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⊠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
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- 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 Releae1 + 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.	(1) Corrected in PCL5e v4.81/PCL6 v2.51/PCL5c	
	(2) Registry size reduction	v1.00.	
	(3) Print commands from more than one clients to the	(2) Corrected in PCL5e v5.00./PCL6 v3.00./PCL5c	
	TSE server results in STOP error.	v1.00.	
	(4) Memory leaks when a printer is added and	(3) Corrected in PCL5e v5.00./PCL6 v3.00./PCL5c	
	deleted. (Memory leak also occurs when a client logs	v1.00.	
	on and then logs off to the TSE server.)	(4) Corrected in PCL5e v5.00./PCL6 v3.00./PCL5c	
	(5) When discarding a palette by DestroyMyPalette	v1.00.	
	within the LIB_GetPalette function, describing	(5) Corrected in PCL5e v5.20/PCL6 v3.20/PCL5c	
	EngFreeMem for invalid memory may cause hang-	v1.10.	
	up.	(6) Corrected in PCL5e v5.20/PCL6 v3.20/PCL5c	
	(6) Check process for invalid input data for	v1.10.	
	conversion of extended DEVMODE data in the core		
	module had a bug (with the iDmDataRead function)		
	(Found with the CUSA PCL Driver.)		

	(1) A 141 - 1 4 1 1 1 1 1 1 1 1 1 1	(1) All CATEMD as a next of moth information in
Fax Driver	(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	(4) Corrected in Fax Driver v1.70.
	server, but emerges only in TSE sessions.	(5) Corrected in Fax Driver v1.70.
	(2) Registry is not freed even after the client logged	(6) Corrected in Fax Driver v1.70.
	out.	(7) Corrected in Fax Driver v1.70.
	(3) The driver requires so much space in registry that	
	adding too many printers makes the TSE server to go	
	down.	
	(4) Print commands from more than one TSE client	
	generate STOP error.	
	(5) Memory leaks when printer is added and deleted.	
	(Memory leak also occurs when a user logs on and	
	logs off the TSE server.	
	(6) When discarding a palette by DestroyMyPalette	
	within the LIB_GetPalette function, describing	
	-	
	EngFreeMem for invalid memory may cause hang-	
	(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.)	

PS3 Driver	(1) Registry is not freed even after the user logs out.	(1) Corrected in PS3 Driver v1.01.
	(2) Registry size reduction	(2) Corrected in PS3 Driver v1.22.
	(3) Print commands from more than one clients to the	(3) Corrected in PS3 Driver v1.22.
	TSE server results in STOP error.	(4) Corrected in PS3 Driver v1.22.
	(4) Memory leaks when a printer is added and	(5) Corrected in PS3 Driver v1.30.
	deleted. (Memory leak also occurs when a client logs	(6) Corrected in PS3 Driver v1.30.
	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.)	

MetaFrame	&	Termi nal	Server	Restrictions	Li st	Feb.	27,	2002
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No	No Case			PDL/Versic	m			OS/MetaF NG	Frame			Outline	Steps	Result	Occurrence	Remarks	Work Around
								N/A									
	1 2	3	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	ĸ 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 VT4 0 TSE + MetaFrame 18 server machine, the printer settings on the client machine are only partially reflected as Auto Created Printers.	 Add a printer on the client machine. (Modify print stratings as you like.) On the MetaFrame server, add the same printer as you have added on the client machine. (Do not change the print settings.) 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. Check print settings of the Auto Created Printer on the MetaFrame server. 	Printer sattings on the client machine are only aprilally reflected to Auto Created Printers. Reflection of the following items has been confirmed. - [PageSetUopiseAt: PageSize/Copies/Orientation - [PaperSource] sheet: BridingCoation (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 litems are reset to the default.)	NG (All the items are reset to the default.)	When the client machine connects as a terminal to the 2X Server + MetaFarenal 3 sever 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.	 Add a printer on the client machine. (Modify print settings as you like) Con the Medrame server, add the same printer as you have added on the print settings.) 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 server lihis time. 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 + MetaFame 1.8 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 TSF. HetaFamer 8. - 2K Server + MetaFamer 8. - 2K Server + MetaFamer 8. NT4.0 TSE without MetaFames free from the problem because Auto Create Printer Is a feature of MetaFrame. On 2K Server without MetaFarame, or on XP Pro RemoteDesKTop, the default settings always remain unchanged regardless of the number of times of connection.	
3		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 be X2 Server + MetaFarma 18 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 connections remain unchanged.	 Add a printer on the client machine. (Modify print straings as you like). On the MetaFrame server, add the same printer asy out have added on the client machine. (Do not change the print stitlings.) Connect the client machine as a terminal to the MetaFrame server, and log on as an Administrator. A chack print settings of the Auto Created Printer on the MetaFrame server. 	Printie settings on the client machine are not reflected to Auto Created Printers. - First-Ime 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 2K Server + MetaFrame1 2K Server + MetaFrame1 2K Server + MetaFrame1 2K Server + 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 + MetaFrame1 8 - 2K Server + MetaFrame1 8 - 2K Server + MetaFrame 18 NT4.0 TSE without MetaFrame, for 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 Installer Progra m	x Installer Program	x Installer Program		NG	NG	N/A			When there are Auto Created Printers on the server, adding a printer varies a server, adding a printer using an installar program on a terminal stops the process with an error message output.	 Add a printer on the client machine. On the Medizame server, add the same printer as you have added on the client machine. Connect the client machine as a terminal to the Mediz-Rame server, and log on as an Administrator. An Autor Contend Printer appears on the terminal screen this time. Start uga mintaler on the terminal screen to add a printer. Co on to the file copy step. 	After the following error message is displayed, they mores stops: "An error occurred during processing the printile roccor. 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 Is free from the problem because Auto Create Printer is a feature of MetaFrame. Outcome of pressing either button Instal accompanies to the message [No]: Installation restarts and minknes normally. [Yes]: All the printers already	To continue installation procedura: reg/N ho to the error message. (Note: Pressing Yes deletes all the installed printers.) – To prevent the problem, run off the Auto Create Printer function on the MetaFrame server.

MetaFrame	&	Termi nal	Server	Restrictions	Li st	Feb.	27,	2002
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N	lo Case PDL/Version x		on			OS/Metal NG	Frame			Outline	Steps	Result	Occurrence	Remarks	Work Around		
								N/A									
	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						
63		x	x Installe Progra m	riografii	x Installer Program		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.	 Add a printer on the client machine 2.0 rule Melarame server, add the same printer as you have added on the client machine. Connect the client machine as a terminal to the MelaFarame server, and log on as an Administrator. * An Auto Created Printer appears on the terminal screen this time. Storen to add a printer. So on to the file copy step. 	After the following error message is displayed, the process stops. 'An active printer driver has been detected. Restart the computer and try installation again." * Restarting the MetaFrame server according to the message only repeats the sequence, that alternative drivers for Win9x cannot be installed.	Always	Problem factor: Auto Created Printer Affected environment: - 2K Server + MetaFrame Unaffected environment: - 2K Server without MetaFrame - NT4.0 TSE + 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.
6			×	x	x	NG			N/A			When the WeNTA 0 TSE machine serves as a print server, installation of alternative drivers for Win9W is impossible. This problem occurs only with Win174 0 TSE, regardless of the use of MetaFrame.	 Add a printer on a NT4.0 TSE machine; Chock "Share Printers" on properties sheet for the printer added in 1 above, then add alternative printers for Win%. 	Can not add Windows9x Printer driver.	Always	Affected environment: - NT4.0 TSE without Metaframe - 2K Server + MetaFrame Unaffected environment:	This problem is avoidable by choosing "Share Printes" 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 PED only). - Another way to avoid this problem: Add alternative drivers at the same time when you add a printer using PS/PCL wetable.
7		x	××	x	×	NG	NG	NG	N/A	NG	NG	GetDevice does not function for Auto Created Printers on the terminal screen.	 Add a printer on the client machine. On the Melframe server, add the same printer as you have added on the client machine. Connoct the client machine as a terminal to the Melframe server, and log on as an Administrator. An Auto Created Printer appears on the terminal screen this time. Run GetDevice for the Auto Created Printer on the terminal screen. 	GetDevice fails with the message below. "Acquisition of device information failed. Check whether printer error has occurred, whether the printer port setting is correct.	Always	Known restriction of VDC, at present	
8			x Installe Progra m	r X Installer Program		NG			NG			the terminal using an installer	Connect the clent machine as a terminal to the WinRT4 0 TES server, and tog on as an Administrator. Start up the installer on the terminal. Select a printer to add. (This step can be skipped.) 4. On the Printer Settings screen, select Add Port and press O.S. In the Port Settings window, select LPR Port and press OK.	Perts cannot be added, with the message of "Ports cannot be added." " This problem does not occur if Default Port or Network is selected in step 4.	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 + 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 Wazed to Add the printer. Use Add printer was local operation directly on the WinNT4.0 TSE machine.
g			x	x	x				N/A	NG	NG	When a client machine connects as a terminal to the 2K Server or XP Pro machine, by the privilege of User, Auto Created Printer settings on the Device Sertings sheat are grayed out and unchangeable. * This problem does not occur if MetaFrame is used.	 Add a printer on the client machine. (Modify option configuration on the Device Settings screen.) On the MetaFrame server, add the same printer as you have added on the client machine. Connect the client machine as a terminal to the 2K server (or XP Pro) machine, and log on as a User. An Auto Created Printer appears on the terminal screen, open the Device Settings sheet for the Auto Created Printer. 	Contents of Device Settings sheet are not carried over (regardless of the privilege of the client). Individual setting items are grayed out and cannot be modified (if the client has logged in as a User). * For these reasons, User cannot change option configuration of Auto Created Printers.	Always	Affected environments: - 2K Server without MetaFrame - - XP Pro Remote DeskTop * The same problem occurs with the Index of viron ments - NT4 0.TSE without MetaFrame - NT4.0.TSE without MetaFrame - XT4.0.TSE + MetaFrame If MetaFrame is used, both Administrators and Users can modify items on the Device Settings sheet.	

No	lo Case		4 PS	x	Se/6 FA	NT TSE	W2K Srv	OS/Meta NG N/A W2K Srv	Frame	W2K Srv	XP Pro	Outline	Steps	Result	Occurrence	Remarks	Work Around
			Rom			& MF 1.8	& MF 1.8	& MF XP	Only	Only	Remote DeskTop						
10		×	×		x x		NG		N/A			If a client machine has a printer named "FAX," is not Auto- Created on the MetaFrame Server.	 Add a printer on the client machine. (Change the man of the printer to FAX-) On the WellerTame server, add the same printer as you have added on the client machine. Connect the client machine as a terminal to the MellerTame server. On the terminal screen, check the printer folder. 	No Auto Created Printer appears on the terminal screen. * So far, "FAX" is the only name that prevents Auto Creation of the printer.	Always	Mfected environment - 2K Server + MetaFrame 1.8 Unaffected environments: NT4.0 TSE + MetaFrame 1.8 2K Server vihout MetaFrame 2K Server + MetaFrame XP NT4.0 TSE without MetaFrame is free from the problem because Auto Create Printer is a feature of MetaFrame. So far, "FAX" is the only name that prevents Auto Creation of the printer. If named "FXX1," the printer is Auto Create J. To avoid the trouble, add	Do not use 'FAX' as a printer name on client machines. Example: There is no problem with a printer name like 'IR2200- FAX.*

MetaFrame & Terminal Server Restrictions List Feb. 27, 2002