



Service Information

COPIER

HARDWARE

SOFTWARE

Model : PCL5e/PCL6 Printer Driver
PCL5c Printer Driver
Fax Driver
PS3 Printer Driver

Number: FF-T01-V3-000155-01

Date : April 23, 2002

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Location : Operation of printer drivers in Terminal Server/Citrix MetaFrame Environment

Subject : Operation of PCL/PS printer/fax drivers in Terminal Server/Citrix MetaFrame environment, in various situations

Reason : This bulletin informs how Canon printer/fax drivers work with Microsoft Windows NT4.0 Terminal Server Edition, Windows2000 terminal server, and Citrix Systems MetaFrame.

[History of Release]

Service Info. No.	Version	Contents	Date
FF-T01-V3-000155-01		New Release	April 23, 2002

Details :

This service information consists of the following information.

- (1) Test environments
- (2) Checked operations
- (3) Restrictions

- (1) Test environments
 - 1-1. Test environments

Windows 2000 Server (Service Pack2)
Citrix MetaFrame ver.1.8 (Feature Release 1 + SP2 or 3)
Citrix MetaFrame v1.8 for Windows2000 Server (Feature Release 1 + SP2 or 3)
Citrix MetaFrame XP 1.0 for Windows (Feature Release 1 + SP1)
ICA Client 32-bit Client 6.20.985

- 1-2. Checked operations

Print from a printer connected to the server (network/local print)
Print from printer connected to the client
Print by differently privileged clients

We checked driver operations in 6 different situations, which varied in the driver installation location, procedure of adding the printer, and type of printer connection.

Case 1:

The client software to print something logs onto the TSE server and uses the printer driver already

installed on the server.

Case 2:

The user adds a printer by starting the Add Printer Wizard from the logon screen.

Case 3:

A printer on the map created by the Auto-Created Printer function is used for printing.

The Auto-Created Printer function of MetaFrame makes a map of the printer set of the client machine when the client logs on, to make these printers available on the terminal.

In order to make the function to prepare the printer map, the TSE server must be set up for mapping the printer set of a logging-on client, and the same printer drivers that are installed in the client machine have to be installed on the TSE server.

Case 4:

When the client logs on, printer drivers that have been installed to the client PC by Point&Print are mapped onto the server (by the Auto-Created Printer function). One of these printer drivers is used.

Confirmation Result :

Behavior of the drivers with Terminal Server in is described in the attached pages.

Restrictions :

Known restrictions of (released versions of) the drivers with Terminal Server are listed below.

Product Name & Version	Restrictions	Work Around	Remarks
PCL Drivers	(1) Registry is not freed even after the user logs out. (2) Registry size reduction (3) Print commands from more than one clients to the TSE server results in STOP error. (4) Memory leaks when a printer is added and deleted. (Memory leak also occurs when a client logs on and then logs off to the TSE server.) (5) When discarding a palette by DestroyMyPalette within the LIB_GetPalette function, describing EngFreeMem for invalid memory may cause hang-up. (6) Check process for invalid input data for conversion of extended DEVMODE data in the core module had a bug (with the iDmDataRead function) (Found with the CUSA PCL Driver.)	(1) Corrected in PCL5e v4.81/PCL6 v2.51/PCL5c v1.00. (2) Corrected in PCL5e v5.00./PCL6 v3.00./PCL5c v1.00. (3) Corrected in PCL5e v5.00./PCL6 v3.00./PCL5c v1.00. (4) Corrected in PCL5e v5.00./PCL6 v3.00./PCL5c v1.00. (5) Corrected in PCL5e v5.20/PCL6 v3.20/PCL5c v1.10. (6) Corrected in PCL5e v5.20/PCL6 v3.20/PCL5c v1.10.	

Fax Driver	<p>(1) Although it is driver's specification to create temporary data in the Windows folder before sending fax data, the client cannot make a read/write access to the server's Windows folder with the User privilege, that sending a fax job is impossible. (This problem is concealed in local login to the NT/2000 server, but emerges only in TSE sessions.)</p> <p>(2) Registry is not freed even after the client logged out.</p> <p>(3) The driver requires so much space in registry that adding too many printers makes the TSE server to go down.</p> <p>(4) Print commands from more than one TSE client generate STOP error.</p> <p>(5) Memory leaks when printer is added and deleted. (Memory leak also occurs when a user logs on and logs off the TSE server.)</p> <p>(6) When discarding a palette by DestroyMyPalette within the LIB_GetPalette function, describing EngFreeMem for invalid memory may cause hang-up.</p> <p>(7) Check process for invalid input data for conversion of extended DEVMODE data in the core module had a bug (with the iDmDataRead function) (Found with the CUSA PCL Driver.)</p>	<p>(1) Add C:\TEMP as a part of path information in relevant environment variables, and permit Users to make read/write access to this folder.</p> <p>(2) Corrected in Fax Driver v1.50.</p> <p>(3) Corrected in Fax Driver v1.70.</p> <p>(4) Corrected in Fax Driver v1.70.</p> <p>(5) Corrected in Fax Driver v1.70.</p> <p>(6) Corrected in Fax Driver v1.70.</p> <p>(7) Corrected in Fax Driver v1.70.</p>	
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PS3 Driver	<p>(1) Registry is not freed even after the user logs out.</p> <p>(2) Registry size reduction</p> <p>(3) Print commands from more than one clients to the TSE server results in STOP error.</p> <p>(4) Memory leaks when a printer is added and deleted. (Memory leak also occurs when a client logs on and then logs off to the TSE server.)</p> <p>(5) When discarding a palette by DestroyMyPalette within the LIB_GetPalette function, describing EngFreeMem for invalid memory may cause hang-up.</p> <p>(6) Check process for invalid input data for conversion of extended DEVMODE data in the core module had a bug (with the iDmDataRead function) (Found with the CUSA PCL Driver.)</p>	<p>(1) Corrected in PS3 Driver v1.01.</p> <p>(2) Corrected in PS3 Driver v1.22.</p> <p>(3) Corrected in PS3 Driver v1.22.</p> <p>(4) Corrected in PS3 Driver v1.22.</p> <p>(5) Corrected in PS3 Driver v1.30.</p> <p>(6) Corrected in PS3 Driver v1.30.</p>	
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MetaFrame & Terminal Server Restrictions List Feb. 27, 2002

No	Case				PDL/Version x			OS/MetaFrame NG N/A						Outline	Steps	Result	Occurrence	Remarks	Work Around
	1	2	3	4	PS Roman	PCL5e/6	FAX	NT TSE & MF 1.8	W2K Srv & MF 1.8	W2K Srv & MF XP	NT TSE Only	W2K Srv Only	XP Pro Remote Desktop						
1			x	x	x	x	x	NG	Different problem. Described in No.2.	Different problem. Described in No.3.	N/A	NG (All the items are reset to the default.)	NG (All the items are reset to the default.)	When the client machine connects as a terminal to the NT4.0 TSE + MetaFrame1.8 server machine, the printer settings on the client machine are only partially reflected as Auto Created Printers.	<ol style="list-style-type: none"> 1. Add a printer on the client machine. (Modify print settings as you like.) 2. On the MetaFrame server, add the same printer as you have added on the client machine. (Do not change the print settings.) 3. Connect the client machine as a terminal to the MetaFrame server, and log on as an Administrator. * An Auto Created Printer appears on the terminal screen this time. 4. Check print settings of the Auto Created Printer on the MetaFrame server. 	Printer settings on the client machine are only partially reflected to Auto Created Printers. Reflection of the following items has been confirmed. - [PageSetup] sheet: PageSize/Copies/Orientation - [Finishing] sheet: Binding/Location (linked if Orientation is landscape) - [PaperSource] sheet: PaperSource	Always	Problem with NT4.0 TSE + MetaFrame1.8 For the following combinations, see No.2 and No.3, respectively. - 2K Server + MetaFrame1.8 - 2K Server + MetaFrameXP NT4.0 TSE without MetaFrame is free from the problem because Auto Create Printer is a feature of MetaFrame. On 2K Server without MetaFrame, or on XP Pro RemoteDesktop, the default settings always remain unchanged regardless of the number of times of connecting.	
2			x	x	x	x	Different problem. Described in No.1.	NG	Different problem. Described in No.3.	N/A	NG (All the items are reset to the default.)	NG (All the items are reset to the default.)	When the client machine connects as a terminal to the 2K Server + MetaFrame1.8 server machine, the printer settings on the client machine are only partially reflected as Auto Created Printers. - First-time connection: Client settings are reflected partially. - Second and succeeding connections: Default settings remain unchanged.	<ol style="list-style-type: none"> 1. Add a printer on the client machine. (Modify print settings as you like.) 2. On the MetaFrame server, add the same printer as you have added on the client machine. (Do not change the print settings.) 3. Connect the client machine as a terminal to the MetaFrame server, and log on as an Administrator. * An Auto Created Printer appears on the terminal screen this time. 4. Check print settings of the Auto Created Printer on the MetaFrame server. 	Printer settings on the client machine are not reflected to Auto Created Printers. - First-time connection: Client settings are reflected partially. - Second and succeeding connections: Default settings are restored.	Depends on how many times the terminal was connected to the server before.	Problem with 2K Server + MetaFrame1.8 Outcome of the operation vary by the number of times of connection. First connection: Client settings are reflected only partially. Second and subsequent connections: The default settings remain unchanged. For the following combinations, see No.1 and No.3, respectively. - NT4.0 TSE + MetaFrame1.8 - 2K Server + MetaFrameXP NT4.0 TSE without MetaFrame is free from the problem because Auto Create Printer is a feature of MetaFrame. On 2K Server without MetaFrame, or on XP Pro RemoteDesktop, the default settings always remain unchanged regardless of the number of times of connecting.		
3			x	x	x	x	Different problem. Described in No.1.	Different problem. Described in No.2.	NG	N/A	NG (All the items are reset to the default.)	NG (All the items are reset to the default.)	When the client machine connects as a terminal to the 2K Server + MetaFrame1.8 server machine, the printer settings on the client machine are not reflected as Auto Created Printers. - First-time connection: Client settings are reflected partially. - Second and succeeding connections: Settings of preceding connection remain unchanged.	<ol style="list-style-type: none"> 1. Add a printer on the client machine. (Modify print settings as you like.) 2. On the MetaFrame server, add the same printer as you have added on the client machine. (Do not change the print settings.) 3. Connect the client machine as a terminal to the MetaFrame server, and log on as an Administrator. * An Auto Created Printer appears on the terminal screen this time. 4. Check print settings of the Auto Created Printer on the MetaFrame server. 	Printer settings on the client machine are not reflected to Auto Created Printers. - First-time connection: Client settings are reflected partially. - Second and succeeding connections: Default settings are restored.	Depends on how many times the terminal was connected to the server before.	Problem with 2K Server + MetaFrame1.8 Outcome of the operation vary by the number of times of connection. First connection: Client settings are reflected only partially. Second and subsequent connections: The default settings remain unchanged. For the following combinations, see No.1 and No.3, respectively. - NT4.0 TSE + MetaFrame1.8 - 2K Server + MetaFrameXP NT4.0 TSE without MetaFrame is free from the problem because Auto Create Printer is a feature of MetaFrame. On 2K Server without MetaFrame, or on XP Pro RemoteDesktop, the default settings always remain unchanged regardless of the number of times of connecting.		
4			x	x	x	x	x	NG	NG	N/A			When there are Auto Created Printers on the server, adding a printer using an installer program on a terminal stops the process with an error message output.	<ol style="list-style-type: none"> 1. Add a printer on the client machine. 2. On the MetaFrame server, add the same printer as you have added on the client machine. 3. Connect the client machine as a terminal to the MetaFrame server, and log on as an Administrator. * An Auto Created Printer appears on the terminal screen this time. 4. Start up an installer on the terminal screen to add a printer. 5. Go on to the file copy step. 	After the following error message is displayed, the process stops. "An error occurred during processing the printer xxxxxx. Do you want to cancel installation?" Below the message, there are Yes and No buttons.	Always	Problem factor: Auto Created Printer Affected environment: - 2K Server + MetaFrame Unaffected environment: - NT4.0 TSE + MetaFrame - 2K Server without MetaFrame NT4.0 TSE without MetaFrame is free from the problem because Auto Create Printer is a feature of MetaFrame. Outcome of pressing either button that accompanies to the message [No]: Installation restarts and finishes normally. [Yes]: All the printers already installed are deleted. (Probably to	To continue installation procedure, reply No to the error message. (Note: Pressing Yes deletes all the installed printers.) - To prevent the problem, turn off the Auto Create Printer function on the MetaFrame server.	

MetaFrame & Terminal Server Restrictions List Feb. 27, 2002

No	Case				PDL/Version			OS/MetaFrame						Outline	Steps	Result	Occurrence	Remarks	Work Around
	1	2	3	4	PS Roman	PCL5e/6	FAX	NT TSE & MF 1.8	W2K Srv & MF 1.8	W2K Srv & MF XP	NT TSE Only	W2K Srv Only	XP Pro Remote DeskTop						
5			x	x	x	x	x									Always	Problem factor: Auto Created Printer Affected environment: - 2K Server + MetaFrame Unaffected environment: - 2K Server without MetaFrame - NT4.0 TSE + MetaFrame NT4.0 TSE without MetaFrame is free from the problem because Auto Create Printer is a feature of MetaFrame.	To prevent the problem, turn off the Auto Create Printer function on the MetaFrame server.	
					LIPS														
6					x	x	x									Always	Affected environment: - NT4.0 TSE without MetaFrame - 2K Server + MetaFrame Unaffected environment: - 2K Server without MetaFrame - 2K Server + MetaFrame	This problem is avoidable by choosing "Share Printers" in the Add Printer Wizard and adding an alternative driver at the same time. After doing this, more alternative drivers can be added from the printer properties sheet (for that PDL only). - Another way to avoid this problem: Add alternative drivers at the same time when you add a printer using PS/PCL driver.	
7			x	x	x	x										Always	Known restriction of VDC, at present		
8					x	x	x									Always	Problem factor: Choosing "Add Port" on the installer dialog Affected environment: - NT4.0 TSE without MetaFrame - 2K Server + MetaFrame To avoid the problem in these environments: - Choose Default Port or Network on the installer dialog. - Use the Add Printer Wizard to add a port. - Do all as local operations directly on the NT4.0 TSE machine. Unaffected environment: - 2K Server without MetaFrame - 2K Server + MetaFrame	- Add the printer using the default port, such as LPT1, then Add a port from the port sheet of printer Properties. - Use Add printer Wizard to Add the printer - Install the printer as local operation directly on the WinNT4.0 TSE machine.	
9					x	x	x									Always	Affected environments: - 2K Server without MetaFrame - XP Pro Remote DeskTop * The same problem occurs with the InBox driver that comes with the OS. Unaffected environments: - NT4.0 TSE without MetaFrame - NT4.0 TSE + MetaFrame - 2K Server + MetaFrame If MetaFrame is used, both Administrators and Users can modify items on the Device Settings sheet.		

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No	Case				PDL/Version			OS/MetaFrame					Outline	Steps	Result	Occurrence	Remarks	Work Around	
	1	2	3	4	PS Roman	PCL5e/6	FAX	NT TSE & MF 1.8	W2K Srv & MF 1.8	W2K Srv & MF XP	NT TSE Only	W2K Srv Only							XP Pro Remote Desktop
10			x		x	x	x							<p>If a client machine has a printer named "FAX." It is not Auto-Created on the MetaFrame Server.</p>	<ol style="list-style-type: none"> 1. Add a printer on the client machine. (Change the name of the printer to "FAX.") 2. On the MetaFrame server, add the same printer as you have added on the client machine. 3. Connect the client machine as a terminal to the MetaFrame server. 4. On the terminal screen, check the printer folder. 	<p>No Auto Created Printer appears on the terminal screen.</p> <p>* So far, "FAX" is the only name that prevents Auto Creation of the printer.</p>	Always	<p>Affected environment</p> <ul style="list-style-type: none"> - 2K Server + MetaFrame 1.8 <p>Unaffected environments:</p> <ul style="list-style-type: none"> NT4.0 TSE + MetaFrame 1.8 2K Server without MetaFrame 2K Server + MetaFrame XP <p>NT4.0 TSE without MetaFrame is free from the problem because Auto Create Printer is a feature of MetaFrame.</p> <p>So far, "FAX" is the only name that prevents Auto Creation of the printer.</p> <p>If named "FAX1," the printer is Auto Created. To avoid the trouble, add</p>	<p>Do not use "FAX" as a printer name on client machines.</p> <p>Example: There is no problem with a printer name like "R2200 FAX."</p>