

Customer Tips

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... for the user

AIX PCL Printing

Purpose

The Xerox AIX print driver uses Postscript (instead of PCL) for print formatting. This document describes a method to create a print queue in AIX (version 4.x and above), to use instead of the Xerox AIX PS print driver. This document does not apply to versions below AIX 4.x. It also includes an optional method to configure the print queue that provides PCL and/or PDL commands for print formatting

Creating a New Print Queue

Start the **smit** administration tool in AIX. For a remote telnet session, use **smitty**.

1. Select **Print Spooling**.



This document applies to these **Xerox** products:

x	WC Pro C2128/C2636/C3545
x	WC Pro 165/175
x	WC M165/M175
x	WC Pro 32/40 Color
x	WC Pro 65/75/90
x	WC Pro 35/45/55
x	WC M35/M45/M55
x	DC 555/545/535
x	DC 490/480/470/460
x	DC 440/432/425/420
x	DC 332/340
x	DC 265/255/240
x	DC 220/230
	DCCS 50

2. Select **Add a print queue**.

```
 aix - PuTTY                                     Print Spooling
Move cursor to desired item and press Enter.

Start a Print Job
Manage Print Jobs
List All Print Queues
Manage Print Queues
Add a Print Queue
Add an Additional Printer to an Existing Print Queue
Change / Show Print Queue Characteristics
Change / Show Printer Connection Characteristics
Remove a Print Queue
Manage Print Server
Programming Tools
```

3. For type of connection, select **remote**.

```
 aix - PuTTY                                     Print Spooling
Move cursor to desired item and press Enter.

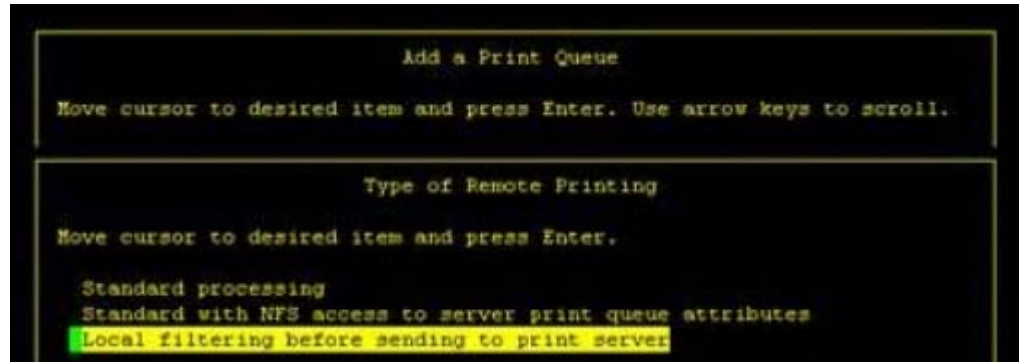
Start a Print Job
Manage Print Jobs
List All Print Queues
Manage Print Queues
Add a Print Queue
Add an Additional Printer to an Existing Print Queue
Change / Show Print Queue Characteristics
Change / Show Printer Connection Characteristics
Remove a Print Queue
Manage Print Server
Programming Tools

Add a Print Queue
Move cursor to desired item and press Enter. Use arrow keys to scroll.

# ATTACHMENT TYPE      DESCRIPTION
local                  Printer Attached to Local Host
remote                 Printer Attached to Remote Host
xstation               Printer Attached to Xstation
ascii                  Printer Attached to ASCII Terminal
hpJetDirect            Network Printer (HP JetDirect)
file                   File (in /dev directory)
other                  User Defined Backend
```

- If the AIX application or client is already producing PCL or Postscript print ready files select **Standard Processing**, then skip to step 6.

If the AIX application or client requires print formatting, select **Local filtering**, then **hplj-5si**.



- Arrow down to **PCL Emulation** and enter a new queue name (you don't have to use lp).
- Arrow down to **Hostname of Remote Server**, and enter the ip address or the hostname of the printer.
- Enter **lp** for the name of the **Remote Queue**.
- For **Type of Print Spooler on remote Server**, change from the default (AIX) to **BSD**. If the selection is not there, press **F4** to get the choices.
- If you chose **Local filtering** in Step 4, set the choice for **Send Pass Through Flag** to **No**.



- Press **Enter** to accept the values and create the new print queue.

Testing the Print Queue

Test the new print queue by printing a text file using the lp or enq command. For example, to print the hosts file, use either of the following commands, substituting the name of the queue from Step 5 in the previous procedure for "qname":

lp -dqname /etc/hosts

enq -Pqname /etc/hosts

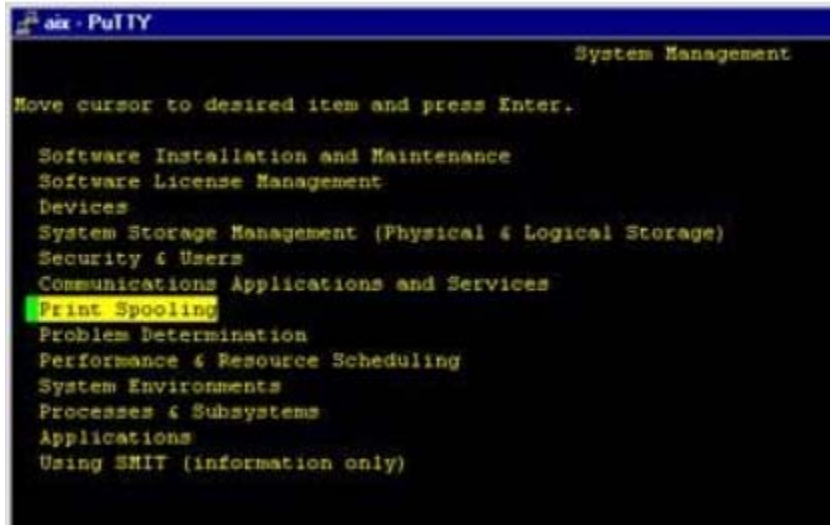
Modifying the Print Queue to Add New Features

You can add new escape codes to provide additional functions. We recommend the following two sources for PCL escape codes:

- PCL 5 Printer Language *Technical Reference Manual* (from Hewlett Packard).
- The Xerox Customer Tip's PDL reference guides. The following procedure requires information from one of these documents.

To change the print queue attributes:

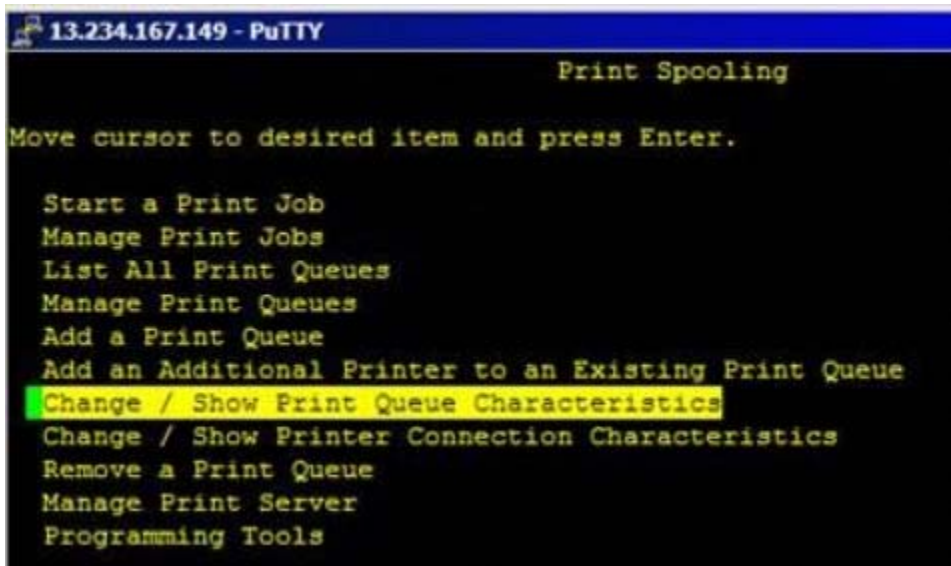
1. Choose **Print Spooling** in **smit**.



```
air - PuTTY                                     System Management
Move cursor to desired item and press Enter.

Software Installation and Maintenance
Software License Management
Devices
System Storage Management (Physical & Logical Storage)
Security & Users
Communications Applications and Services
Print Spooling
Problem Determination
Performance & Resource Scheduling
System Environments
Processes & Subsystems
Applications
Using SMIT (information only)
```

2. Select **Change / Show Print Queue Characteristics**



```
13.234.167.149 - PuTTY                           Print Spooling
Move cursor to desired item and press Enter.

Start a Print Job
Manage Print Jobs
List All Print Queues
Manage Print Queues
Add a Print Queue
Add an Additional Printer to an Existing Print Queue
Change / Show Print Queue Characteristics
Change / Show Printer Connection Characteristics
Remove a Print Queue
Manage Print Server
Programming Tools
```

3. Enter the print queue name.

```
13.234.167.149 - PuTTY
Print Queue to Change / Show

Type or select a value for the entry field.
Press Enter AFTER making all desired changes.

[Entry Fields]
* PRINT QUEUE name [new_queue]
```

4. Choose Default Print Job Attributes

```
13.234.167.149 - PuTTY
Print Queue to Change / Show

Type or select a value for the entry field.
Press Enter AFTER making all desired changes.

[Entry Fields]
* PRINT QUEUE name [new_queue]

Characteristic to Change / Show

Move cursor to desired item and press Enter.

1 Printer Setup
2 Default Print Job Attributes
3 Accounting File
4 Queuing Discipline
```

- On this screen, you may change typestyle, pitch, and orientation.

```

13.234.167.149 - PuTTY
Change / Show Default Print Job Attributes

Type or select values in entry fields.
Press Enter AFTER making all desired changes.

[TOP]                                     [Entry Fields]
Print queue name                          new_queue1
Printer name                               hp@snoopy

----- Text Print Options -----
TYPESTYLE and PITCH                       courier 17
Print QUALITY                              300

----- Job Processing Options -----
PAGE NUMBER where printing should begin    [1]
Print file TYPE                            a
Pre-processing FILTER NAME                 []
INITIALIZE printer?                        full initialization
RESTORE printer?                           yes
[MORE...25]

```

- To make other changes to the print queue for example, to change attributes that address the differences between native AIX tray calls and Xerox tray calls, exit smit and enter **lsvirprt** at a shell prompt.

```

aix - PuTTY
# lsvirprt

```

- A list of print queues are displayed. Enter the number that corresponds to the print queue you need to change.

```

aix - PuTTY

```

No.	Queue	Device	Description
1	Elmo	@13	generic (PCL Emulation)
2	Fred	@13	generic (PCL Emulation)
3	PD	@13	generic (PCL Emulation)
4	arturo	@elmoq	generic (PCL Emulation)
5	gars_emu	@gars	generic (PCL Emulation)
6	gars_hp	@gars	hplj-4si (PCL)
7	holly	@holly	generic (PCL Emulation)
8	new_queue	@snoopy	hplj-5si (PCL)
9	oak_rem	@13	VCP90
10	oscar2	@13	generic (PCL Emulation)
11	oscarNF	@13	OSCAR NO FILTER
12	pebb	@pebbles	test
13	pebbles_pci	@13	generic (PCL Emulation)
14	pebbles_rem	@pebbles	Remote Printer
15	pebbles_rq	@pebbles	generic (PCL Emulation)
16	pebblesqx		
17	pine_emu	@pine	generic (PCL Emulation)
18	poppy_net	hp@13.234.167.167	generic (PCL Emulation)
19	snoop	@pebbles	test
20	snoopy_ps	@snoopy	generic (PostScript)
21	spruce_emu	@spruce	generic (PCL Emulation)
22	tray	@aix	Remote Printer
23	tray_oall	@gars	hplj-5si (PCL)
24	wile_emu	@wile	generic (PCL Emulation)

```

Enter number from list above (press Enter to terminate): -> 8

```

- On the next screen, enter the command `ci~v` to access the vi editor.

```

aia - PuTTY
new queue      @snoopy hplj-5si (PCL)
To LIST attributes, enter AttributeName1 ... (* for all attributes)
To CHANGE an attribute value, enter AttributeName=NewValue
To FORMAT and EDIT an attribute value, enter AttributeName~v
To EDIT the attribute file, enter ~v
To terminate, press Enter: ci~v

```

- Refer to the PDL guide for your Xerox model of multifunction device to find the PCL escape sequences for the paper trays. Open a new line just above the last line `<END>`. Input PCL escape sequences enclosed in single quotes. Enter **Ctrl-v** `esc` to insert the escape character within vi. After editing, **write** and **quit** vi.

```

aia - PuTTY
Command To Initialize the Printer
ci = \I[pU]\?G_)\(2)\= \t\Ipl\te\I[pR,pO,pL,eR,eP,ci,eT,eS,eO,ct,eF,eu,es,eC]:
\IpU      INCLUDE: (Reset command)
\?        <IF>
\G_       PUSH: (INITIALIZE printer?)
\ (2)     PUSH: (Integer Constant 2)
\ =       PUSH: {pop2 = pop1 ?}
\ t       <THEN>
\Ipl      INCLUDE: (Command to set printer language)
\ e       <ELSE>
\IpR      INCLUDE: (Command to set printer resolution )
\IpO      INCLUDE: (command to set output bin destination)
\IpL      INCLUDE: (Command to set printer language)
\IeR      INCLUDE: (PCL Reset)
\IeP      INCLUDE: (Select pitch - default is 10)
\Ici      INCLUDE: (Select the Roman-8 symbol set)
\IeT      INCLUDE: (Set Typeface/style/weight)
\IeS      INCLUDE: (Set Duplex/Simplex Mode)
\IeO      INCLUDE: (Specify the page orientation)
\Ict      INCLUDE: (Set line termination mode)
\Ief      INCLUDE: (Select font if specified)
\Ieu      INCLUDE: (Generate the paper source escape sequence)
\Ies      INCLUDE: (Set Page Size)
\IeC      INCLUDE: (Set the vertical line spacing (VMI))
'^[416A^[410H'
\ :       <END>

```

- If `@PJL` Comments are required, enter the command `pU~v`.

```

13.234.167.149 - PuTTY
new queue1     hp@snoopy hplj-5si (PCL)
To LIST attributes, enter AttributeName1 ... (* for all attributes)
To CHANGE an attribute value, enter AttributeName=NewValue
To FORMAT and EDIT an attribute value, enter AttributeName~v
To EDIT the attribute file, enter ~v
To terminate, press Enter: pU~v

```

11. The following screen appears.

```
13.234.167.149 - PuTTY
Reset command
pU = \33\n-12345X

'\33'
\n          -> OUTPUT
'-12345X'
```

12. Add to the last line. Enter the entire string on one line enclosed by single quotes (see the following example). Use \012 to create a new line in the output. Refer to the PCL section of the PDL reference guide for the PJL command syntax.

```
13.234.167.149 - PuTTY
Reset command
pU = \33\n-12345X@PJL COMMENT\012@PJL COMMENT XRXbegin\012@PJL COMMENT OID_ATT_FINISHING_STAPLE;\012@PJL COMMENT OID_ATT_OUTPUT_PAGE_COLLATE;\012@PJL COMMENT XRXend\012

'\33'
\n          -> OUTPUT
'-12345X@PJL COMMENT\012@PJL COMMENT XRXbegin\012@PJL COMMENT OID_ATT_FINISHING_STAPLE;\012@PJL COMMENT OID_ATT_OUTPUT_PAGE_COLLATE;\012@PJL COMMENT XRXend\012'
```

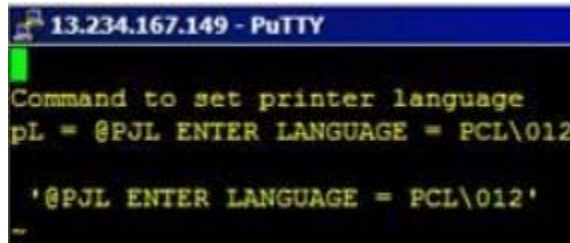
13. If it is necessary to edit the attribute file, enter the command **pL~v**.

```
13.234.167.149 - PuTTY
'\33'
\n          -> OUTPUT
'-12345X@PJL COMMENT\012@PJL COMMENT XRXbegin\012@PJL COMMENT OID_STAPLE;\012@PJL COMMENT OID_ATT_OUTPUT_PAGE_COLLATE;\012@PJL COMMENT'

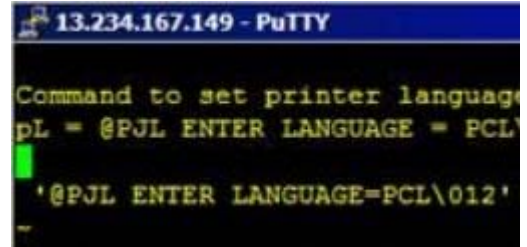
:~v

To LIST attributes, enter AttributeName1 ... (* for all attributes)
To CHANGE an attribute value, enter AttributeName=NewValue
To FORMAT and EDIT an attribute value, enter AttributeName~v
To EDIT the attribute file, enter ~v
To terminate, press Enter: pL~v
```


14. Edit the last line by removing the spaces around the equal sign. The following screens show before (left) and after (right) editing.



A screenshot of a PuTTY terminal window titled "13.234.167.149 - PuTTY". The terminal displays the following text: "Command to set printer language", "pL = @PJL ENTER LANGUAGE = PCL\012", and "'@PJL ENTER LANGUAGE = PCL\012'". A green cursor is positioned at the beginning of the third line.



A screenshot of a PuTTY terminal window titled "13.234.167.149 - PuTTY". The terminal displays the following text: "Command to set printer language", "pL = @PJL ENTER LANGUAGE = PCL\012", and "'@PJL ENTER LANGUAGE=PCL\012'". A green cursor is positioned at the beginning of the third line.

Additional Information

Xerox Customer Support welcomes feedback on all documentation - send feedback via e-mail to: USA.DSSC.Doc.Feedback@mc.usa.xerox.com.

You can reach Xerox Customer Support at 1-800-821-2797 (USA), TTY 1-800-855-2880 or at <http://www.xerox.com>.

Other Tips about Xerox multifunction devices are available at the following URL: <http://www.office.xerox.com/support/dctips/dctips.html>.

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