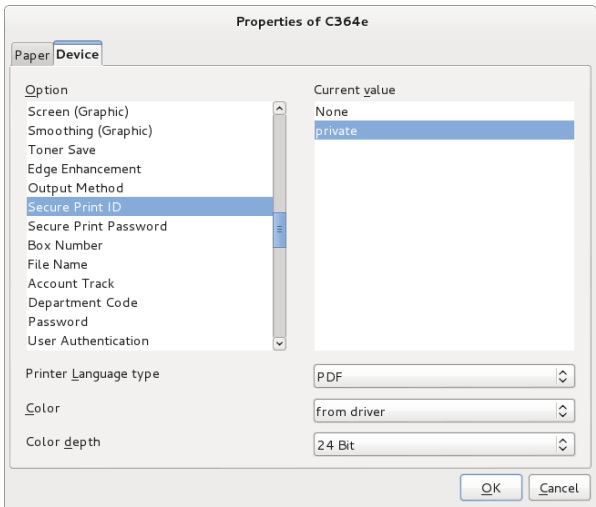
*% =====
*%   Secure Print password
*% =====
*OpenUI *KMSecPass/Secure Print Password: PickOne
*OrderDependency: 10 AnySetup *KMSecPass
*DefaultKMSecPass: None
*KMSecPass None: " "
*KMSecPass pass/private: " "
*CloseUI: *KMSecPass

*% Custom PostScript KMSecPass option
*CustomKMSecPass True: " "
*ParamCustomKMSecPass Password: 1 password 1 8
```

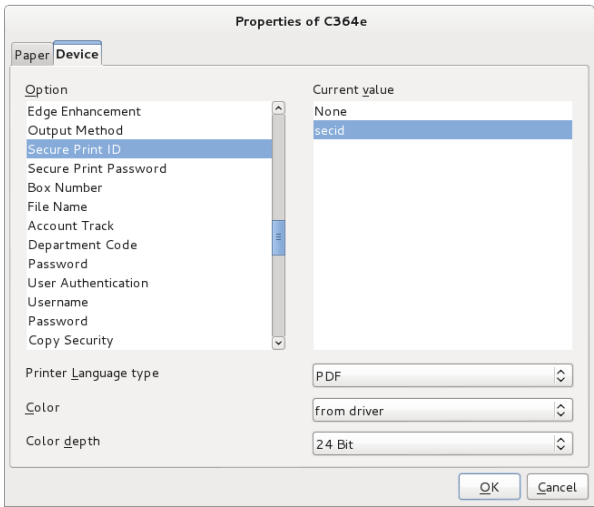
After modifying the PPD, it might be necessary to restart the CUPS demon:

```
# /etc/init.d/cups restart
```

Print dialog from OpenOffice:



Added parameter:  
\*KMSecID secid/private: " "



\*KMSecID secid: " "

In both cases "secid" will be the value used as SecurePrint ID, but the displayed text is different.

Comparison Workaround 1 and 2

Workaround 1	Workaround 2
Setting will be applied to printers using this driver	Setting is only available for to modified printer PPD needs to be modified for each printer.
Individual settings for each user.	Changes made in the PPD are available for all users.
Selections in the print dialog have no influence on the settings defined in the setting file.	The customer can select among the different parameters/values defined in the PPD.
Easy to handle, each user can modify the settings file and define its own values.	For normal user it is difficult to make the changes in the PPD, also root credentials are required for the change.

## Supported Products

### Konica Minolta

- bizhub 423 series (223/283/423/283)
- bizhub 652 series (652/602/552/502)
- bizhub 554e series (554e/454e/364e/284e/224e)
- bizhub 754 series (754/654/754e/654e)
- bizhub C360 series (C220/C280/C360)
- bizhub C652 series (C652/C602/C552/C502)
- bizhub C364 series (C224/C284/C364/C224e/C284e/C364e)
- bizhub C554 series (C554/C454/C554e/C454e)
- bizhub C754 series (C754/C654/C754e/C654e)
- bizhub C35 (only with special firmware)

### Generic:

- 42BW-4 series (22BW-4/28BW-4/42BW-4/28BW-4)
- 65BW-3 series (65BW-3/60BW-3/55BW-3/50BW-3)
- 55BW-5e series (55BW-5e/45BW-5e/36BW-5e/28BW-5e/22BW-5e)
- 75BW-5 series (75BW-5/65BW-5/75BW-5e/65BW-5e)
- 36-C1 series (36C-1/28C-1/22C-1)
- 36C-6 series (36C-6/36C-6e/28C-6/28C-6e/22C-6/22C-6e)
- 55C-6 series (55C-6/55C-6e/45C-6/45C-6e)
- 60C-6 series (60C-6/60C-6e/60C-7/60C-7e)
- 50C-2 series (50C-2/50C-3/45C-3/45C-4/45C-5)

## Change Log

2013-11-13 driver package v1.4

- added SafeQ support (using different user name)

2013-10-16 driver package v1.3

- added new models:
- bizhub 754 series (754/654/754e/654e)
- bizhub 554e series (554e/454e/364e/284e/224e)
- 75BW-5 series (75BW-5/65BW-5/75BW-5e/65BW-5e)
- 55BW-5e series (55BW-5e/45BW-5e/36BW-5e/28BW-5e/22BW-5e)

2013-08-23 driver package v1.2

- added PSES Authentication
- added "e"-models
- correction of translation strings for Generic supported products (Konica Minolta)
- bizhub 423 series (223/283/423/283)
- bizhub 652 series (652/602/552/502)
- bizhub 754 series (754/654)
- bizhub C360 series (C220/C280/C360)
- bizhub C652 series (C652/C602/C552/C502)
- bizhub C364 series (C224/C284/C364/C224e/C284e/C364e)
- bizhub C554 series (C554/C454/C554e/C454e)
- bizhub C754 series (C754/C654/C754e/C654e)
- bizhub C35 (only with special firmware)
- supported products (Generic)
- 42BW-4 series (22BW-4/28BW-4/42BW-4/28BW-4)
- 65BW-3 series (65BW-3/60BW-3/55BW-3/50BW-3)
- 75BW-5 series (75BW-5/65BW-5)
- 36-C1 series (36C-1/28C-1/22C-1)
- 36C-6 series (36C-6/36C-6e/28C-6/28C-6e/22C-6/22C-6e)
- 55C-6 series (55C-6/55C-6e/45C-6/45C-6e)
- 60C-6 series (60C-6/60C-6e/60C-7/60C-7e)
- 50C-2 series (50C-2/50C-3/45C-3/45C-4/45C-5)

2013-03-27 driver package v1.1

Filter version 1.0.2

- ID&Print: public user when no authentication is set
- support for overwrite driver settings using a file in the users home folder

PPD files

- multilanguage support (EFIGS)
- supported products (Konica Minolta)
- bizhub 423 series (223 / 283 / 423 / 283)
- bizhub 652 series (652 / 602 / 552 / 502)
- bizhub C360 series (C220 / C280 / C360)
- bizhub C652 series (C652 / C602 / C552 / C502)
- bizhub C364 series (C224 / C284 / C364)
- bizhub C754 series (C754 / C654)
- bizhub C35 (only with special firmware)
- supported products (Generic)

- 42BW series
- 65BW series
- 36-C1 series
- 36C-6 series
- 60C-6 series
- 50C2 series

2012-09-06 driver package v1.0

- initial version
- supported features

- Secure Print
  - BoxPrint
  - Authentication
  - AccountTrack
  - CopySecurity
  - Date/Time Stamp
  - Page Number Stamp
  - page logging (in cups)
- supported products
- bizhub 423 series
  - bizhub C360 series
  - bizhub C364 series
  - bizhub C754 series
  - bizhub C35 (only with special firmware)



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