

Customer Tips

dc06cc0389
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... for the user

WorkCentre/WorkCentre Pro Options for Printing Raw TCP/IP

Introduction

This document describes the settings available on a Xerox device's standard Raw TCP/IP Web page and those on the hidden Raw TCP/IP Web page. The settings on the standard page are adequate for simple Raw TCP/IP printing. The hidden page has settings that are helpful when printing from applications such as HP Output Server.

Unlike other methods of communication such as LPR, Raw TCP/IP (or port 9100) printing has no industry standards, RFCs or other specifications that define communications between a client and a Xerox multifunction device (MFD). The parameters of Raw TCP/IP printing on a Xerox MFD are defined by the settings selected on one or both of the Raw TCP/IP Web pages.

The Raw TCP/IP settings can produce many results. This document also describes some caveats for Raw TCP/IP printing that these settings have resolved in an HP Output Server environment.

This document applies to the Xerox products indicated in the table below. For some products, it is assumed that your device is equipped with the appropriate option to support this document.

x	WC 7655/7665
x	WC Pro 232/238/245/255/265/275
x	WC 232/238/245/255/265/275
	WC Pro C2128/C2636/C3545
	WC Pro 165/175
	WC M165/M175
	WC Pro 32/40 Color
	WC Pro 65/75/90
	WC Pro 35/45/55
	WC M35/M45/M55
	DC 555/545/535
	DC 490/480/470/460
	DC 440/432/425/420

WorkCentre/WorkCentre Pro Configuration

You can enable Raw TCP/IP printing on some Xerox MFDs from the device's local user interface (WorkCentre/WorkCentre Pro 232/238/245/255/265/275 only), as well as the Web interface. To use the local user interface:

1. Access the Tools menu and press **Connectivity and Network Setup, Network Setup, TCP/IP Options, and Raw TCP/IP Printing**.
2. Press **Enable** and follow the instructions on the touch screen. If the Raw TCP/IP printing defaults (shown in Figure 1) are acceptable, you are ready to print.

To enable and change the WorkCentre/WorkCentre Pro default settings for Raw TCP/IP, use the device's Web interface. To display the Web interface:

1. Enter the device's host name or IP address into a Web browser.
2. Select **Properties>General Setup>Protocols>Raw TCP/IP Printing** to display the page in Figure 1 (except for Enabled, default values shown).

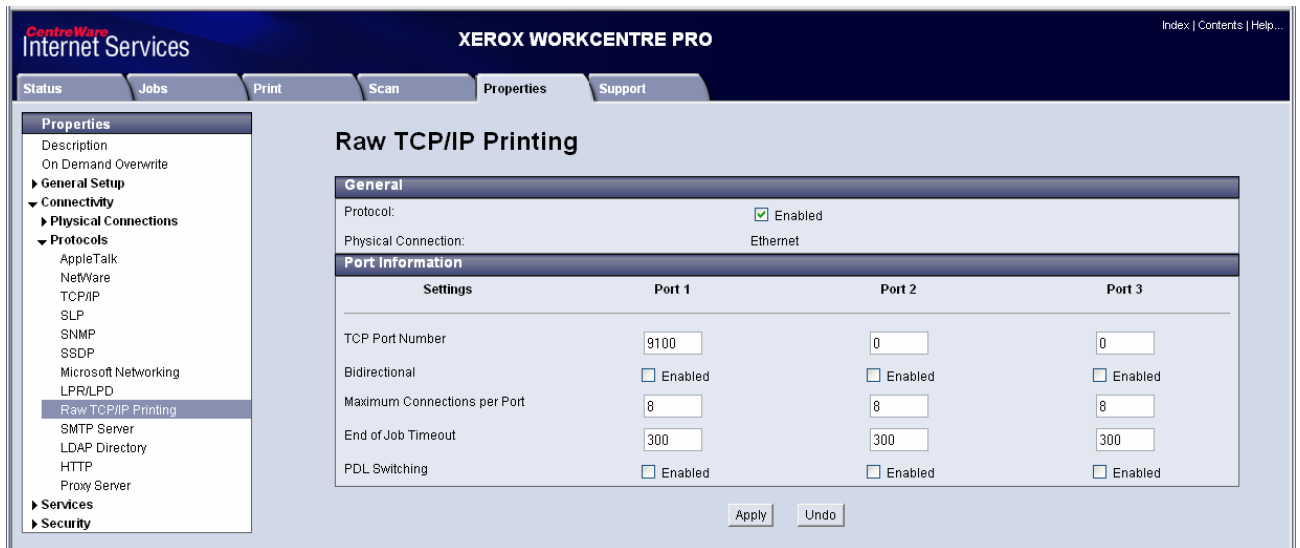


Figure 1. Standard Raw TCP/IP Printing Page

After Raw TCP/IP printing using port 9100 is enabled, the default settings allow a Microsoft workstation to print to a WorkCentre/WorkCentre Pro device. The client opens a port 9100 connection on the printer and transmits data to it. After the client completes the data transmission the client closes the connection, and the job is printed. Microsoft Windows clients do not require backchannel information.

Note: When Windows clients print using port 9100, do not enable PDL Switching so that each print job does not generate multiple banner pages.

The WorkCentre/WorkCentre Pro device's hidden Web page offers more Raw TCP/IP settings. To access the hidden page, enter the following url with the device's host name or IP address, for example, [http://\[printer hostname\]/diagnostics/rawTcplphidden.dhtml](http://[printer hostname]/diagnostics/rawTcplphidden.dhtml) or [http://\[xxx.xxx.xxx.xxx\]/diagnostics/rawTcplphidden.dhtml](http://[xxx.xxx.xxx.xxx]/diagnostics/rawTcplphidden.dhtml) (see Figure 2). All settings except protocol enablement on the standard Raw TCP/IP page are also on the hidden page. Some settings have more descriptive names on the hidden page. Table 1, later in this document, describes the settings available in Figure 1 and Figure 2.

Raw TCP/IP Printing Hidden

General			
Protocol:	Enabled		
Physical Connection:	Ethernet		
Settings	Port 1	Port 2	Port 3
Port Information			
TCP Port Number	9100	0	0
Maximum Concurrent Connections per Port	8	8	8
Maximum Concurrent Jobs per Connection (0 indicates unlimited jobs)	0	0	0
Total Job Limit per Connection (Printer disconnects after limit, 0 indicates unlimited)	0	0	0
Job Boundary Determination			
End of Job Timeout in Seconds (0 disables end of job detection by timeout)	300	300	300
Control D Marks End of PostScript Job	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled
Backchannel Data			
Backchannel Data Transmission to Client	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled
Out of Order Backchannel Data (Data from several jobs may be interspersed)	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled
Banner Page Printing			
Banner Page Enabled	All Jobs	All Jobs	All Jobs
Banner Page for Each Document of Job	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled
Banner Page for Job Containing only PJI Commands	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled
Miscellaneous			
Language (PDL) Switching within PJI Job (Results in multiple documents per job)	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled
Job Data Parsing Override	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled	<input type="checkbox"/> Enabled

Apply Undo

Done

Local intranet

Figure 2. Hidden Raw TCP/IP Printing Page

Table 1. Descriptions of Raw TCP/IP Settings		
Hidden Raw TCP/IP Printing Web Page	Standard Raw TCP/IP Printing Web Page	Selection Description
Protocol (view only)	Protocol (active check box)	Select the Enabled field on the standard page to enable port 9100 on the device. You cannot enable the port from the hidden page.
Physical Connection	Physical Connection	Ethernet is the only protocol allowed in this field. You cannot change this value.
TCP Port Number	TCP Port Number	This option allows three ports to support port 9100 printing. By default, Port 1 is set to 9100. You can set these port numbers to any port number not in use on the your network. Do not configure these ports to use well-known port numbers. Use the multiple ports to accommodate different environments, for example, configure Port 1 for Windows workstations to print via port 9100 and Port 2 for HP Open Server (Dazel) to print using port number 9101. Enter a zero in this field to disable the port.
Maximum Concurrent Connections per Port	Maximum Connections per Port	This selection indicates the number of simultaneous connections allowed on the port. Enter a value in the range 1-32 (default = 8).
Maximum Concurrent Jobs per Connection (0 indicates unlimited jobs)	Not available on this page	The maximum number of jobs a single connection can process concurrently.

Table 1. Descriptions of Raw TCP/IP Settings		
Hidden Raw TCP/IP Printing Web Page	Standard Raw TCP/IP Printing Web Page	Selection Description
Total Job Limit per Connection (Printer disconnects after limit, 0 indicates unlimited)	Not Available on this page	This setting limits the total number of jobs accepted on a single connection. After the limit is reached and all jobs complete printing, port 9100 closes the connection.
End of Job Timeout in Seconds (0 disables end of job detection by timeout)	End of Job Timeout	This value controls how long the device waits for data received through the port before terminating a job.
Control D Marks End of Postscript Job	Not available on this page	When enabled the "Ctrl-d" character indicates the end of a PostScript print job.
Backchannel Data Transmission to Client	Bidirectional	Enable this option to allow backchannel information to transmit back to the client, such as PDL interpreter and PDL status messages.
Out of Order Backchannel Data (data from several jobs may be interspersed)	Not available on this page	Enable this option to allow bi-directional information from multiple print jobs to return to the client out of the order they are sent to the MFD. This helps to avoid jobs hung in the queue.
Banner Page Enabled	Not available on this page	Allows banner sheets to print for all jobs, no jobs, or only the first job, received on a single connection.
Banner Page for Each Document of Job	Not available on this page	Enable this option to generate a banner page for each document in a job. This only applies to PDL switched PDL jobs. When disabled, a banner sheet is printed for the first document only.
Banner Page for Job Containing only PDL Commands	Not available on this page	Controls the banner page for jobs/documents containing only PDL commands.
Language (PDL) Switching within PDL Job (Results in multiple documents per job)	PDL Switching	Enable this option to allow the port to handle PDL print jobs consisting of more than one language (PCL, Postscript). PDL switching allows the job data to spool so that the proper interpreter processes each language. Each language is spooled as a separate document, which creates a multiple document job.
Job Data Parsing Override	Not available on this page	Forces parsing of job data. Job data is not parsed when bidirectional and PDL switching are disabled.

Port 9100 Caveats When Printing from HP Output Server (formally known as Dazel)

Printing Extra Banner Sheets from HP Output Server

This condition occurs when the HP Output Server is notified by the WorkCentre/WorkCentre Pro that the print job has successfully printed. The Output Server then sends a PJI USTATUSOFF command back to the WorkCentre/WorkCentre Pro. The device treats this information as a print job even though there is no data to print; and prints a banner sheet for it. To stop printing the extra banner sheet, set the **Total Job Limit per Connection** to **1** to alter the process in the following way:

1. The HP Output Server sends the print job to the WorkCentre/WorkCentre Pro.
2. After job completes, the WorkCentre/WorkCentre Pro sends the unsolicited job status to the HP Output Server.
3. The WorkCentre/WorkCentre Pro now closes the connection to the HP Output Server.
4. The HP Output Server logs that the connection was closed by the client and does not attempt to reconnect to send the USTATUSOFF command.

Print jobs Not Removed from HP Output Server Queue

This condition occurs when a print job is submitted from the HP Output Server to the WorkCentre/WorkCentre Pro where the job is printed. The print job remains in the HP Output Server print queue.

This happens when the HP Output Server does not receive a PJI unsolicited job status back from the printer indicating that the print job completed successfully.

To correct this issue, enable **Bidirectional** or **Backchannel** communication between the printer and client.

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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