

**Oracle® Documaker**

**Using the Bitmap Print  
Driver**

version 11.5

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## Chapter 1

# Setting Up the Bitmap Print Driver

The Bitmap Print Driver lets you create bitmap output from Oracle Documaker software such as Documaker Workstation, Docucreate, Documaker, and Documaker Studio.

The Bitmap Print Driver runs on Windows implementations of Documaker Workstation, Docucreate, Documaker, and Documaker Studio.

This document discusses...

- [Overview on page 2](#)
- [Setting Up Your INI Files on page 3](#)
- [Choosing the Right Fonts on page 10](#)
- [Working with Color on page 12](#)
- [Handling Multiple Page Form Sets on page 13](#)
- [Selecting the Bitmap Print Driver on page 18](#)
- [Additional Considerations on page 20](#)

## OVERVIEW

Using the Bitmap Print Driver, you can create bitmaps in several formats from a form set or a single FAP file. Output from the Bitmap Print Driver can be written to disk and stored in one or more files. You can view and print the output in any application that reads bitmap files. You can also archive output using other software applications.

The bitmap print driver works just like other print drivers available for Documaker applications. The Bitmap Print Driver lets you specify a bitmap format to use, such as LOG, TIF, JPG, or BMP.

### Prerequisites

First make sure you have the correct system requirements to run your Documaker software. For instance, if you are using Documaker Workstation, see the [Documaker Workstation Administration Guide](#) for information on what you need to run those systems.

For Documaker, see the [Documaker Installation Guide](#) for more information on system requirements.

Once you have made sure you have the correct system configuration to run Oracle Documaker software, follow these steps to use the Bitmap Print Driver:

- 1 Customize your INI files. See [Setting Up Your INI Files on page 3](#).
  - Review [Choosing the Right Fonts on page 10](#)
  - Review [Handling Multiple Page Form Sets on page 13](#)
- 2 Select the Bitmap Print Driver in your Documaker application. See [Selecting the Bitmap Print Driver on page 18](#) for more information.

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**NOTE:** The Bitmap Print Driver is installed when you install Oracle Documaker.

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## SETTING UP YOUR INI FILES

You use INI options in your FSISYS.INI file to tell the system how you want the Bitmap Print Driver to work. These options differ slightly depending on the Documaker application you are using.

---

**NOTE:** *Before* making any changes to these files, back up your INI files.

---

### DOCUMAKER WORKSTATION, DOCUCREATE, AND DOCUMAKER STUDIO INI OPTIONS

Include these INI options to set up the Bitmap Print Driver for Documaker Workstation, Docucreate, and Documaker Studio, all of which have a graphical user interface:

```
< Printers >
  PrtType           = BMP
< PrtType:BMP >
  BMPType          = TIF
  Module           = BPDW32
  PrintFunc        = BPDPrint
  Device           = NULL
  SendColor        = Yes, Enabled
  GrayShades       = Yes
  ForcePrintinColor = Yes
  SelectRecipients = Yes, Enabled
  Resolution       = 300
  DefaultSymSet    = W1
  PageNumbering    = Yes
  RotateLandscapePages = Yes
  Fonts            = PCL, TTF, PS, AFP, XER
```

Option	Description
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Printers control group

PrtType	<p>You may have several printers defined using PrtType options, such as PCL, AFP, and XER. To this list, add another PrtType option set to identify the Bitmap Print Driver, as shown here:</p> <pre>PrtType = BMP</pre> <p>You can call the printer driver anything you like, <i>BMP</i> is just an example. Just make sure what you choose is reflected in the name of the PrtType:<i>BMP</i> control group.</p>
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PrtType:BMP control group

BMPType	<p>Use this option to specify the bitmap format you want to create, such as compressed LOG, LOGPACK, TIF, MTIF, BMP, FNT, IMG, SEG, and JPG.</p> <p>The default is compressed LOG format.</p>
Module	<p>Enter <b>BPDW32</b>.</p> <p>This is the name of the program module which contains the print driver.</p>

Option	Description
PrintFunc	Enter <b>BPDPrint</b> . This is the name of the program function that is the main entry point into the print driver.
Device	This option is used by GUI applications such as Documaker Studio or Documaker Workstation. Documaker Server ignores this option. Enter the name of the file or device where the output should be written. If this option is not set or is set to NULL, the system generates a file name based on the page number, such as 00000001.LOG for the first page, 00000002.LOG for the second page, and so on. Otherwise, the system uses the name you provided for the first page and then appends 00000002.log for the second page and so on. If you include a file extension in the file name for the device, that extension is used for all files produced. Otherwise, the system assigns the file extension to match the type of output you are producing.
SendColor	Enter No for black and white bitmaps. Enter Yes for color bitmaps. You also have these options: Enabled = Send Color field appears in the Print window and is active (available to be checked). Disabled = Send Color field appears in the Print window but is grayed out (not available to be checked). Hidden = Send Color field does not appear in the Print window For instance, Yes, Enabled indicates color bitmaps and displays the Send Color field on the Print window where it can be checked or not. Keep in mind that the higher the color depth and resolution, the longer it will take to create output. For example, changing from 24-bit color bitmap to monochrome (black and white) makes the bitmap 24 times smaller. For example, a 24-bit color bitmap at 300 DPI that measures an 8.5 x 11 inches will require a bitmap file that is roughly 25MB in size. $300 \times 300 \times 8.5 \times 11 \times 24 / 8 = 25,245,000 \text{ bytes}$ 300 = resolution in DPI 8.5 X 11 = letter page size in inches 24 =color depth in bits 8 = bits in one byte The larger the bitmap, the slower the processing.
GrayShades	Enter Yes to print in shades of gray. The default is No.
ForcePrintInColor	Enter Yes to print in color. The default is No.

Option	Description
SelectRecipients	Enter No to disable the ability to select recipients. The default is Yes. Enabled = Appears in the Print window and is active (available to be checked). Disabled = Appears in the Print window but is grayed out (not available to be checked). Hidden = Does not appear in the Print window.
Resolution	Specify the bitmap resolution in pixels per inch. Valid entries range from 30 to 600 pixels per inch. The default is 300. Keep in mind that the higher the resolution and color depth, the longer it will take to create output. For example, changing the resolution from 300 DPI to 150 DPI makes the output four times smaller. Again, the larger the bitmap, the slower the processing.
DefaultSymSet	(Optional) Specify the symbol set. The default is W1 for TrueType (TTF) and PostScript (PS) font types.
PageNumbering	(Optional) Enter Yes to turn on form or form set page numbering. The default is No.
RotateLandscapePages	(Optional) Enter Yes to rotate landscape pages left 90 degrees. The default is No.
Fonts	(Optional) This only affects objects that have to be converted to bitmaps, such as charts, bar codes, and vectors. Use this option to specify the fonts you intend to use, in order. For example, if you set the Fonts option to <i>PCL,TTF</i> , the Bitmap Print Driver first locates the PCL font. If the PCL font does not exist, it finds the TTF font. The default font order is: PCL,AFP,XER,TTF,PS.

In addition, make sure the following options are set correctly in your FSISYS.INI file. These options provide font and character set information the system needs. For more information, see [Choosing the Right Fonts on page 10](#).

```
< MasterResource >
  FontLib      = ..\frmes\fontlib\
  XRFFile     = REL113SM
< FMRes >
  DefLib      = ..\frmes\deflib\
```

Option	Description
MasterResource control group	
FontLib	Specify the font library you want to use.
XRFFile	Specify the font cross-reference (FXR) file you want to use, such as REL113SM.FXR.

Option	Description
FMRes control group	
DefLib	Specify the path to the CODEPAGE.INI and other files for TrueType (TTF) and PostScript (PS) font types. See <a href="#">Choosing the Right Fonts on page 10</a> for more information on the files required in the directory you specify here.

---

**NOTE:** If the FontLib and DefLib options point to the same directory, the Oracle Image Export software will find the plugin.ttf file, which is not a normal TrueType font file. The Oracle Image Export software is used in converting various file types into bitmaps, such as when you use the AddMultiPageBitmap rule. If the Oracle Image Export software uses the plugin.ttf to convert a file into a bitmap, text represented in the bitmap may not display properly.

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These files should be located in the path specified by the DefLib option in the FMRES control group in your FSISYS.INI file:

File	Description
IF.CFG	Intellifont Configuration file (not required with version 9.5 and later)
IF.FNT	Intellifont Typeface Index file
UIF.SS	Intellifont Symbol Set file
UMT.SS	MicroType Symbol Set file
UTI.SS	TrueType Symbol Set file
PLUGIN.TYQ	Intellifont Plugin and Typeface Library file
PLUGIN.TTF	TrueType Plugin and Typeface Library file

If you want to create a single TIFF file per form set, see [Handling Multiple Page Form Sets on page 13](#) for more information.



## DOCUMAKER INI OPTIONS

For multi-step GenPrint and single-step GenData, you set up the Bitmap Printer Driver just as you would the other printer drivers. Here is an example of the INI options you would use to set up the GenPrint program in Documaker to use the Bitmap Print Driver:

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**NOTE:** See also [Handling Multiple Page Form Sets on page 13](#) for information on setting the INI options necessary to have Documaker create one output file per form set.

When you print multiple transactions from Documaker, be sure to set up MultiFilePrint callback function. This function lets you run the GenData program in single-step mode. See the [Documaker Administration Guide](#) for more information.

---

```

< Printer >
  PrtType          = BMP
< Printer1 >
  Port             = DATA\~tmp.tif
< Printer2 >
  Port             = DATA\~tmp.tif
< Printer3 >
  Port             = DATA\~tmp.tif
< Printer4 >
  Port             = DATA\~tmp.tif
< Printer5 >
  Port             = DATA\~tmp.tif
< PrinterInfo >
  Printer          = Printer1
  Printer          = Printer2
  Printer          = Printer3
  Printer          = Printer4
  Printer          = Printer5
< PrtType:BMP >
  BMPType         = TIF
  Module          = BPDW32
  PrintFunc       = BPDPrint
  Device          = dummy.txt
  SendColor       = No
  Resolution      = 300
  Fonts           = PCL, AFP, XER, TTF, PS

```

Option	Description
Printer control group	
PrtType	Enter <b>BMP</b> . You can call the printer driver anything you like, <i>BMP</i> is just an example. Just make sure what you choose is reflected in the name of the PrtType: <i>BMP</i> control group.
PrinterX control group	
Port	Enter the name of the print batch file for each designated printer. Note the control group name is defined by the printer option in the PrinterInfo control group.  Keep in mind that the print batch file should always include a correct file extension. If, however it does not contain an extension, such as PORT=DATA\~TMP, the printer driver uses the PrtType as the file extension. In this case BMP, so it becomes DATA\~TMP.BMP.
PrinterInfo control group	
Printer	Enter the designated printers for the print batches.
PrtType:BMP control group	
BMPTYPE	Use this option to specify the bitmap format you want to create, such as compressed LOG, TIF, JPG, BMP, or MTIF for multi-page TIFF. The default is compressed LOG format.
Module	Enter <b>BPDW32</b> . This is the name of the program module which contains the print driver.
PrintFunc	Enter <b>BPDPrint</b> . This is the name of the program function that is the main entry point into the print driver.
Device	This option is ignored by the GenPrint program but should not be left blank or omitted. For instance, you could enter <i>dummy.txt</i> .
SendColor	Enter No for black and white bitmaps. Enter Yes for color bitmaps. Keep in mind that the higher the color depth and resolution, the longer it will take to create output. For example, changing from 24-bit color bitmap to monochrome (black and white) makes the bitmap 24 times smaller. For example, a 24-bit color bitmap at 300 DPI that measures an 8.5 x 11 inches will require a bitmap file that is roughly 25MB in size. $300 \times 300 \times 8.5 \times 11 \times 24 / 8 = 25,245,000 \text{ bytes}$ 300 = resolution in DPI 8.5 X 11 = letter page size in inches 24 =color depth in bits 8 = bits in one byte. The larger the bitmap, the slower the processing.

Option	Description
Resolution	<p>Specify the bitmap resolution in pixels per inch. Valid entries range from 30 to 600 pixels per inch. The default is 300.</p> <p>Keep in mind that the higher the resolution and color depth, the longer it will take to create output. For example, changing the resolution from 300 DPI to 150 DPI makes the output four times smaller.</p> <p>Again, the larger the bitmap, the slower the processing.</p>
Fonts	<p>(Optional) Use this option to specify the supported fonts you intend to use, in order. For example, if you set the Fonts option to <i>PCL,TTF</i>, the Bitmap Print Driver first locates the PCL font. If the PCL font does not exist, it finds the TTF font.</p> <p>The default font order is: PCL, AFP, XER, TTF, PS.</p>

## CHOOSING THE RIGHT FONTS

When TrueType (TTF) and PostScript (PS) font types are used, the Bitmap Print Driver loads the INI file and looks for the DefLib option in the FMRes control group. The path you specified in the DefLib option tells the Bitmap Print Driver where to locate CODEPAGE.INI file. By default, the path is set to...

```
..\fmres\deflib
```

The CODEPAGE.INI file includes some of the default character sets. Other required files include:

Character set	Description
IF.CFG	Intellifont Configuration file (not required with version 9.5 and later)
IF.FNT	Intellifont Typeface Index file
UIF.SS	Intellifont Symbol Set file
UMT.SS	MicroType Symbol Set file
UTT.SS	TrueType Symbol Set file
PLUGIN.TYQ	Intellifont Plug-in and Typeface Library file
PLUGIN.TTF	TrueType Plug-in and Typeface Library file

When you install the system, these files are part of the TrueType font installation in the same directory as specified by DefLib option of the FMRes control group.

When converting text strings, Intellifont (PostScript) or TrueType fonts are required (they have a file extension PFB or TTF). Intellifont and TrueType font files must be installed in the font library. If a required font file is not located, a platform error occurs (only once for the same font error) and the conversion is not performed.

The font information comes from FXR file specified by XRFFile option in the Config control group.

---

**NOTE:** You can use Font Manager or the Fonts option in Studio to open the FXR file and edit a selected font.

---

The Char Set ID (Character Set ID) field denotes the symbol set. It is used by the AGFA library (UFST) to associate code points with characters in both PostScript and TrueType fonts. The default symbol set is *W1* but you can change it using the DefaultSymSet option in the PrtType:BMP control group. Other symbol sets are listed here:

Code	Description	Code	Description
DN	ISO 60: Danish/Norwegian	DT	Desktop
E1	ISO 8859/1: Latin 1	E2	ISO 8859/1: Latin 2
E5	ISO 8859/1: Latin 5	FR	ISO 69: French
GR	ISO 21: German	IT	ISO 15: Italian

Code	Description	Code	Description
LG	legal	M8	Math-8
MC	Macintosh	MS	PS Math
PB	Microsoft Publishing	PC	PC-8 code page 437
PD	PC-8 D/N, code page 437N	PE	PC-852 Latin 2
PI	PI font	PM	PC-850 Multilingual
PT	PC-8 TK, code page 437T	R8	Roman-8
SP	ISO 17: Spanish	SW	ISO 11: Swedish
TS	PS text	UK	ISO 4: United Kingdom
US	ISO 6: ASCII	VI	Ventura International
VM	Ventura Math	VU	Ventura US
W1	Window 3.1 Latin 1	WD	Symbol fonts
WE	Window 3.1 Latin 2	WO	Window 3.0 Latin 1
WT	Window 3.1 Latin 5		

Other fonts like PCL, Monotype (AFP), and XER fonts are also supported but the installation is simpler. The FMRes control group and DefaultSymSet option are not required so the supporting files for TrueType (TTF) and PostScript (PS) are not needed.

The Bitmap Print Driver can convert all FAP objects into bitmaps, such as bar codes, boxes, charts, lines, graphics, shades, text areas, text labels, variable fields, vectors, and so on.

---

**NOTE:** If there is an error, review the error information in the trace file.

---

## WORKING WITH COLOR

The bits-per-pixel of a page bitmap may be 1-bit, 8-bit, or 24-bit, depending on the objects on the page. For instance...

If	The bitmap will be
All objects are the same color	A 1-bit single color or BW (black and white)
Objects are single colors or use the orthogonal color palette	An 8-bit bitmap based on the orthogonal color palette
The bitmap is from a 24-bit graphic	A 24-bit true color bitmap

If you set the SendColor option to No or uncheck the corresponding field on the Print window the output will be in black and white. If you set the GrayShades option to Yes, 8-bit color bitmaps and 24-bit true color bitmaps are printed in 256 shades of gray.

Be aware that when converted to a bitmap, an object must have a color selection and the Print in Color option should be checked. Otherwise, it will print in black and white – unless you use the ForcePrintInColor option.

## FORCING COLOR OUTPUT

You can tell the Bitmap Print Driver to create color output regardless of the object's Print in Color property setting and the print driver's SendColor option setting. To do this, include the ForcePrintInColor option:

```
< PrtType:BPD >  
ForcePrintInColor = Yes
```

Option	Description
ForcePrintInColor	Enter Yes if you want all objects on the form set to print in their default colors. The default (No) tells the system that the object's Print in Color property setting and the print driver's SendColor option determine if the object prints in color. This affects text labels, text areas, text fields, boxes, lines, bar codes, charts, shaded areas, graphics, vectors, and so on.

## HANDLING MULTIPLE PAGE FORM SETS

The Bitmap Print Driver can produce bitmap files, typically in TIFF format, for each page of a form set or for the form set as a whole. Depending on the application you are using, you may need to set the INI options to produce the output you want.

### FOR DOCUMAKER STUDIO, DOCUMAKER WORKSTATION, AND DOCUCREATE

For Documaker Studio, Documaker Workstation, and Docucreate, there are two ways to process a form set that contains multiple pages. You can create...

- One TIFF file for each page of the form set
- One TIFF file that contains the entire form set

Creating a TIFF file for  
each page of a form set

If you set the `BmpType` option in the `PrtType:BMP` control group to `TIF`, the Bitmap Print Driver creates a TIFF file for each page of the form set. For instance, if the form set consists of four pages, you would get four TIFF files. For reference, here is an example of the INI options you need to create a TIFF file for each page of the form set:

```
< LogoUnloader:TIF >
  Desc   = Tiff file
  Ext    = .TIF
  Func   = LOGUnloadTifFile
  Module = LOGW32.DLL
```

Option	Description
Desc	Enter a description. The default is <i>Tiff file</i> .
Ext	Enter an extension for the output file. The default is <i>.TIF</i> .
Func	Enter <b>LOGUnloadTifFile</b> .
Module	Enter <b>LOGW32.DLL</b> .

**NOTE:** If you use the default unloader name, in this case `LogoUnloader:TIF`, the system provides the defaults shown above.

Creating a single TIFF file  
for each form set

If you set the `BmpType` option in the `PrtType:BMP` control group to `MTIF`, the Bitmap Print Driver creates a single TIFF file for each multi-page form set. For example, if the form set consists of four pages, you would get one TIFF file. For reference, here is an example of the INI options you need to create a multi-page TIFF file for a form set:

```
< LogoUnloader:MTIF >
  Desc   = Multipage Tiff file
  Ext    = .TIF
  Func   = LOGUnloadMultiTifFiles
  Module = LOGW32.DLL
```

Option	Description
Desc	Enter a description. The default is <i>Multipage Tiff file</i> .
Ext	Enter an extension for the output file. The default is <i>.TIF</i> .
Func	Enter <b>LOGUnloadMultiTifFiles</b> .
Module	Enter <b>LOGW32.DLL</b> .

---

**NOTE:** If you use the default unloader name, in this case *LogoUnloader:MTIF*, the system provides the defaults shown above.

---

In addition, make sure the options in bold are set similar to those shown here:

```

< PrtType:BMP >
  BMPTType      = MTIF
  Module        = BPDW32
  PrintFunc     = BPDPrint
  Device       = D:\print\
  SendColor     = Yes, Enabled
  Resolution    = 300
  Fonts         = PCL, TTF, PS, AFP, XER
< Printers >
  PrtType       = BMP

```

The entry for the BMPTType option must reflect the name of the LogoUnloader control group, in this case *MTIF*.

If you want to use a different name for the TIFF unloader, you must register it as a new TIFF unloader. For example, if you choose to use *MTF* to represent the multi-page TIFF unloader, you need to register it as shown here:

```

< LogoUnloaders >
  LogoUnloader  = MTF
< LogoUnloader:MTF >
  Desc          = Multi-page TIFF file
  Ext           = .TIF
  Func         = LOGUnloadMultiTifFiles
  Module       = LOGW32.DLL
< PrtType:BMP >
  BMPTType     = MTF
...

```

---

**NOTE:** Please note that this applies to all unloaders.

---



Be sure to specify a location in the Device option where you want the Bitmap Printer Driver to send the output. If you leave this option blank or NULL, the system defaults to the current location.

---

**NOTE:** The other INI options are discussed in [Setting Up Your INI Files on page 3](#).

---

## FOR DOCUMAKER

When using the Bitmap Print Driver with Documaker, you need to set up your system to produce one TIFF file that contains the entire form set. See [Creating a single TIFF file for each form set on page 13](#) for a discussion of these options.

---

**NOTE:** When you run Documaker, there is always a file name passed in so the Bitmap Print Driver driver does not generate a file name for each per page based on the page number. Instead, it tries to write to the same file again and again and you end up with only the last page because the previous pages were overwritten.

---

In addition, for Documaker the following control groups and callback function must be present to create multi-page TIFF files in a batch environment:

### Generating file names

If you are using multi-step or single-step processing and you want to generate 8- or 16 byte file names, include these options:

```
< Print >
  CallbackFunc   = MultiFilePrint
  MultiFileLog   = data\datlog.dat
```

See the discussion of the Port option in [Documaker INI Options on page 7](#) for additional information on the setup you need to produce multi-page TIFF files. For example, if the Port option is set as shown here:

```
< Printer1 >
  Port = BPDBat1.tif
```

The first file name generated will be *BPDBat1.tif*. The second and subsequent file names will be based on the first four bytes of your entry for the Port option plus a 4-byte sequence number – *BPDB0002*, *BPDB0003*, and so on.

To avoid overwriting files, if you are using single-step processing and the single page tiff or other bitmap unloader, set all of the Port options to the same four characters, as discussed in [Documaker INI Options on page 7](#). Here is an example:

```
< Printer1 >
  Port = DATA\~TMP.TIF
```

For the first transaction, the first file name generated will be:

```
~Tmp.tif
```

Subsequent file names will look like this:

```
~Tmp00000002.tif
~Tmp00000003.tif
```

and so on. For the second and subsequent transactions, the system generates names similar to these:

```
~Tmp0002.tif
~Tmp000200000002.tif
~Tmp000200000003.tif
...
~Tmp0003.tif
~Tmp000300000002.tif
~Tmp000300000003.tif
```

...

---

**NOTE:** You cannot produce single page TIFF files on z/OS because of the long file name requirements.

---

### Generating unique file names

If you are using single-step processing and you want to generate unique file names, include these options:

```
< PrintFormSet >
  MultiFilePrint = Yes
  MultiFileLog   = data\datlog.dat
```

You can use the PrintFormSet control group to produce a 46-byte unique output file name. This is typically preferred by Docupresentation processing. When you use the PrintFormSet control group to turn off the callback function to avoid confusion. See the Docupresentation documentation for more information.

For example, using options set up as shown here:

```
< PrtType:BPD >
  BmpType      = TIF
...
< Printer >
  PrtType      = BPD
< Printer1 >
  Port         = DATA\BMPBAT1.TIF
...
< PrintFormSet >
  MultiFilePrint = Yes
  MultiFileLog   = data\datlog.dat
```

The Bitmap Print Driver will generate unique file names similar to these:

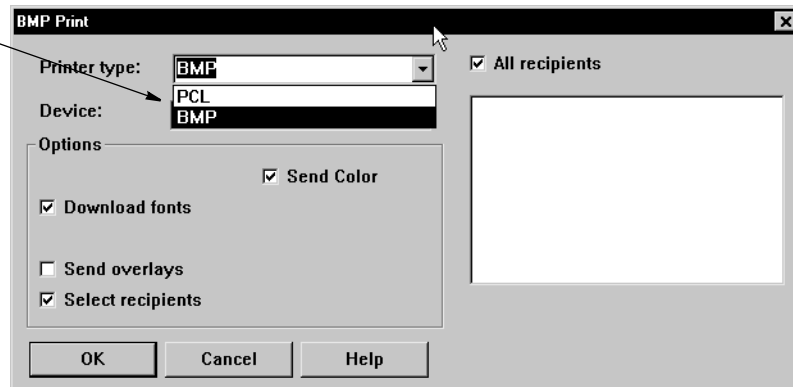
```
0zelzqDAmW8VnbnYZYSUkoeMt492V-iWeDOCGm9Dd7K5x.TIF
0zA3XvAkGr0VyoVQ1hwBPFV-OsAUc-uFZFIFwORGjLmTg.TIF
0y1x9_kotjF6--_xOfzx0-Ecu-kxnw-KzACdzpjbhBJ1P.TIF
0y1x9_kotjF6--_xOfzx0-Ecu-kxnw-KzACdzpjbhBJ1P00000002.TIF
0y1x9_kotjF6--_xOfzx0-Ecu-kxnw-KzACdzpjbhBJ1P00000003.TIF
0xBUheR9U5nI6kxsiyg_41ld4imtj7BV2ygt2riLWRs9X.TIF
0WBYZ5U3Cq1i3weBZYwJ9b13zngcYzwhzxkmu9xCiB1fk.TIF
0WBYZ5U3Cq1i3weBZYwJ9b13zngcYzwhzxkmu9xCiB1fk00000002.TIF
```

## SELECTING THE BITMAP PRINT DRIVER

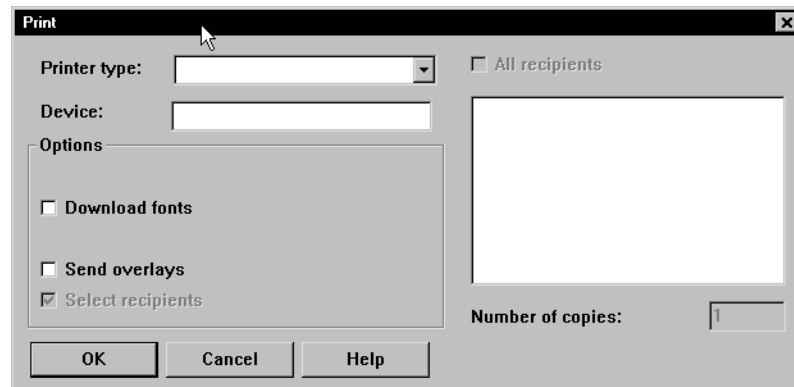
Selecting the Bitmap Print Driver is just like selecting any other print driver once you have installed the driver and set up the necessary INI options. The steps vary slightly, depending on the application you are using.

For instance, with Documaker Workstation, you simply open the form set you want to print then choose the Print option from the File menu.

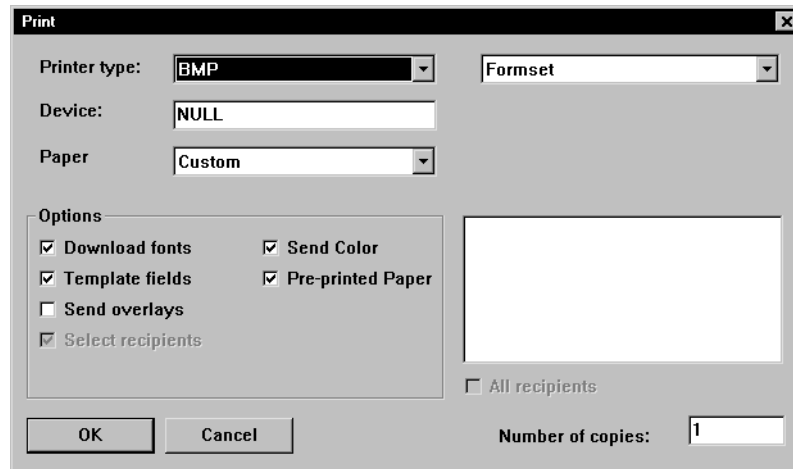
Select BMP as the printer type and enter NULL in the Device field.



From Image Editor, the steps are the same. Here is an example of the Print window:



From Documaker Studio the steps are basically the same, you open the form set or section (FAP file) you want to print and choose File, Print. Here is an example of the Print window:



For Documaker, you simply set up the INI options. The following option tells the GenPrint program which printer driver to use:

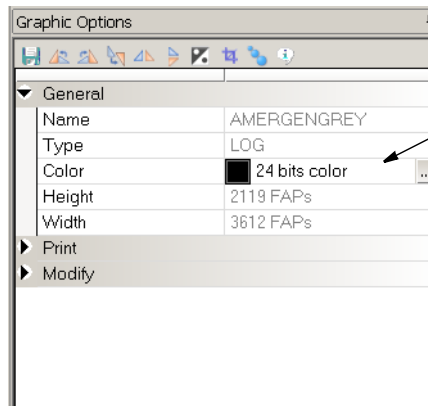
```
< Printer >
  PrtType      = BMP
```

For more information, see [Setting Up Your INI Files on page 3](#).

## ADDITIONAL CONSIDERATIONS

Keep in mind...

- The Bitmap Print Driver can produce 1-bit, 8-bit, and 24-bit bitmaps. The number of bits per pixel generated is based on the highest number of bits used. For example, if the page includes a 1-bit bitmap, an 8-bit bitmap, and a 24-bit bitmap, the Bitmap Print Driver will produce a 24-bit bitmap of the page.
- You can use Graphics manager in Documaker Studio to find out the type of color bitmap you have.



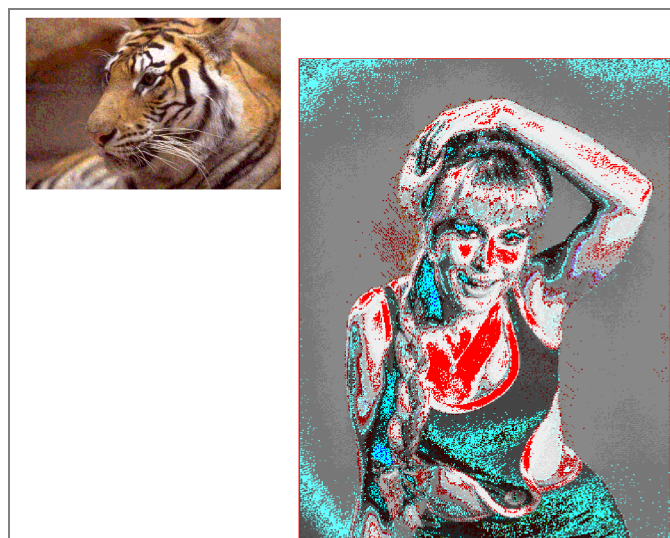
Studio shows you the type of color bitmap you have in the graphics' Color field

---

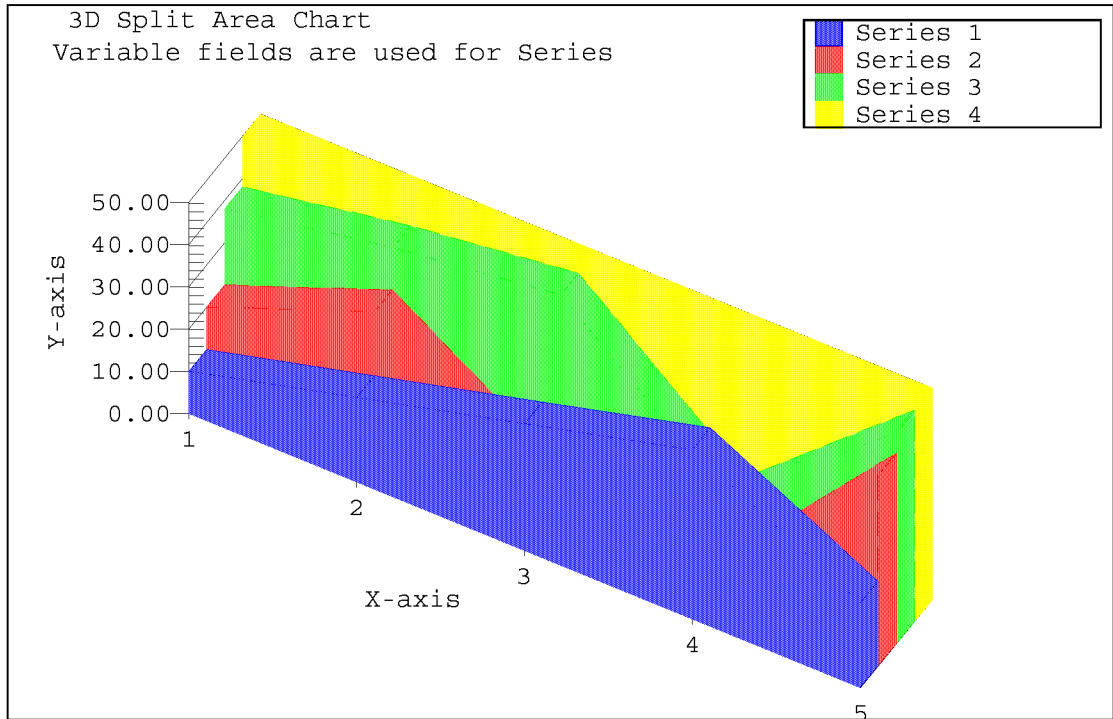
**NOTE:** Other Oracle Insurance print drivers may accept bitmaps which are not 1-bit or 24-bit graphics and produce different results.

---

- If the page includes two 8-bit color bitmaps with different color palettes, the color palette of the first 8-bit bitmap encountered is used as the base color palette. This can cause the second 8-bit bitmap to look different from its original color. Here is an example:



- If a page has more than one color, such as a color chart, the Bitmap Print Driver creates a single 8-bit bitmap. Here is an example:







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