User's Manual

Linux Drivers

for POS and Kiosk Printers

Version 1.0

BemaTECH
INTERNATIONAL

1 DESCRIPTION

The Linux Drivers for Bematech Kiosk Printers and Mini Printers are available in Five **Modules**, as described by the following table:

Module #	Module Name	Module Description
1	bemathermal-spooldrv	*Spooler Driver* for CUPS™. Tested with the following distributions: Red Hat Linux 7.2, 7.3, 8 and 9; Red Hat Enterprise Linux 2.1 and 3; Conectiva 8 and 9; Fedora Core 1; SuSe 9.0 – 9.2 and SuSe Enterprise 8.0
2	bemathermal-apidrv	API compatible with MP2032.dll (Bematech Windows API) for kiosk and mini-printers. This package contains a shared library (/usr/lib/libmp2032.so) and a test application (/usr/bin/test-mp2032). This package requires specific libraries for serial and parallel communication - libezV24 and libieee1284.
3	bemathermal-apidrv-devel	Version of the library that contains the files needed for application development. Contains a header file (/usr/include/mp2032/mp2032.h), and the source code used in our test application, located at /usr/src/mp2032.
4	libezV24	This module corresponds to the serial port communication library used by libmp2032. This module MUST be installed.
5	libieee1284	This module corresponds to the parallel port communication library used by libmp2032. Any version of this library may be used.

1.1 Related files

Each module is made available as an RPM **Package**. The following RPM package files and numbers relate to the Modules previously described:

Package #	File Name	Package Description
1	bemathermal-spooldrv-***x.x-x***.i386.rpm	RPM package containing the driver binary file and a file with the printer descriptions. The supported printer models are "58mm", "76/80mm" and "112mm". **This file is for the end user.**
2	bemathermal-apidrv-***x.x.x-x***.i386.rpm	RPM package containing Bematech MP2032 shared library. **This file is for end users.** User applications (non spooler) must be linked to this library.
3	bemathermal-apidrv-devel-***x.x.x-x***.i386.rpm	RPM package containing files needed for application development using the library. **This file is for application developers.**
4	libezV24-***x.x.x-x***wbrtk.i386.rpm	RPM Package containing the serial port communication library used by the API. This module is required when installing the libmp2032 RPM package. Users *MUST* install this version. **This file is for developers as well as final users.**
5	libieee1284-***x.x.x-x.x***.i386.rpm	RPM package containing the parallel port communication library, used by the API. This module is needed when installing the libmp2032 package. Any version of this library may be used. **This file is for developers and end users.**

Note: the letters "***x***" correspond to the version numbers of the RPM file.

1.2 Dependencies

Package	Packages needed for installation
1. bemathermal-spooldrv	cups; cups-libs
2. bemathermal-apidrv	libezV24; libieee1284
3. bemathermal-apidrv-devel	bemathermal-apidrv

2 INSTALLATION INSTRUCTIONS

2.1 Package installation

The package installation may be done using any graphic utility that allows RPM packages installation. Nevertheless, the simplest way is to use the **rpm** command line utility.

Follow the steps below:

1. Open a terminal as user "**root**";

2. Copy the RPM files inside a temporary folder. In the following example, we consider that the packages are in a floppy disk and we copy them inside the folder **/root**:

```
# mount /mnt/floppy
# cp /mnt/floppy/bemathermal-spooldrv-x.x-x.i386.rpm /root
# cp /mnt/floppy/bemathermal-apidrv-x.x-x.i386.rpm /root
# cp /mnt/floppy/libezV24-x.x.x-xwbrtk.i386.rpm /root
# cp /mnt/floppy/libieee1284-x.x.x-x.x.i386.rpm /root
```

Note: the letters "***x***" correspond to the version numbers of the RPM file.

3. Install the packages using the command RPM:

```
# cd /root
# rpm –ivh bemathermal-spooldrv-x.x-x.i386.rpm
...
# rpm –ivh libezV24-x.x.x-xwbrtk.i386.rpm libieee1284-x.x.x-x.x.i386.rpm
...
# rpm –ivh bemathermal-apidrv-x.x-x.i386.rpm
...
```

Note: the letters "***x***" correspond to the version numbers of the RPM file.

4. Make sure that the *spooler* CUPS™ is correctly installed, configured and already initialized (must be running). The following example shows Red Hat Linux administrative commands:

```
# chkconfig cups on
# service cups start
```

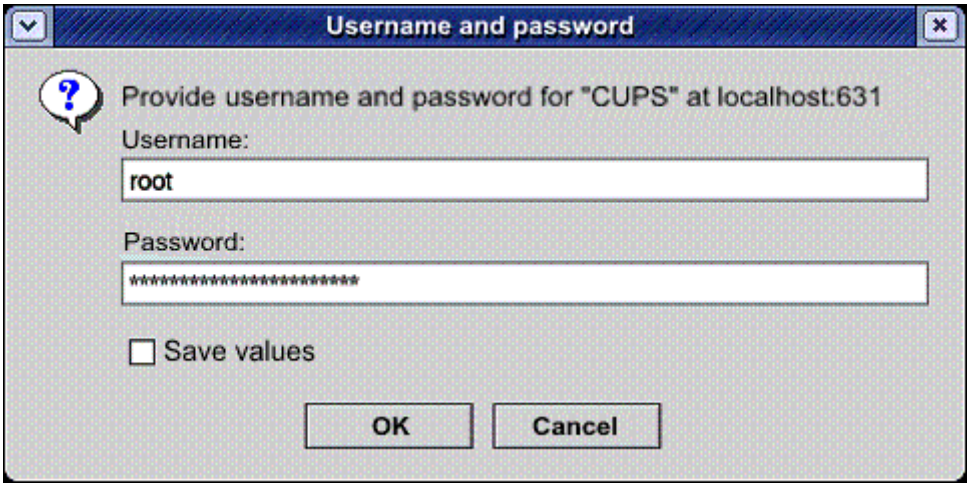
3 SETTING-UP

3.1 Configuring a printer with the spooler driver

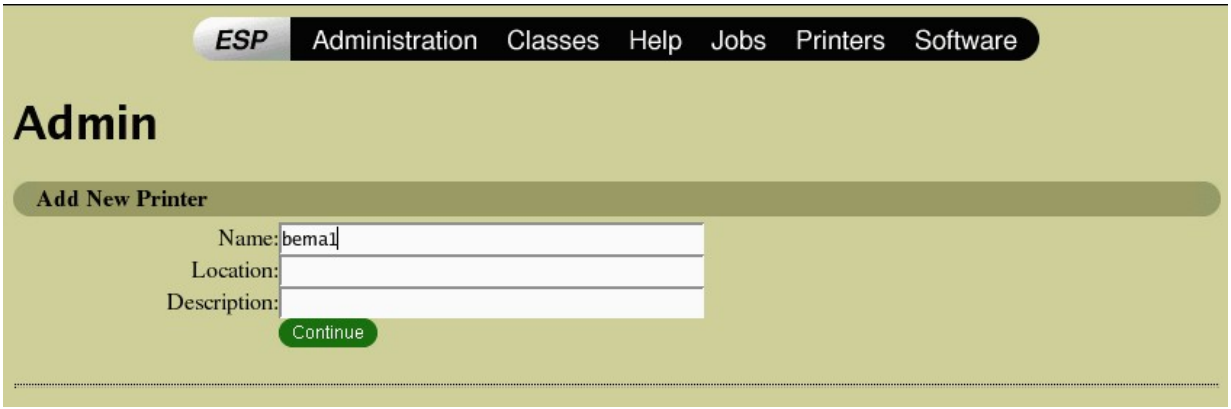
1. Launch a Web browser and access the administration interface of the CUPS™ server, pointing the browser to **http://localhost:631** (local host, port 631). The following figure shows the start page:

2. Click on link "**Manage Printers**" to proceed to the CUPS™ printer administration page:

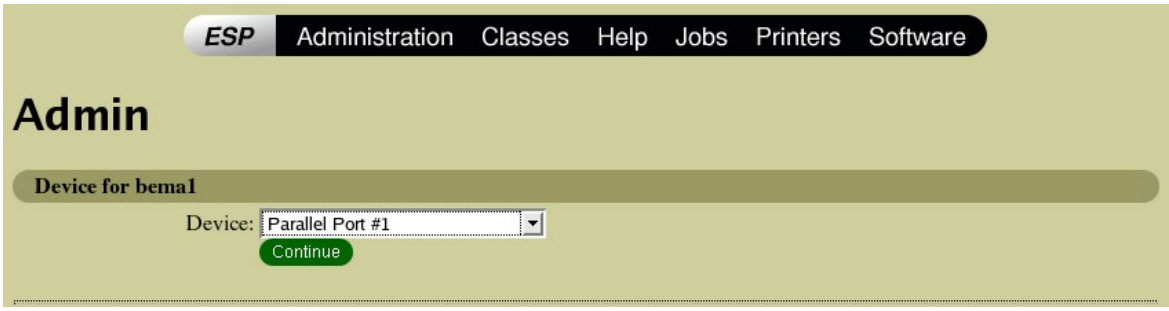
3. Click on button "**Add Printer**" to start the printer's configuration wizard. This action requires administrator rights and you will be asked to authenticate your request. In many Linux distributions the *login and password of user* "**root**" must be informed. For Red Hat Linux, the users of the group "**sys**" also have administrative rights over the CUPS™ server:



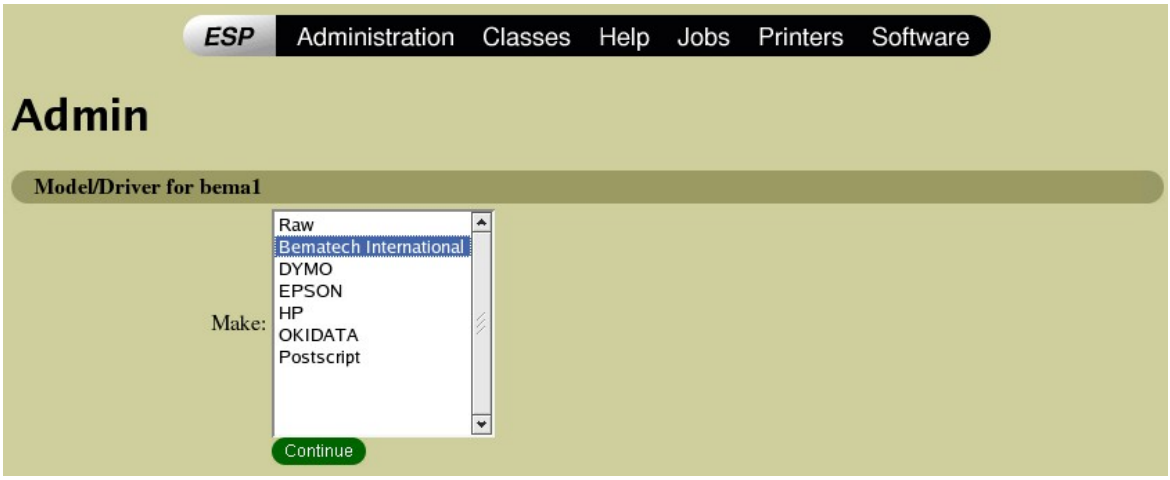
4. Once authenticated, the wizard will be launched, asking for basic printer information. The only requested field is the printer "**Name**", that must not contain spaces neither special characters. The fields "**Location**" and "**Description**" correspond to the physical location of the printer and its detailed description, respectively. Both are optional. Fill the fields and press "**Continue**":



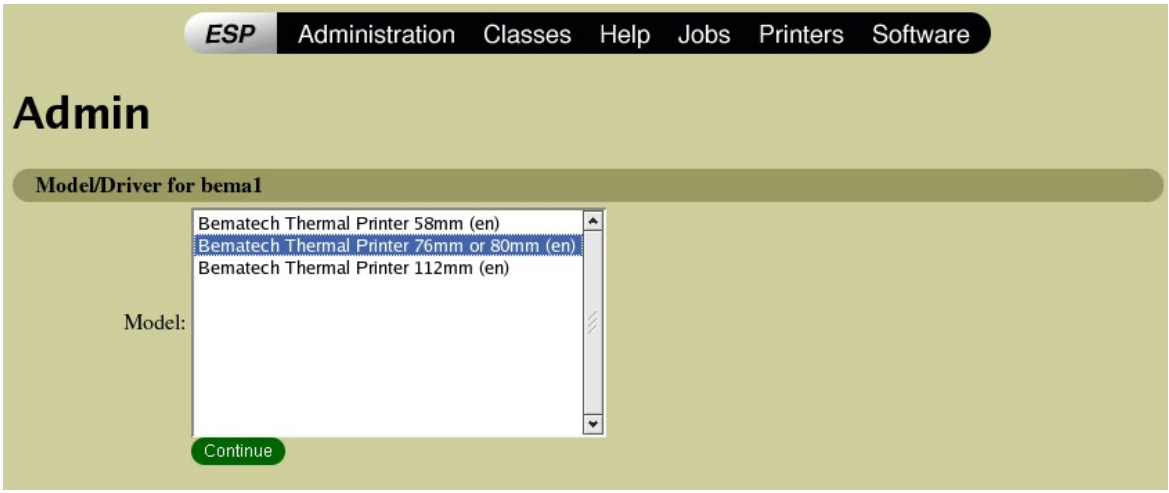
5. Choose the device connected to the printer (parallel or serial port, for example) and click on "**Continue**":



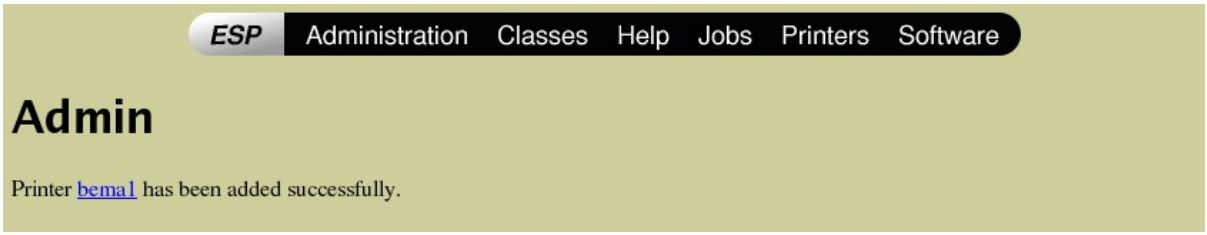
6. Choose the printer manufacturer ("**Bematech International**") in the list and click on "**Continue**":



7. Choose the printer model. In the example, a thermal printer with paper width of 76mm or 80 mm was selected. Click on "**Continue**":

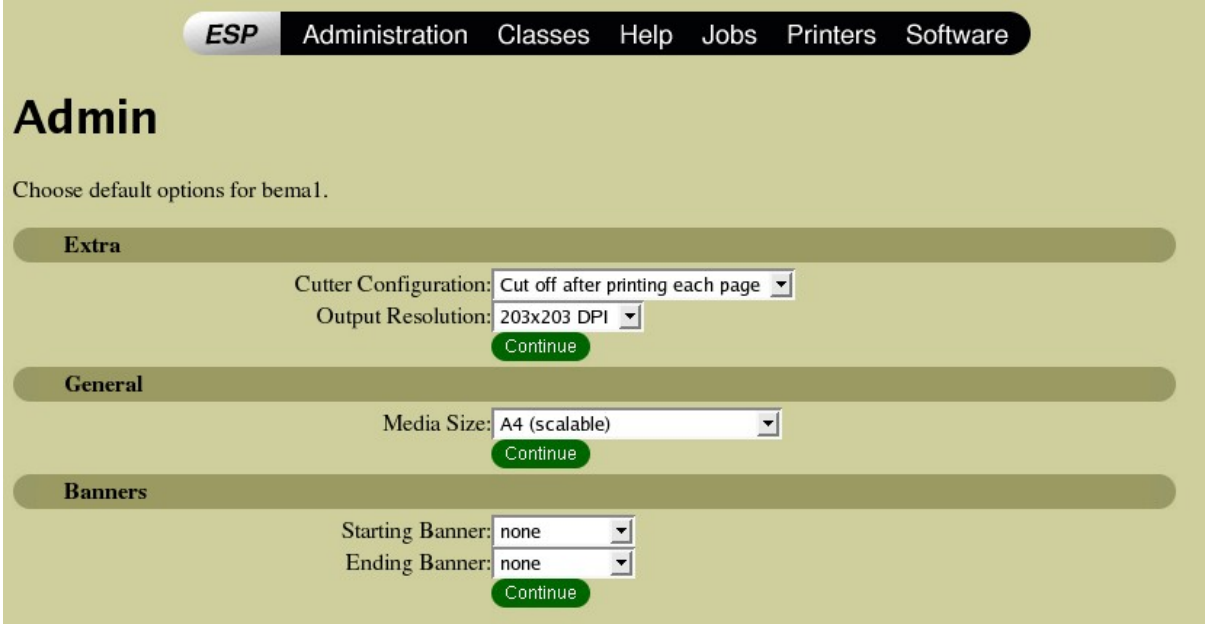
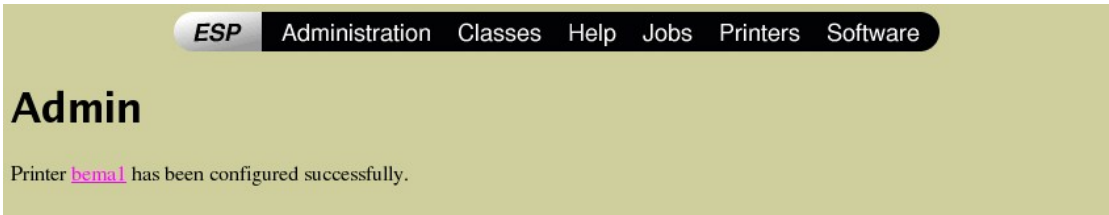


8. The printer is now added to the system with its default configuration. To return to the printer administration page, click on option "**Printers**". Optionally you may click directly on the printer name to view its configurations:



9. At the printer administration page, you are ready to print a test page (click on "**Print Test Page**"). The "**Modify Printer**" button may be used to change the printer configuration (port, name, etc). Use the "**Delete Printer**" to remove the printer from the system. To set up the printer, click on "**Configure Printer**" (see figure below):

10. The option "**Cutter Configuration**" allows choosing whether the paper is cut automatically or not after each ticket or page. The option "**Output Resolution**" configures the resolution for "**203x203 DPI**" or "**203x90 DPI**". The option "**Media Size**" controls the aspect ratio of the printout. The attributes "**A4 (scalable)**" and "**Letter (scalable)**" must be used in cases where the application is not supposed to "talk" to CUPS™, and therefore is only capable of print using default paper formats. The attribute "**Thermal Paper Roll XXmm**" must be used when the application is prepared to generate a printout respecting the media (paper) margins. The options "**Starting Banner**" and "**Ending Banner**" are default options from CUPS™ and allow pre-printing and pos-printing pages to be generated automatically. Click on "**Continue**" to save settings.



11. After the setup, click on one of the options on the upper toolbar or start using the printer.