

Pcounter WebPrint

2024.06.25

Installation & Administration Guide

support@pcounter.com https://www.pcounter.com (415) 701-9222 A.N.D. Technologies San Francisco, CA Copyright © 2024

Table of Contents

0.0.0 - Introduction	3
1.0.0 - 'Same Server' Installation	3
1.1.0 - Disable Spool File Pooling	3
1.2.0 - Windows Defender Firewall Exception - Port 443 - HTTPS	4
1.3.0 - Download & Extract Pcounter WebPrint	6
1.4.0 - Enable Pcounter WebPrint	7
1.5.0 - Pcounter WebPrint User Logon	12
1.6.0 - Set Default Printer	13
1.7.0 - Test WebPrint User Portal Access	15
1.8.0 - WebPrint Device List - Adding\Removing Printers	16
1.9.0 - Configure Default Driver Settings\Copy Paste Printing Preferences	17
2.0.0 - 'Separate Server' Installation	18
2.0.1 - Network Communication Overview	18
2.1.0 - Install WebPrint	18
2.2.0 - Prepare Pcounter LPD Server	19
2.2.1 - Configure Pcounter LPD Server	19
2.2.2 - Windows Defender Firewall Exception - Port 515 - LPR	20
2.3.0 - Create LPR Passthru Printers	22
2.4.0 - Test LPR Passthru Printers	23
2.5.0 - WebPrint Device List - Adding\Removing Printers	24
3.0.0 - WebPrint Customization	25
3.1.0 - Setting Default Color Mode	25
3.2.0 - Configure Allowed Paper Sizes	25
3.3.0 - Setting Default Collate Mode	27
3.4.0 - Banner Icon Customization	27
3.5.0 - Display Allowed File Extensions	28
3.6.0 - Anonymous User Access	29
3.7.0 - User Balance Display	29
3.7.1 -'DisplayAccountBalance' Registry Entry	29
3.7.2 'AllowedAPIAddresses' Registry Entry	30
3.8.0 - Customized DNS WebPrint Access	31
3.9.0 - Alternate PDF Processor 'PDF-XChange'	32
4.0.0 - Pcounter SSL Guide	35
4.1.0 - Install Trusted Certificate	35
4.2.0 - Create\Export PFX	35
4.3.0 - Create PEM	39
4.4.0 - Testing HTTPS	40
5.0.0 - Conclusion & Links	41

0.0.0 - Introduction

Pcounter WebPrint is an add-on component to Pcounter for Windows that extends available print job submission methods by allowing users to upload files to preconfigured print queues using a web browser.

The Pcounter WebPrint User Portal website can be made externally accessible, thus allowing remote users to submit jobs when offsite.

1.0.0 - 'Same Server' Installation

This section covers how to install Pcounter WebPrint on the same server that Pcounter for Windows resides.

If installing WebPrint on a server separate from Pcounter please see Section 2.0.0 - Separate Installation.

1.1.0 - Disable Spool File Pooling

Server spool file pooling <u>must</u> be disabled for WebPrint to function. The following process is adapted from the Microsoft KB article located <u>here</u>.

- 1) Click Start > type Run > type regedit > click OK to open regedit.exe.
- Locate the following registry subkey: HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Print
- 3) Create a new DWORD Value named DisableServerFilePooling.
- **4)** Right-click DisableServerFilePooling, and then click Modify.
- 5) In the Value data box, type 1 to turn off spool file pooling, and then click OK.
- 6) <u>Restart the spooler service in services.msc. for the change to take effect</u> IE:

Registry Editor

File Edit View Favorites Help

Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Print

> 📔 Print	^	Name	Туре	Data
	ol	(Default)	REG_SZ	(value not set)
ProductOptic	ons	100 BeepEnabled	REG_DWORD	0x0000000 (0)
> 📙 RadioManage	em	ab ConfigModule	REG_SZ	PrintConfig.dll
> 📙 SafeBoot		DisableServerFilePooling	REG_DWORD	0x00000001 (1)

1.2.0 - Windows Defender Firewall Exception - Port 443 - HTTPS

Port 443 is the default port for HTTPS traffic as well as Pcounter WebPrint. By default, the Windows Firewall will block this port and thus it must be opened for WebPrint to function.

- 1) Open 'Windows Defender Firewall with Advanced Security' on the Pcounter WebPrint server.
- 2) Right click Inbound Rules and choose 'New Rule'.



3) Choose Port.



4) Choose TCP and enter 443 as the specific local port.

Steps:		
Rule Type	Does this rule apply to TCP or U	DP?
Protocol and Ports	TCP	
Action	O UDP	
Profile		
 Name 	Does this rule apply to all local p	orts or specific local ports?
	All local ports	
	Specific local ports:	443

5) Choose 'allow the connection'.

Steps:	
Rule Type	What action should be taken when a connection matches t
Protocol and Ports	Allow the connection
Action	This includes connections that are protected with IPsec
Profile	

6) Ensure all 3 boxes are checked for the zones to apply.



7) Enter a name such as 'Pcounter WebPrint HTTPS' and click Finish to complete the process.

Steps:	
Rule Type	
Protocol and Ports	
Action	
Profile	Name:
Name	Pcounter Webprint HTTPS

1.3.0 - Download & Extract Pcounter WebPrint

Create a new directory for Pcounter WebPrint to reside. Download Pcounter WebPrint and extract the files in the newly created directory.

- 1) On the WebPrint server, browse to C:\Program Files (x86)\ and create a new folder named Pcounter WebPrint. The full path should be C:\Program Files (x86)\Pcounter WebPrint unless a different drive letter or fully custom path is used.
- 2) Open a web browser and navigate to <u>www.pcounter.com/downloads</u>
- 3) Click on 'Mobile Printing'.
- 4) Download the Pcounter WebPrint .zip and save it to the Pcounter server desktop.
- 5) Copy the contents of the Pcounter WebPrint .zip to the newly created Pcounter WebPrint folder in the Pcounter installation directory.

This PC > Local Disk (C:) > Program Files (x86) > Pc	counter WebPrint
Name	Date modified
🔳 ddePrint.exe	8/30/2023 12:24 PM
🧰 Installing a Web Certificate in Pcounter WebPri	8/30/2023 12:24 PM
O login.html	8/30/2023 12:24 PM
Pcounter_Logo_48.png	8/30/2023 12:24 PM
🧰 Pcounter_WebPrint_Guide.pdf	8/30/2023 12:24 PM
webprint.css	8/30/2023 12:24 PM
WebPrint.exe	8/30/2023 12:24 PM
📀 webprint.html	8/30/2023 12:24 PM
WebPrint64.exe	8/30/2023 12:24 PM
📀 webprinthelp.html	8/30/2023 12:24 PM
XPSPrint.exe	8/30/2023 12:24 PM

The DC A Hand District (C) A Description Files (v06) & Descriptor WebDrint

1.4.0 - Enable Pcounter WebPrint

7

- 1) Navigate to the Pcounter WebPrint directory that was created in the previous sections.
- 2) Double click the WebPrint64.exe to launch the Pcounter Web Print Configuration interface.
- **3)** If Microsoft Office is not installed on the server currently an info message will be displayed each time WebPrint is launched. Just click OK to dismiss the message and view the WebPrint interface.



4) If the MS Color Publisher driver is not installed a message will be displayed confirming this and that 'print server properties' will be opened so the driver can be added. Click OK to continue.



5) In print server properties, click the Driver tab and then click the Add button.



6) In the window that opens click Next, make sure x64 is selected and click Next again.



7) Select Generic for manufacturer, then choose 'MS Publisher Color Printer', click Next, click Finish to close the wizard, and click Close to close Print Server Properties.

Manufacturer	Printers
Generic	🔄 Generic / Text Only
Microsoft	🔄 Generic IBM Graphics 9pin
Parallels	🔄 Generic IBM Graphics 9pin wide
	MS Publisher Color Printer
	C MC D. LILL
This driver is digitally signed.	Windows Update H
Tell me why driver signing is im	portant
	< Back Next >

8) The Pcounter WebPrint Configuration interface should finally be displayed, but if not then again double click the WebPrint64.exe to launch the Pcounter Web Print Configuration interface.

Configure Pcounte	er Web Print			Х
General	_		_	i,
WebPrint Printer:			•	
Language:	English		•	
Session Timeout:	600 ≑	seconds		
Print Timeout:	30 ÷	seconds		
File Size Limit:	10 🔅	megabytes (0=unlimited)		
HTTPS Port:	443	Pcounter options		

9) Click on the "WebPrint Printer" dropdown at the top of the Pcounter Web Print Configuration interface and a small window will display asking 'Would you like to create the Pcounter WebPrint Printer now?'. Click Yes to continue.

Configure Pcounter Web Print	\times
General	
WebPrint Printer:	
Question	×
Would you like to create the Pcounter WebPrint Printer now?	
Yes No	

10) Click on the WebPrint Printer dropdown and choose the Pcounter WebPrint Printer.

len Configure Pcounter Web Print	×
General	
WebPrint Printer: Pcounter WebPrint Printer	
Language: English	
Session Timeout: 600 🔹 seconds	
Print Timeout: 30 🔹 seconds	
File Size Limit: 10 🕂 megabytes (0=unlimited)	
HTTPS Port: 443 Pcounter options	

- **11)** Next, click the small arrow button, in the middle of the window on the right, to open a selection window.
- **12)** In the 'Select available printers' window, check only the boxes for printers that should be allowed in Pcounter WebPrint and click OK

Configure Pcounter Web Print	×
General	Select available printers
WebPrint Printer: Pcounter WebPrint Printer	
	Portserver2
File Size Limit: 10 🛁 megabytes (0=unlimited)	Printer02
HTTPS Port: 443 <u>Pcounter options</u>	Private Pull Queue Public Pull Queue v4 Pull Queue
Printing Preferences	4
ExitQueue	

-in the example above only the 'HoldQueue' and 'Public Pull Queue' printers will be usable in WebPrint-

9 Pcounter WebPrint - Installation and Customization Guide | AND Technologies

13) At the bottom of the 'Configure Pcounter Web Print' window, click 'Install' in the 'Services' area.

ces	_	
The Pcounter WebF	Print service is not installed.	
Pcounter Webi	Print.exe (2023.08.29)	

14) If this is being performed for the first time, a new window will open with a password entry field. This is the password that will be used to create the Pcounter WebPrint service account that will be used by the Pcounter WebPrint Web Service. Do not forget this password as it will be needed in the future. Type a password that will not be forgotten and click OK.

Create New User		\times
Before installing this service create a new dedicated use password for this new user.	for the first time, Pcounter Web Print needs to r (PcounterWebPrintUser). Please enter a	
Password:	*******	
	Cancel	

15) A warning will be displayed confirming prerequisites for Pcounter WebPrint to be fully functional. Both of these tasks will be performed in this guide. Click OK to close the warning.



16) Click Start to start the Pcounter WebPrint service for the first time. If all is well, the service will start and the text will display in green text that the service is running.

Services	_	_
The Pcounter Web Pcounter WebP	oPrint service is rint.exe (2023.	s running. .08.29)
Remove	Stop	License key

17) At this point, Pcounter WebPrint should be accessible locally. Open a web browser on the server and browse to <u>https://127.0.0.1</u>. Pcounter WebPrint's logon page should be displayed after redirecting to <u>https://127.0.0.1/login</u>

S Pcounter WebPrint Login	× +
$\leftarrow \rightarrow C$ A Not secu	re https://127.0.0.1/login
Pcounter WebPrint	t Login
	Username:
	Password:

NOTE. Pcounter WebPrint requires HTTPS. Unsecured HTTP access to WebPrint is not possible.

18) It is critical the rest of the guide be completed. Please do not stop at this point as WebPrint is not yet functional.

1.5.0 - Pcounter WebPrint User Logon

The new PcounterWebPrintUser must be used to login to the server and open each MS Office app.

1) On the Pcounter WebPrint Server, login as the new PcounterWebPrintUser using the password that was used to create the user in the previous section. If the password has been lost use Computer Management or equivalent to reset the password as needed.



2) Once logged in as the PcounterWebPrintUser, open each Microsoft Office app that is installed and fully register/login with Microsoft Office.



3) Once all the Office apps have been opened and default settings confirmed, <u>logout as the</u> <u>PcounterWebPrintUser</u> and log back into the server using a normal administrative account.

1.6.0 - Set Default Printer

The Pcounter WebPrint Printer must be selected as the server's default printer.

1) Click Start and type Printers then click on 'Printers & Scanners' to open the control panel applet.



-continued on next page-

2) Find the Pcounter WebPrint Printer and left click it once, then choose 'Open Queue'.

Printers & scanners			
Add printers & scanners			
+ Add a printer or scanner			
Printers & scanners			
ExitQueue			
HoldQueue 1 document(s) in queue			
Pcounter WebPrint Printer Default, Paused			
Open queue Manage	Remove device		

3) In the small window that opens click Printer then 'Set As Default Printer' and a checkmark will appear next to the text.



4) Close both windows to complete the change.

1.7.0 - Test WebPrint User Portal Access

- 1) Locate a domain workstation, any workstation instance external to the server, and login as any domain user.
- 2) Use a web browser to access the Pcounter WebPrint User Portal. In the example below, the Pcounter WebPrint server is named PS2. Thus, the path used is: <u>https://ps2/</u>

S Pcounter WebPrint Login	× +			
← → C ▲ Not secure	https://ps2/login			
Pcou	nter WebPrint Login			
	Username:			

- 3) If the page does <u>not</u> display, then:
 - **a.** Port 443 may be blocked between the WebPrint server and the test workstation. See section 1.2.0 above.
 - **b.** Ping the DNS name used to ensure it is resolvable and reachable from the workstation. Contact your network team for assistance if it is not resolvable or reachable. The DNS name in the example above is Print1.
 - c. If DNS is not an option, use the server IP instead.
- 4) If the page <u>is</u> accessible, test WebPrint by logging in as any domain user submitting several jobs to various printers.

1.8.0 - WebPrint Device List - Adding\Removing Printers

Use this process to make newly added printers available, or remove any unneeded printers, in WebPrint.

- 1) Browse to C:\Program Files (x86)\Pcounter WebPrint (or wherever it is located) and launch WebPrint64.exe.
- 2) Click the small arrow button (in the middle of the window, on the right) to open a selection window. Choose the printers that will be available in Pcounter WebPrint with checkboxes.
- 3) Make any needed changes, then click OK, and OK again to close the window.

Configure Pcounte	er Web Print		×
General		_	
WebPrint Printer:	Pcounter WebPrint Printer	•	Select available printers
Language:	English	•	ExitQueue
Session Timeout:	600 ÷ seconds		HoldQueue
Print Timeout:	30 🛨 seconds		Printer01
File Size Limit:	10 🕂 megabytes (0=unlimited)		Printer02
HTTPS Port:	443 Pcounter options		Public Pull Queue
Printing Preference	ج.		
ExitQueue	-	- -	

1.9.0 - Configure Default Driver Settings\Copy Paste Printing Preferences

Every printer added to WebPrint can have a unique driver. WebPrint allows individual configuration for each printer that can be set differently than normal printing. WebPrint driver defaults can be configured differently than normal printing, allowing the default behavior of jobs that are received via WebPrint to differ from normal printing.

To modify driver default settings for printers added to WebPrint:

- 1) Browse to and launch WebPrint.exe, located at C:\Program Files (x86)\Pcounter for NT\NT\Pcounter WebPrint.
- 2) Choose the printer you wish to modify in the dropdown, then click the defaults button right below and the driver's printer properties will open.
- **3)** Make changes as needed to the driver's settings such as color, duplex/simplex, and effects. e.g

Configure Pcounte	er Web Print	\times
General		
WebPrint Printer:	Pcounter WebPrint Printer	
Language:	English	
Session Timeout:	600 🕂 seconds	!S
Print Timeout:	30 ÷ seconds	
File Size Limit:	10 🕂 megabytes (0=u	
HTTPS Port:	443 Pc 1-Touch Printing Option	is Doc
Printing Preference	s Job Type:	
	Paper: -Letter (8.5 x 11") -Type: Automatica	lly Sele
	Defaults Add	

- **4)** These default settings will apply to jobs received via WebPrint only. Normal printing is configured in Print Management as usual.
- 5) Printing preference profiles can be copied and pasted between printers that use the exact same driver. Select a printer in the dropdown and then click the 'Copy all' button.



6) Change the dropdown to another printer using the **exact** same driver and click the 'Paste all' button.

2.0.0 - 'Separate Server' Installation

This section of the guide covers how to install Pcounter WebPrint on a server separate from Pcounter. If WebPrint will be on the same server as Pcounter, see Section 1.0.0 - Local Installation.

2.0.1 - Network Communication Overview

Clients will communicate with the WebPrint Server over TCP Port 443 - HTTPS using a web browser. The WebPrint server will communicate with the Pcounter server over TCP Port 515 - LPR using the Pcounter LPD Server.



Domain or Non-Domain Workstations

2.1.0 - Install WebPrint

- **1)** Return to the beginning of the guide and complete sections 1.1.0 1.7.0 to install WebPrint on the server.
- Once the WebPrint portal is confirmed to be accessible to user workstations as shown in 'Section 1.7.0 - Test WebPrint User Portal Access' <u>then</u> proceed to the next section, 'Section 2.2.0 - Prepare Pcounter LPD Server'.

2.2.0 - Prepare Pcounter LPD Server

WebPrint hands print jobs to the Pcounter Server via LPR. The Pcounter Server accepts the job via the built in Pcounter LPD Server.

For each printer that will be available to WebPrint, their box must be checked in the Pcounter LPD Server configuration, and a valid LPR queue name must be set.

The Pcounter Server must also have TCP Port 515 opened in the firewall.

2.2.1 - Configure Pcounter LPD Server

- 1) On the Pcounter Server (not the WebPrint Server), open Pcontrol.
- Double click Quick Server List to expand it, then right click the server and choose Pcounter > Configuration.

🖆 Pcontrol						
Utility Pcou	unter Server Add	-ons				
ه ₽ Network	View 🛛 🕒 Pcount	er 🕒 Printer	- @	Job co	ntrol 🔻	💦 Dele
Microsoft	Windows Network ver List		Document	t Name	Owner	Status
Ш. Б	Add new print	er				
Дари Дари	Properties					
P P	Pcounter		>	Ac	counting	1
Pi	Zoom			Co	nfigurati	on

- **3)** Navigate to the LPD Server bullet.
- **4)** Confirm the box Enable LPD Server' is checked and grayed out at the top. If not grayed out then upgrade to the latest version of Pcounter.
- 5) Check the box for each print queue that is needed in WebPrint making sure to type a LPR queue name in each entry field in the center of the window.

Pcounter Configuration: \\PS3

 Global Settings Printers 	Enable LPD Server	Simplify dott	ed user names	Port n	umber: 515
Popup	Local print queue	LPR queue name	Host access list	Pause	Anon
 Data Server Services/Poets 	Student Hold Queue	StudentHoldQueue	(No restriction)	No	No
LPD Server					
Message Text					
Message Transport Real time monitor					
		LPR queue name: S	tudentHoldQueue		

- 6) Once all changes have been made OK to accept and close the window.
- 7) Go to Services.msc and restart the Pcounter Printer Control service and the Pcounter Data Server service to complete the change.

2.2.2 - Windows Defender Firewall Exception - Port 515 - LPR

Port 515 is the default port for LPR traffic. By default, the Windows Firewall will block this port and thus it must be opened for WebPrint to send print jobs to Pcounter.

Open the Windows Defender Firewall and create an inbound exception for TCP Port 515.

- 1) On the Pcounter Server (<u>not</u> the WebPrint Server), open 'Windows Defender Firewall with Advanced Security' on the Pcounter WebPrint server.
- 2) Right click Inbound Rules and choose 'New Rule'.



3) Choose Port.



4) Choose TCP and enter 443 as the specific local port.

		🔗 Windows Defender Firew	all with Advanced Security
		Prew Inbound Rule Wizard	d
		Protocol and Ports Specify the protocols and ports to	which this rule applies.
		Steps: Rule Type	Does this rule apply to TCP or UDP?
		 Protocol and Ports Action Profile 	● TCP ○ UDP
		Name	Does this rule apply to all local ports or specific local ports? All local ports Specific local ports: 515
5)	Choose '	allow the connection'.	
	•	teps: Rule Type	What action should be taken when a connection matches t
	ت ن	Protocol and Ports Action	Allow the connection This includes connections that are protected with IPsec.
		Profile	

6) Ensure all 3 boxes are checked for the zones to apply.

St	eps:		
۲	Rule Type	W	en does this rule apply?
۲	Protocol and Ports		
۲	Action	\checkmark	Domain
٠	Profile		Applies when a computer is connected to its corporate c
٠	Name	\checkmark	Private
			Applies when a computer is connected to a private netw or work place.
		\checkmark	Public
			Applies when a computer is connected to a public netwo

7) Enter a name such as 'Pcounter LPD - TCP 515' and click Finish to complete the process.

PWindows Defender Firewall with Advanced Security

鹶 New Inbound Rule Wizard	
Name Specify the name and description of this	rule.
Steps:	
Rule Type	
Protocol and Ports	
Action	
Profile	Name:

Name Pcounter LPD - TCP 515

2.3.0 - Create LPR Passthru Printers

In the walkthrough below the printer "Student Hold Queue" located on a Pcounter server is utilized by the WebPrint server. The WebPrint server sends jobs to the Pcounter server via manually created printers that use a LPR port configured to send the job to the Pcounter server's IP and the previously configured LPR queue name from section 2.2.1.

- 1) On the WebPrint Server (<u>not</u> the Pcounter Server), create a new printer using a standard TCP/IP port. Use the same driver that is in use by the destination server/queue.
- 2) Once the printer has been created, go into Printer Properties > Ports and click 'Configure Port'.
- **3)** In the port configuration:
 - **a.** for IP Address, define the IP or DNS name of the Pcounter Print Server.
 - **b.** Set 'Protocol' to 'LPR'.
 - c. For 'Queue Name', specify the LPR Queue Name for the corresponding queue as defined in Pcontrol on the Pcounter Print Server.
- 4) Repeat the process as many times as needed until all printers are created.

	unter Print Server		WebPrint Se	rver
Administrator: Command	Prompt	Configure Standard TC	P/IP Port Monito	r
Ethernet adapter Ether Connection-specific	rnet: c DNS Suffix .:	Port Settings		
Link-local IPv6 Add IPv4 Address	Port Name:		Student Hold Queue	
Default Gateway .	· · · · · · · · · · · · · · · · · · ·	Printer Name or IP Ac	ldress:	192.1.68.1.5
🚇 Pcounter Configuration: \\	PS3	Protocol		
		C Rav	N	LPR
 Global Settings Printers 	Enable LPD Server Simplify dotted us	Raw Settings		
O Popup Data Server Services/Ports Services/Ports Services/Ports Services/Ports		Port Number:	9100	
LPD Server		- LPR Settings		
 Message Text Message Transport 		Queue Name:	Student	HoldQueue

2.4.0 - Test LPR Passthru Printers

Send a test print and ensure it is received on Pcounter Print Server.

1) On the <u>Pcounter Print Server</u>, pause the receiving queue by right clicking it in Pcontrol and clicking 'Pause Printing'. When right clicked again the box should be checked.

😂 Pcontrol			
Utility Pcounter	Server Add-o	ns	
▲ Network View	싎 Pcounter	🕒 Printer 🔻	
Microsoft Windows Network Quick Server List In \\PS3 Student Hold Queue			
	~	Pause printing	

2) On the <u>WebPrint Server</u>, open printer properties for the corresponding LPR Passthru and send a test page.

Head Student Hold Queue Properties					
General	Sharing	Ports	Advanced	Color Management	Security
\$		Student	Hold Queu	e	
Student Hold Queue X					
A test page has been sent to your printer					

3) On the <u>Pcounter Print Server</u>, the test page should show in the paused, receiving queue very quickly. The job status will likely be 'ready' if the queue is not using PPopup.



4) On the <u>Pcounter Print Server</u>, unpause the queue, and the job should both print and disappear from Pcontrol immediately after spooling. Confirm the test page prints at the appropriate printer.

2.5.0 - WebPrint Device List - Adding\Removing Printers

Use this process to make newly added printers available, or remove any unneeded printers, in WebPrint.

- **1)** Browse to C:\Program Files (x86)\Pcounter WebPrint (or wherever it is located) and launch WebPrint64.exe.
- 2) Click the small arrow button (in the middle of the window, on the right) to open a selection window. Choose the printers that will be available in Pcounter WebPrint with checkboxes.
- 3) Make any needed changes, then click OK, and OK again to close the window.

Configure Pcounter Web Print	×
General	
WebPrint Printer: Pcounter WebPrint Printer	▼ Select available printers
Language: English	ExitQueue
Session Timeout: 600 seconds	HoldQueue Portserver2
Print Timeout: 30 🗧 seconds	Printer01
File Size Limit: 10 📩 megabytes (0=unlimited)	Printer02
HTTPS Port: 443 Pcounter options	Public Pull Queue
Drinting Draferences	
ExitQueue	E

3.0.0 - WebPrint Customization

In the WebPrint User Portal, the 'Set Options' dropdown contains all available printer/job options. Many can be customized.

3.1.0 - Setting Default Color Mode

WebPrint defaults to grayscale printing mode. The 'Color printing mode' dropdown will be set to 'Grayscale' by default.

To change the default 'Color printing mode' to 'Color', perform the following steps:

- 1) On the WebPrint server, browse to the WebPrint installation directory, default path is C:\Program Files (x86)\Pcounter for NT\NT\Pcounter WebPrint
- 2) Open WebPrint.html in Notepad.
- Search for: id="jobSubmitColorModeOption
- 4) Change the line from:

<option id="jobSubmitColorModeOption" value="on"></option> To:

<option selected id="jobSubmitColorModeOption" value="on"></option>

/// v	vebpri	int.html	- Note	pad	
File	Edit	Format	View	Help	
				-	<pre> <select <option="" class="optioncontrol" id="jobsubmitGrayscaleOption" name="color" value="off"> <option id="jobSubmitColorModeOption" selected="" value="on"></option> </select> </pre>

5) After making the change, save and overwrite the existing WebPrint.html. The change will take effect after a page refresh.

3.2.0 - Configure Allowed Paper Sizes

When submitting a file to be printed, users can specify the paper size they want to use. The paper sizes available to the user come automatically from the available sizes detected in the corresponding printer's driver. The available sizes can then be further customized with the WebPrintPaperSizes.ini file on the WebPrint server.

Set Options ▼

Letter	~
Letter	
Tabloid	
Legal	
A3	
A4	
	Letter Letter Tabloid Legal A3 A4

-user paper size selection dropdown-

To customize the paper sizes available in WebPrint using WebPrintPaperSizes.ini:

- 1) Navigate to the Pcounter WebPrint directory and double click the WebPrint64.exe to launch the Pcounter Web Print Configuration interface.
- 2) If Microsoft Office is not installed on the server currently an info message will be displayed each time WebPrint is launched. Just click OK to dismiss the message.

3) In the 'Configure Pcounter Web Print' window, click on the left facing arrow button in the center of the right side to open the printer selection window.



- 4) Click OK to close the printer selection window, then click OK again to close the 'Configure Pcounter Web Print' window. <u>This process has generated the file WebPrintPaperSizes.ini.</u>
- 5) Next, navigate to the Pcounter WebPrint directory and open the file WebPrintPaperSizes.ini using Notepad.
- 6) In the .ini there will be a list of all detected paper sizes per printer. By default, all detected paper sizes will be enabled. To disable a paper size, first locate the printer's listed sizes and then in that printer's section locate the needed paper size and change from =1 to =0. In the example image below 'HoldQueue' has been customized to have Letter, A3, and A4 sizes disabled.

🦲 We	ebPrin	tPaperSiz	es.ini - I	Notepad	
File	Edit	Format	View	Help	
[Exi	tQue	ue]			
Lette	er=1				
Tablo	oid=:	1			
Lega:	l=1				
A3=0					
A4=0					
[Hold	dQue	ue]			
Lette	er=0				
Lega:	l=1				
Execu	utive	e=1			
11x17	7=1				
A4=0					
A3=0					
A5=1					
B5=1					
A6=1					
#10 H	Enve	lope=1			

- 7) Open a web browser, navigate to the WebPrint user portal, and login as any user.
- 8) Select a test document, select the printer that has had its paper sizes customized, and then click the paper size dropdown to view the available paper sizes.

Select Printer		
HoldQueue		

set	Op	cion	SV	

Legal 🗸
Legal
Executive
11×17
A5
B5
A6
#10 Envelope

3.3.0 - Setting Default Collate Mode

WebPrint defaults to an uncollated printing mode. The 'collated' check box in the options area will be unchecked by default.

To change the default mode to be collated, thus checking the box in options, perform the following steps:

- 1) On the WebPrint server, browse to the WebPrint installation directory, default path is C:\Program Files (x86)\Pcounter for NT\NT\Pcounter WebPrint
- **2)** Open WebPrint.html in Notepad.
- **3)** Search for:

id="jobSubmitCollated"

4) Change the line from:

<input id="jobSubmitCollated" class="aligned" type="checkbox" name="collate" /> To:

<input checked id="jobSubmitCollated" class="aligned" type="checkbox" name="collate" />



5) After making the change, save and overwrite the existing WebPrint.html. The change will take effect immediately, after a page refresh.

3.4.0 - Banner Icon Customization

- 1) On the WebPrint server, browse to the WebPrint installation directory, default path is C:\Program Files (x86)\Pcounter for NT\NT\Pcounter WebPrint
- 2) Locate the file "Pcounter_Logo_48.png".
- **3)** Either edit the file in MSPaint, or take a custom logo in .png format and overwrite the existing Pcounter_Logo_48.png, making sure to retain the file name.
- 4) Changes to the logo take effect immediately, after a page refresh.

Pcounter WebPrint Logi	n	
	Username:	
	Password:	
		Login

3.5.0 - Display Allowed File Extensions

The 'choose file' text can be customized to display allowed file extensions.

	IE:	
P	customized!	
Sub	omit File for Printing	Help · Logout
	Choose File - <u>Allowed Extensions (.txt</u>	: .jpg .jpeg .bmp . png .pdf)
	Choose File No file chosen	
	Select Printer	
	(Please select printer)	¥
	Set Options ►	
		Preview Print
To mak	ke this change, perform the following steps.	
1)	On the WebPrint server, browse to the Web	pPrint installation directory, default path is
	C:\Program Files (x86)\Pcounter for NT\NT\	Pcounter WebPrint
2)	Open WebPrint.html in Notepad.	
3)	Search for:	

element.innerHTML = "" + chooseFileString

 Change the line from: element.innerHTML = "" + chooseFileString + ""; To:

element.innerHTML = " " + chooseFileString -	" - Allowed Extensions (.pdf .txt .jpg .png .etc)";
---	---

📕 webprint.html - Notepad
File Edit Format View Help
element.innerHTML = " " + fromLiteralString + ": "; element = document.getElementById("jobSubmitToPageLabel"); element.innerHTML = " " + toLiteralString + ": "; element = document.getElementById("jobSubmitProfileLabel"); element.innerHTML = printingPreferencesString + ": ";
<pre>element = document.getElementById("jobSubmitTitle"); element.innerHTML = titleString; element = document.getElementById("chooseFile"); element.innerHTML = "" + chooseFileString + " - Allowed Extensions (.txt .jpg .jpeg .bmp . png .pdf)"; element = document.getElementById("selectPrinter"); element = document.getElementById("selectPrinter"); element = document.getElementById("setOptions"); element = document.getElementById("setOptionsString + " ►";</pre>

5) After making the change, save and overwrite the existing WebPrint.html. The change will take effect immediately, after a page refresh.

3.6.0 - Anonymous User Access

In certain environments where no authentication is required to login to a workstation and submit print jobs, Pcounter WebPrint can also be configured to not require authentication.

To enable Anonymous User Access in Pcounter WebPrint:

- 1) Open regedit on the Pcounter WebPrint server.
- 2) Browse to HKEY_LOCAL_MACHINE\SOFTWARE\Pcounter\WebPrint (Not in Wow6432Node)
- 3) Create a new DWORD named 'AnonymousAccess'
- 4) Set the value to 1 to enable anonymous access. Set the value to 0 to require login.
- e.g.



3.7.0 - User Balance Display

3.7.1 - 'DisplayAccountBalance' Registry Entry

- 1) Open regedit on the WebPrint Server.
- 2) Browse to HKEY_LOCAL_MACHINE\SOFTWARE\Pcounter\WebPrint (*Not* in Wow6432Node)
- 3) Create a new DWORD named 'DisplayAccountBalance'
- 4) Set the value to 1 to display 'balance only' Set the value to 2 to display 'balance and free quota'. Set the value to 0 to display no balances.
 - e.g.



3.7.2 'AllowedAPIAddresses' Registry Entry

- 1) Open regedit on the <u>Pcounter Print Server</u>.
- 2) Browse to HKEY_LOCAL_MACHINE\SOFTWARE\Pcounter\Wow6432Node\DataServer
- 3) Create a new 'String' named 'AllowedAPIAddresses'.
- 4) If the Pcounter Print Server is also the WebPrint Server then only 127.0.0.1 is required.



5) If the Pcounter Print Server is separate from the WebPrint server then enter 127.0.0.1 then the IP address of the other server with a comma as a separator. As many servers can be added as are required, so long as each IP address is separated with a comma.

e.g.			
💣 Registry Editor			
File Edit View Favorites Help			
Image: Second state of the second	Name Name (Default) BalanceMessage BalanceMessageLimit BalanceMessageType CreateNewLog HTTPSPort RawPort BalanceMessageType Default	Type REG_SZ REG_SZ REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD	Data (value not set) %U, your print account balance 0x00000000 (0) 0x00000000 (0) 0x00000000 (0) 0x00000000 (0) 0x00000000 (0) 0x0000192b (6443) 0x0000192a (6442) 122.0.0.1 102.168.2 2011
Computer (HKET_LOCAL_MACHINE (SOFTWARE (WO	pwo4521voue (+counter (patase	erver	-

3.8.0 - Customized DNS WebPrint Access

This section of the guide is intended as a educational resource to help domain administrators understand DNS modification. If additional support is needed with anything DNS related, <u>escalate internally</u>, <u>Google it</u>, <u>or contact Microsoft</u>.

Disclaimer: AND Technologies <u>does not provide support</u> for the processes in this section involving Microsoft Server Snap-in's such as DNSMGMT.msc (DNS Manager). This section is a mere example of one way access to the user portal can be customized.

- In the screenshot below the WebPrint server is named 'Print1'. With WebPrint fully configured, the default path to access the WebPrint User portal would be https://print1.
- Since Print1 is a member of the domain the DNS server automatically has a Host record that allows other users to access the server using the name Print1.
- A CNAME record in DNS can be used to provide an alternate path to the WebPrint user portal.
- In the example screenshot below, we see the host record for the server 'Print1' and we have created a CNAME record for 'Printing' that points to the FQDN of the server Print1 as the target host.
- With the configuration pictured below both '<u>https://printing</u>' and '<u>https://print1</u>' will navigate the user to the WebPrint Portal.



3.9.0 - Alternate PDF/Image Processor 'PDF-XChange'

PDF-XChange is free software that can be used to enhance PDF and image processing in WebPrint. To download, install, and enable PDF-Exchange as WebPrint's PDF and image processor:

- 1) On the WebPrint server, navigate to the PDF-XChange's website: <u>https://www.pdf-xchange.com/product/downloads</u>
- 2) Download PDF-XChange Editor 64-bit MSI installer:

PDF-XChange Editor

Latest Stable Release: 10.2.1.385

(Updated on 22 Jan 2024)

Supported Operating Systems: All current versions of MS Windows opera service updates from Microsoft, are supported for this product.



- **3)** Install PDF-XChange 64-bit MSI on the server and take all the defaults.
- 4) Login to the server as the special **<u>PcounterWebPrintUser</u>**.
- 5) Locate any PDF on the server, right click and choose Open With > Choose another app.
- 6) Click on More apps if necessary and locate PDF-XChange Editor, make sure to check the box 'Always use this app to open .pdf files' and click OK.

PDF PDF-XChange Editor
Preview (Mac)
Safari (Mac)
More apps \downarrow
✓ Always use this app to open .pdf files

7) Open at least one PDF using PDF-XChange until the document is visible, then click on File > Print to open the Print window.



8) Set Page Placement and Scaling > Type to 'Fit to Printer Margins' and click Print to save the needed settings. The document can be deleted from the print queue before it prints to prevent waste.

Printer				
Name:	S Pcour	nter WebPrint Printer	0 ~	Properties
	Status: F Type: M	P <mark>aused</mark> MS Publisher Color Printe	r	Page Setup
-	Copies:	1 🗘 🗌 Collate	Duplex:	Auto (None)
	_			
Sul Curren Selecte	bset: t View ed Graphic	All Odd Even Re	everse Order	
Sul Curren Selecte Page Placem	bset: t View ed Graphic nent and S	All Odd Even Ra	everse Order	
Sul Curren Selecte Page Placem	bset: t View ed Graphic nent and S Type:	All Odd Even Ra	everse Order	
Sul Curren Selecte Page Placen Pag	bset: t View ed Graphic nent and S Type: ge Zoom:	All Odd Even Re Scaling Fit to Printer Margins None	everse Order	

- **9)** To associate PDF XChange with image files, locate a file of each image file format e.g. .JPG, .JPEG, .PNG, .BMP.
- **10)** Right click each file and choose Open with > Choose another app.

PDF			2	
Test Pag (Letter).p	Open Print Open with PDF Extra Share			
	 Open with	>		Books (Mac)
	Open in PDF-XChange Editor		- <u>SS</u> 	ColorSync Utility (Mac)
	Open on Mac Show in Finder Share on	>		Google Chrome Google Chrome (Mac) Microsoft Edge
	Give access to Restore previous versions	>		Microsoft Word (Mac) PDF Extra
	Send to	>	PDF	PDF-XChange Editor
	Cut Copy			Preview (Mac) Safari (Mac)
	 Create shortcut		X	Search the Microsoft Store Choose another app

11) Locate PDF-XChange Editor in the list of available applications and check the box 'always use this app to open XXX files'.



12) If all the above steps were performed successfully, PDF-XChange will now be used for processing PDFs as well as any other chosen image formats.

4.0.0 - Pcounter SSL Guide

4.0.1 - Introduction

This section of the WebPrint guide demonstrates how to use a trusted SSL certificate to allow fully trusted HTTPS access to the WebPrint user portal.

Using a trusted SSL certificate will stop certificate errors from being displayed to users when they access the Pcounter web sites using HTTPS.

AND Technologies uses <u>DigiCert</u> as a Certificate Authority (CA) for this guide. Obtaining and installing a trusted SSL certificate is not a process supported by AND Technologies.

4.0.2 - Overview

Here is an overview of the entire process of enabling HTTPS:

- 1) Obtain a trusted SSL certificate from a CA.
- 2) Install the trusted SSL certificate on the Pcounter server that will host Pcounter WebPrint and/or Pcounter Web Administrator.
- 3) Export a PFX from the trusted SSL certificate using the Windows Certificate Manager.
- 4) Use MakePEM to generate a PEM from the PFX.
- **5)** Test the new PEM by browsing to Pcounter WebPrint and Pcounter Web Administrator using HTTPS.

4.1.0 - Install Trusted Certificate

Obtain a trusted certificate from a CA and install it on the Pcounter server where the Pcounter Data service resides. Usually, a certificate can be installed by simply double clicking it once it is located on the server, then choosing the Local Computer certificate store. Google this for more info.

NOTE. AND Technologies does not provide support for obtaining and installing certificates. Please contact a CA like <u>DigiCert</u> for help obtaining and installing a certificate.

4.2.0 - Create\Export PFX

This process creates a PFX file using an installed, trusted SSL certificate.

- 1) On the Pcounter Data server, open a blank MMC at start>run, type MMC and click OK.
- 2) In the blank MMC window, click on 'File' then 'Add/Remove Snap In'

-	Cons	ole1 - [Cor	nsole Ro	oot]			
	File	Action	View	Favorites	Window	Help	
¢		New				Ctrl+N	
		Open				Ctrl+0	-
		Save				Ctrl+S	F
		Save As					
		Add/Rem	iove Sna	ip-in		Ctrl+M	
		Options					
		1.0000					

4.2.0 - Create\Export PFX - Continued

3) Choose 'Certificates' and click 'Add'

Add or Remove Snap-ins You can select snap-ins for this console from those available on your compu extensible snap-ins, you can configure which extensions are enabled. Available snap-ins: Selected Cor ۰ Vendor Snap-in Microsoft Cor... ActiveX Control Authorization Manager Microsoft Cor... Certificates Microsoft Cor... Ξ Component Services Microsoft Cor... 🞥 Computer Managem... Microsoft Cor... Microsoft Cor... 📥 Device Manager Add > 🚟 Disk Management Microsoft and... 😹 Event Viewer Microsoft Cor... Folder Microsoft Cor...

4) Choose 'Computer Account'

Certificates snap-in	
This same is will show a manage costificates for	
This shap-in will always manage certificates for:	
My user account	
Service account	
 Computer account 	

5) Choose 'Local Computer'

6) Click OK.

Select the computer you want this snap-in to manage. This snap-in will always manage: Local computer: (the computer this console is running on) Another computer: Allow the selected computer to be changed when launching only applies if you save the console.	Sel	ect Compu	ter	_				
 This snap-in will always manage: Local computer: (the computer this console is running on) Another computer: Allow the selected computer to be changed when launching only applies if you save the console. 		Select the	computer	r you war	nt this	snap-in t	o mana	ige.
 Local computer: (the computer this console is running on) Another computer: Allow the selected computer to be changed when launching only applies if you save the console. 		This snap	o-in will al	ways ma	nage	:		
 Another computer: Allow the selected computer to be changed when launching only applies if you save the console. 		Local	l comput	er: (the o	comp	uter this c	onsole	is running on)
Allow the selected computer to be changed when launchin only applies if you save the console.		Anot	her comp	uter:				
		Allov only	v the sele applies if	ected cor you sav	npute e the	r to be ch console.	nanged	when launchi
							-	
				ОК		Cancel		

4.2.0 - Create\Export PFX - Continued

7) In the explorer pane on the left, browse to Certificates > Personal > Certificates. This will display local machine certificates that are currently installed.

<mark> loc</mark>	al compute	er certi	ficates - [(Console Ro	ot\Certific	ates (Local	l Comp	uter)\Personal\Certificates]				
🚡 File	e Action	View	Favorites	Window	Help							
<pre></pre>) 🖄 🗖		0 🗟	?								
Co 📔	nsole Root			Issued T	o 🔺			Issued By		Expiration D)ate	Int
🗆 🗔	Certificate	s (Local	Computer)	LeJWMS	vc-PRINT1			WMSvc-PRINT1		6/3/2024		- Ser
=	Person	al		🛛 🖾 www	.pcountersf.	.com 🛑		DigiCert SHA2 Secure Server CA		1/4/2020		ser
	🚞 Ce	rtificate	s 💶 🛛						_		-	_

- 8) In the example screenshot above, there is a trusted certificate installed for <u>www.pcountersf.com</u>, issued by DigiCert, expiring 1/4/2020.
- 9) Right click the trusted certificate and choose 'All Tasks' > 'Export'. (NOTE, certificates that start with, and are issued by, WMSVC are not trusted and cannot be used for this process)

1	Issue	ed To 🔺	Issued By
	2 . w	/MSvc-PRINT1	WMSvc-PRINT1
	19 W	ww.pcountersf.com	n DigiCert SHA2 Secure Server CA
		Open	
		All Tasks 🔸	Open
1		Cut	Request Certificate with New Key
		Сору	Renew Certificate with New Key
ł		Delete	Manage Private Keys
		Properties	Advanced Operations
ī		Help	Export

10) Click next on the first screen, then choose 'Yes, export the private key' and click next.



11) Check the box for 'include all certificates in the certification path if possible' and click next.



4.2.0 - Create\Export PFX - Continued

12) Confirm a password and click next.

NOTE. This password will be used again, make a note of it.

T	ype and confirm a password.	
	Password:	
	•••••	
	Type and confirm password (mandatory):	
	•••••	

13) Specify a location, like c:\, and a file name, like Pcounter.PFX, and click next.

File to Export Specify the name of the file you want to export	
File name: pcounter.pfx	Browse

14) Click Finish.

< Back	Finish	Cancel

15) 'The export was successful' should display in a popup window if successful, and the PFX will be in the directory specified in step 13.

Certificate Export Wizard	×
The export was successful.	
ОК	

4.3.0 - Create PEM

Using the PFX created in the previous section, we will generate a PEM that Pcounter can use for web services.

- 1) Download makepem.zip at: <u>https://apps.pcounter.com/supportfiles/MakePEM.zip</u>
- 2) Open the makepem.zip and extract the MakePEM folder to c:\
- **3)** Open a command prompt.
- 4) Use a CD command and change to c:\MakePEM or wherever the MakePEM directory was extracted to.



5) Run the command:

makepem c:\pcounter.pfx

c:\MakePEM>makepem c:\pcounter.pfx

6) Enter the PFX password created in step 12 of section 1.1 and press enter.

C:∖≻cd c:∖makepem
c:\MakePEM>makepem c:\pcounter.pfx
Enter Import Password:

- 7) When prompted to copy the Pcounter.pem to c:\windows\syswow64\pcounter, type y and press enter.
- 8) If successful, the message '1 file(s) copied' will be displayed.

```
C:\>cd c:\makepem
c:\MakePEM>makepem c:\pcounter.pfx
Enter Import Password:
MAC verified OK
Copy pcounter.pem to C:\Windows\SYSWOW64\PCOUNTER? (Y/N) y
1 File(s) copied
```

9) Go to services.msc and restart the Pcounter Data service to accept the new PEM.

4.4.0 - Testing HTTPS

- 1) To test, browse to Pcounter WebPrint Jusing HTTPS.
- If successful, there will be no certificate warning message displayed in the browser. Also, the certification path will show the root, intermediary, and server certificates in a tree layout.



3) If <u>unsuccessful</u>, there will be a privacy or SSL error displayed.



5.0.0 - Conclusion & Links

This concludes the guide. If there are any questions, please email <u>support@pcounter.com</u>.

Links to common Pcounter Videos:

Pcounter for Windows - Prepare, Install, Configure: <u>https://www.youtube.com/watch?v=hyOaYOnVp3k</u>

Pcounter Administrator Training Video Part 1: <u>https://www.youtube.com/watch?v=FxwmXCE6ebU</u>

Pcounter Administrator Training Video Part 2: <u>https://www.youtube.com/watch?v=5jLsOj4tKJw</u>

Pcounter Popup Training Video: <u>https://www.youtube.com/watch?v=chSbuDZJIhQ</u>

Pcounter for Windows - Balance.exe as a Web App: https://www.youtube.com/watch?v=J_IVgsgopnI

All Pcounter Videos: <u>https://www.youtube.com/user/andtechsf</u>