

Oracle Reports 10g Setup

Network printing (from Oracle Forms dedicated printers)

IBM AIX

Prépared by : Hafed BENTEFTIFA

**November 2008
Version : 1.0**

Preamble

A major problem when using Oracle reports 10g with Forms 10g is direct printing. In modern environments, printers are most of the time TCP/IP enabled and are visible within the corporate network. Users accustomed to printing their reports from an oracle application in a C/S environment, will want to keep the same functionality in an Oracle 10g web environment.

Given that a number of applications are migrated to UNIX given the stability of the platform, it was assumed that setting up oracle reports would be straightforward. Unfortunately, this is not the case and a thorough search on OTN and other specialized websites, show that implementing direct printing results in costly problems.

In this report, we outline some setup steps and a scenario for setting up direct printing using oracle forms and reports 10g on IBM AIX.

We assume that the application server is already installed and a report server instance is already created.

Installation

Version française

- 1) Modifier uiprint.txt et inclure les destinations imprimantes
- 2) Modifier uifonts.ali et spécialement la section PDF section pour Arial et Courier
- 3) Placer les fichiers AFM des polices Arial et Courier dans le répertoire AFM
- 3) Placer les ppd de chaque imprimante destination dans le répertoire PPD
- 4) Vérifier le script vdmlp (si vous en utilisez un)
- 5) Vérifier le fichier de config de votre instance report (voir les variables additionnelles)
- 5) Redémarrer le serveur reports (ou seulement votre instance)

Vérification et contrôle

- 1) Vérifier que les fichiers sont ASCII pur là où c'est requis(od -a filename |grep cr)
- 2) Vérifier les permissions sur les fichiers owner/group (ls et puis chown)
- 3) Vérifier que les noms de fichiers sont exacts et ne contiennent pas de caractères superflus.

English version

- 1) Modify uiprint.txt and include all the printer destinations.
- 2) Modify uifonts.ali, especially the PDF section for Arial and Courier
- 3) Place the AFM files for Arial and Courier in the AFM folder
- 3) Place the ppds for each printer destination in the PPD folder
- 4) Check the vdmpl script (if you use one)
- 5) Check the config file for your report instance (see the additional variables)
- 5) Restart your report server (or your own instance)

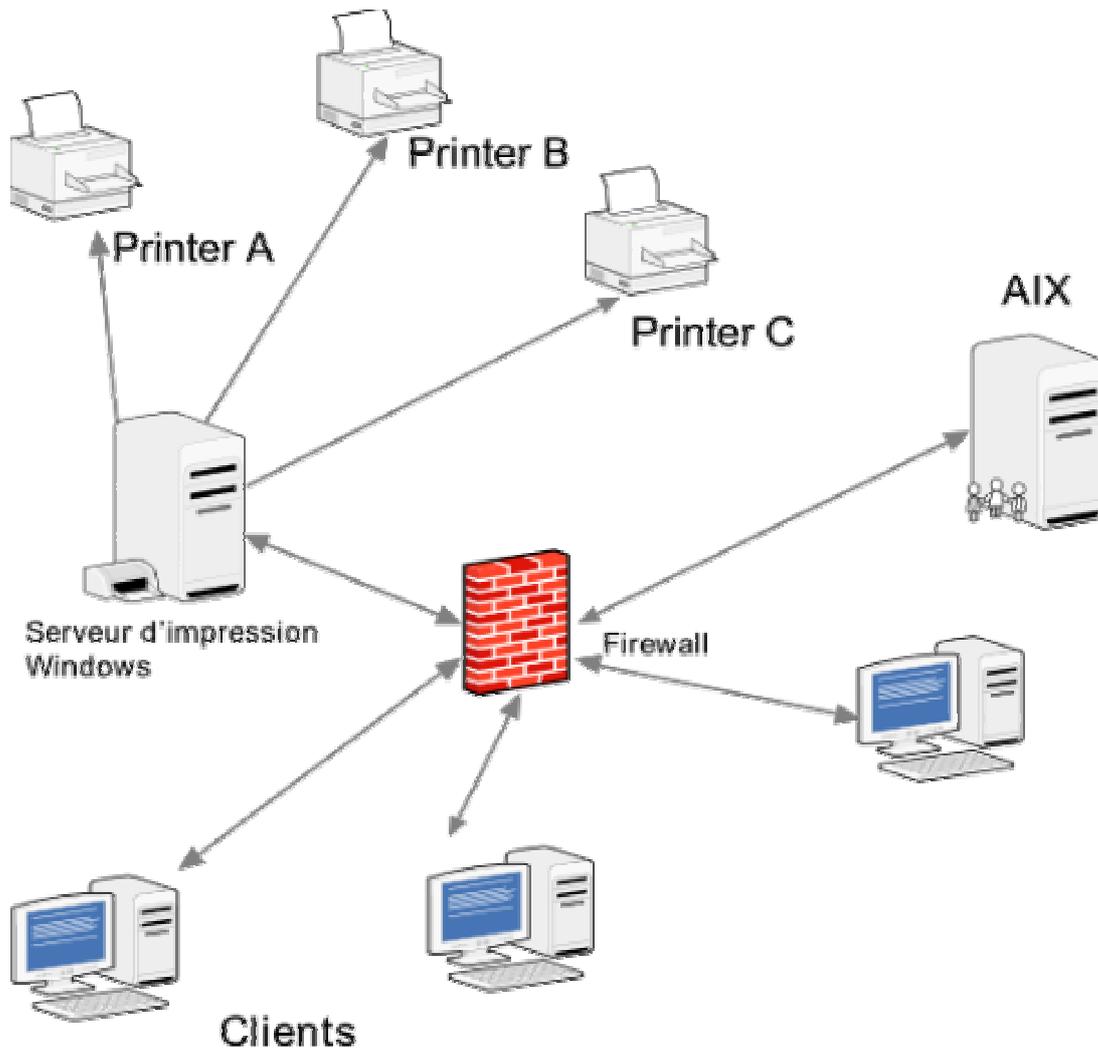
Required checks

- 4) Make sure that the files are ASCII whenever required (`od -a filename | grep cr`)
- 5) Make sure that the files are for the right owner/group (`ls` and then `chown`)
- 6) Make sure that the filenames are spelled out right with no extra characters

Example

A practical implementation of the above is explained in the following scenario.

Our application needs to output several reports to a number of printers. We have 3 physical printers located in 3 different places. These are the latest models and have several features such as paper tray selection, duplex printing, font selection etc.



Constraints

Printer A: located on the 2nd Floor in building I, brand is HP and reference is HP Laserjet 4250

Printer B: located in building II, brand is HP and reference is HP Laserjet 4350

Printer C: located on the 4th floor in building II, brand is Lexmark and reference is T620.

Report server is installed on AIX machine ver 5.3

Because of some requirements beyond our control, printers can not be installed on AIX and as such we were asked to forward any printing to a windows print server where the printers were installed using the Windows drivers.

Printing requirements are as follows :

- Some jobs sent to Printer A need to be printed in Duplex using page size Letter
- Some jobs sent to Printer A need to be printed on one side only using page size Letter
- Some jobs sent to Printer A need to be printed on one side only using page size Legal
- Some jobs sent to Printer B need to be printed on one side only using tray 1 with page size letter
- Some jobs sent to Printer B need to be printed Duplex using page size Legal
- Jobs sent to Printer C need to be printed on one side only using page size A4

The solution that was selected is to create 6 ppds (postscript printer definitions).

We ask the Unix Admin to create 6 printer queues with the following names:

```
Duplex_lpa_letter  
Sgl_lpa_letter  
Sgl_lpa_legal  
Sgltly1_lpb_letter  
Duplex_lpb_legal  
Sgl_lpc_a4
```

Each queue is referenced in `/etc/qconfig` with the right host and remote queue corresponding to the windows printserver queues.

To simplify, the window admin was asked to create the queues on windows (`winprintserverRef`) using the printer name with the suffix PS. Hence, on windows, we will have the following queues:

```
printerA_PS  
printerB_PS  
printerC_PS
```

A sample entry from the `qconfig` file on AIX is shown below :

```
duplex_lpa_letter:  
  device = @winprintserverRef  
  up = TRUE  
  host = winprintserverRef.mycorp.com  
  s_statfilter = /usr/lib/lpd/bsdshort  
  l_statfilter = /usr/lib/lpd/bsdlong  
  rq = printerA_PS
```

Once the queues on both AIX and windows are defined, we need to create or modify the ppds.

We assume we already downloaded the driver packages from the manufacturer's websites. In our case, we have HP and Lexmark printers. Please note that we are not required to install the printers on AIX. We only need the PPD files.

These are the names we have selected for our ppds:

hp4250.ppd
hp4350.ppd
lexmarkt620.ppd

It is important to rename the files to names that do not contain any special characters, especially the hyphen.

Because we need to associate each ppd to an AIX queue, we will create six (06) files.

Printer	Printer queue	PPD file
Printer A: HP 4250	duplex_lpa_letter	hp4250dll.ppd
Printer A: HP 4250	sgl_lpa_letter	hp4250slt.ppd
Printer A: HP 4250	sgl_lpa_legal	hp4250slg.ppd
Printer B: HP 4350	sglty1_lpb_letter	hp4350syl.ppd
Printer B: HP 4350	duplex_lpb_legal	hp4350dlg.ppd
Printer C: Lexmark T620	sgl_lpc_a4	lex620sla.ppd

Copy hp4250.ppd to create hp4250dll.ppd, hp4250slt.ppd and hp4250slg.ppd

Copy hp4350.ppd to create hp4350syl.ppd and hp4350dlg.ppd

Copy lexmarkt620.ppd to create lex620sla.ppd

The step that follows is the most important for our setup. We will customize each ppd file in order to include the special requirements. This step will be done on AIX.

Example 1: Some jobs sent to Printer A need to be printed in Duplex using page size Letter

Open hp4250dll.ppd

Search for the line that begins with:

*DefaultDuplex:

This line indicates the default option for printing duplex on Printer A. If you find None, it means that the printer will print only on one side by default. Since we need to have the duplex requirements, then we need to see the option to one of the following:

DuplexNoTumble or DuplexTumble. In most cases, these are the only options. You can find out about the available options by scrolling 3 or 4 lines down from the current line.

In your case, you need to change the line:

From: *DefaultDuplex: None

To: *DefaultDuplex: DuplexNoTumble

We need also to make sure that by default we print on Letter size. In most cases, the default is already set to Letter but your current ppd might have it set to A4 for example.

In this case, we will search for the following:

*DefaultPageSize:

*DefaultPageRegion:

*DefaultImageableArea:

*DefaultPaperDimension:

We will check the word following each and it should say Letter. For example, if you find:

*DefaultPageSize: A4

*DefaultPageRegion: A4

*DefaultImageableArea: A4

*DefaultPaperDimension: A4

Then you need to change each line in order to obtain:

*DefaultPageSize: Letter

*DefaultPageRegion: Letter

*DefaultImageableArea: Letter

*DefaultPaperDimension: Letter

Then, save hp4250dll.ppd

Example 2: Some jobs sent to Printer B need to be printed on one side only using tray 1 with page size letter

Open hp4350syl.ppd

Search for the line that begins with:

*DefaultDuplex:

Make sure it is set to:

*DefaultDuplex: None

In order to print from tray 1, we will search for *DefaultInputSlot:

And set it to Tray1.

*DefaultInputSlot: Tray1

We need also to make sure that by default we print on Letter size. In this case, we will search for the following:

*DefaultPageSize:

*DefaultPageRegion:

```
*DefaultImageableArea:  
*DefaultPaperDimension:
```

and make sure it is set to:

```
*DefaultPageSize: Letter  
*DefaultPageRegion: Letter  
*DefaultImageableArea: Letter  
*DefaultPaperDimension: Letter
```

Once you are done with these modifications, save hp4350syl.ppd

The same modifications can be done to each ppd file to reflect the printing requirements. The next step will outline the configuration that needs to be performed on report server.

Here, open the file `uiprint.txt`. Please bear in mind this is an important file that will be used to obtain the required information in order to dispatch printing jobs to selected printers.

Add the following lines:

```
Not_A_Printer:PostScript:2:default config PDF:screenprinter.ppd:  
Duplex_lpa_letter:PostScript:2:Printer HP4250 2nd Floor in building I:hp4250dll.ppd:  
Sgl_lpa_letter:PostScript:2: Printer HP4250 2nd Floor in building I: hp4250slt.ppd:  
Sgl_lpa_legal:PostScript:2: Printer HP4250 2nd Floor in building I:hp4250slg.ppd:  
Sgltl1_lpb_letter:PostScript:2:Printer HP4350 building II:hp4350syl.ppd:  
Duplex_lpb_legal:PostScript:2:Printer HP4350 building II:hp4350dlg.ppd:  
Sgl_lpc_a4:PostScript:2:Printer Lexmark T620 4th floor building II :lex620sla.ppd:
```

Here it is important to separate the fields on each line with the colon `:` and end the line with `:`

Once this step is completed, reboot your report server instance to make the changes effective.

Troubleshooting

- If you can't find a ppd corresponding to your printer, use `screenprinter.ppd` or `default.ppd` because not all of the information in the ppd file is used.
- Even you don't have an entry in `uiprint.txt` for your printer, reports will print to the destination you specified. The ppd file used in this case will be `screenprinter.ppd`
- Make sure to test your file for `^M` (`od -a filename | grep cr` and it should not give you anything in output)
- Unless you make changes to your `.conf` file and/or `uiprint.txt`, you won't need to reboot your report instance
- Check the reports cache and open the document there in order to check for useful info. For example, you can check which ppd was used to generate the postscript file.
- If Oracle reports does not output the correct document, you can try to print from the command line. Use something like `lp -dyourqueuedprinter`

-Last but not least, UNIX is case sensitive and you should ideally use small case for all your filenames.