

Pcounter Station

**Win32 Printer Accounting Release Station
for
Windows and NetWare networks**

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Requirements

Software Requirements

- Windows 2000 or later.
- NetWare support requires Novell Client 32.
- Pcounter running on the print server in order for cost of print jobs to be calculated, and/or to automatically pause jobs in print queues.

Hardware Requirements

- A CPU fast enough and sufficient RAM to run the OS efficiently.
- If **Remote to local printing** is being used, enough disk space to store 2 jobs for each local printer.

Overview

Pcounter Station is printer accounting release station software that runs on a dedicated Windows PC, to be used in controlled or pay-to-print environments. After users send print jobs from other workstations, they can approach the station, select the jobs they wish to send to the printer, and submit some form of payment through devices such as card readers or cash machines. Pcounter Station locks down the PC so that users cannot exit, and the Pcounter Station software is the only application that is shown on the computer's display.

Pcounter Station works with print queues hosted on Windows 2000 or later, and NetWare. NetWare support includes NDS queues, Bindery queues, and NDPS printers.

Generally Pcounter for Windows or Pcounter for NetWare should be running on the print server, in order to automatically pause/hold jobs, and to calculate the page counts and cost of print jobs.

Run **PSConfig.exe** to configure and setup Pcounter Station.

Pcounter Station can be used as a network print server so that local printers can be attached, and can be configured as a NetWare queue server and/or an LPD server.

Pcounter Station is also able to route print jobs to single and multiple destination print queues.

Print queues

- Pcounter Station will display all jobs in the specified queues.
- **Specify a nickname** in order to display a “short” or “descriptive” name. If no nickname is configured, then Pcounter Station will display the full UNC path.
- Individual print queues can be configured to bypass vending, so that users are not charged for printing on these queues.
- Pcounter Station is able to delete duplicate jobs and/or enforce page count limits on individual print queues. The Pcounter server can be configured to do this as well, but the benefit here is that users are shown a message on the Pcounter Station screen, and the jobs are deleted immediately before they are released for printing and processing by the Pcounter server.
- Typically all jobs sent to these queues should be **paused or held by Pcounter**, so that when a user selects jobs for printing, Pcounter Station will remove the pause/hold and release the jobs to be printed.

Required network permissions

Windows 2000 and later	The logged on user requires Manage Documents permission to printers.
NetWare queues	The logged on user should be a Queue operator of each queue.
NDPS printers	The logged on user should be a Printer operator of each printer.

Destinations

Each source print queue which is being monitored by Pcounter Station can be assigned multiple job destination print queues. Jobs that are selected to print by the user can be sent to one destination queue.

- If the destination list is empty, then all selected held/paused jobs will be resumed within the source queue being monitored by Pcounter Station.
- If the destination list contains one single print queue, then all selected jobs will be moved from the source print queue to the destination print queue.
- If the destination list contains multiple print queues, then the user will be prompted to choose the destination print queue where the jobs should be sent. If the source queue is included in a multiple destination list and is chosen by the user, then the selected held/paused jobs will be resumed within the source queue.

Limitations

- Jobs on Windows servers can only be moved to print queues on the same server. Pcounter 2.10e or later is required to be running on the Windows server.
- Jobs on NDPS printers can only be moved to NDPS printers on the same tree.
- The NetWare queue server should not be used on source queues which are configured with multiple destinations.

Destination Configuration Scenarios

- Multiple Pcounter Stations can be configured to monitor the same source queue, each with its own unique destination. Each destination is connected to a printer which is physically located near each station.
- A single Pcounter Station can be configured with multiple destinations for a single source queue. Destinations are connected to similar printers, and users may choose an idle printer, achieving a type of load balancing.
- Print jobs can be forwarded to remote destinations which may not have payment options that are available at the Pcounter Station site.

Global Settings

These settings affect the overall operation of the Pcounter Station.

Language

If Pcounter Station detects the default language as French, Spanish, German, Portuguese, Swedish, Danish, Finnish, Czech, or Dutch, it will use that language for all displays. Otherwise it will use English.

Program functionality

- **Release station**
Pcounter Station will be the only application available and locks down the desktop so that no other applications are accessible.
- **Operator console**
Pcounter Station will run as a standard Windows application. It can be used as a simple printer operator utility. This setting should be used for testing the station.

Numerical format

The numerical format determines how costs are displayed. The actual costs are specified in Pcounter printer/queue configurations and are discussed in more detail in the Pcounter documentation.

- **Currency**
Accounting is kept in terms of local currency. The type and format of the local currency are determined from local Windows settings.
- **Units**
Use this setting for devices which use their own accounting units, or if Pcounter is using the Numerical format = Pages setting.

User identification

- **None (Show all print jobs)**

Print jobs from all users are shown at all times. Any user can select any job. This requires the most screen updates.

- **Job user list**

A list of print job owner names is shown, and only print jobs from the selected user are displayed. This can be more efficient and easier to navigate on busy networks.

- **Job user list with password**

Same as Job user list above, except that users are required to type their network passwords before any print jobs are shown. If Pcounter Popup is being used to enter individual print job IDs and passwords for security, in situations where network credentials are not used, then users can type the print job password to gain access, and it will not be necessary for the users to type the passwords again in order to release print jobs.

- **ID Prompt**

Users are prompted for an ID to enter. If no jobs are available for that user, then Pcounter Station will return to the prompt.

- **ID/Password Prompt**

Users are prompted for an ID and password to enter. If the login is incorrect or no jobs are available for that user, then Pcounter Station will return to the prompt.

- **ID/Password deposit only**

Users are prompted for an ID and password to enter. Users can make deposits to their account balance, but no access to print jobs is provided.

- **Job ID/Password Prompt**

This setting should only be used if Pcounter Popup is being used to enter individual print job IDs and passwords for security, in situations where network credentials are not used. Users can type the print job ID and password to gain access, and it will not be necessary for the users to type the passwords again in order to release print jobs.

- **Pcounter Pro ID only, Pcounter Pro ID/PIN**

Pcounter Pro ID and PIN numbers are defined in Pcounter Administrator, and are mapped to network accounts. This setting should be used with ID cards being swiped via wedge readers. Wedge readers send the card data through the computer's keyboard stream, just as if a user had typed it.

Requirements for Pcounter Station to authenticate network passwords

- If the Novell Client 32 is installed, then the Pcounter Station is able to authenticate NetWare passwords without any additional configuration.
- In order to authenticate Windows domain passwords, the computer on which the station is running must have a computer account created in the domain.

Authenticating Novell NDPS jobs from LPR and IPP clients

- Set User Identification = Require net password
- Users appear in the display as username@hostname or username@xx-xx-xx-xx-xx-xx (MAC address)
- Jobs chosen from that username will require an NDS ID and password
- All selected jobs will have the job owner changed to the specified NDS ID.

Refresh information every ??? seconds

This is the number of seconds which will elapse between each refresh of the display, whether user names or print jobs are being shown. Making the interval too short will cause unnecessary network traffic.

Close dialogs after ??? seconds of inactivity

If no user input has been detected, then all dialogs will be closed and/or users will be logged off of the station console after the specified number of seconds.

Only display jobs which are paused

If this setting is enabled, then jobs that have been released will not be shown.

Display print job page counts

This setting requires Pcounter running on the print server with the **Count jobs in advance for display** setting enabled in the printer or queue's Pcounter configuration. This allows users to see the number of pages in each print job so that they can determine whether they want it to be printed.

Display print job cost

This setting requires Pcounter running on the print server with the **Count jobs in advance for display** setting enabled in the printer or queue's Pcounter configuration. This allows users to see the cost of each print job so that they can determine whether they want it to be printed.

Show printer name column

If only one printer is being managed by Pcounter Station, then it might be useful to simplify the display by hiding the column that displays the printer name.

Display print job byte size

It might be useful to simplify the display by hiding the column that displays the print job byte size.

Display date in submitted time column

If the Pcounter server is deleting paused/held jobs after a certain amount of time, and Pcounter Station is only showing today's print jobs, then it might be useful to simplify the display by only displaying the time that the jobs were submitted.

Display client code column

If the Pcounter Popup client is being used to enter client codes, then Pcounter Station can display the client codes.

Only display jobs which have been counted

If this setting is enabled, then jobs that have been released will not be shown.

Allow users to delete jobs

If passwords are not required, then any user can delete any job. Disabling this setting prevents any job from being deleted at the Pcounter Station console.

Display computer names instead of user names

This feature is useful in situations where users do not logon to workstations in order to print, and/or the same user is logged on to multiple workstations. Pcounter Station can display the workstation names in order to make print job selection easier. Pcounter account balance operations are not available if this feature is selected, since user names are ignored.

- Jobs on NetWare queues and NDPS are only able to display IP and/or IPX addresses.

Use DNS to resolve workstation IP addresses

In some cases, only the print job client workstation IP address may be available. If the above feature **Display computer names instead of user names** is selected, then Pcounter Station will try to use DNS to resolve the computer names. This may reduce performance.

Only display popup-processed jobs

(Windows/NDPS/iPrint only) If Pcounter Popup (or Web Client) is used, then jobs are paused so that the popup window can trigger on the workstation. The Pcounter printer setting **Keep Job Paused After Popup** would be required in order to use Pcounter Popup and Pcounter Station together. This Pcounter Station setting is useful to display only the jobs with which users have processed Pcounter Popup on the workstations.

Set admin/exit password

If an exit password is set, then Pcounter Station will require this password to be entered in order to shut it down. Pcounter Station is able to recognize 2 different passwords. These passwords can also be used to override vending and allow free prints.

Appearance

- **Window title**
The station's caption title bar can display any desired text.
- **Font**
The station can use any font installed on the system. Larger point sizes can be automatically used for easier viewing without requiring configuration changes in Control Panel.
- **Display grid lines in print job list**
Lines can be drawn between print jobs in the list.
- **Use checkboxes to select jobs**
This setting allows selection of multiple jobs without requiring a keyboard.
- **On-Screen Keyboard**
Allows text to be entered without a keyboard. The screen position can be fixed or movable.
Note: If a serial vending device is configured, then it is necessary to disable serial port polling in OSK.
 - ◆ Login to the Pcounter Station machine using the Pcounter Station Automatic Logon account, because the OSK configuration modes indicated below are per-user settings.
 - ◆ Run OSK
 - ◆ Choose Settings → Typing mode
 - ◆ Select → Joystick or key to select
 - ◆ Press the Advanced button
 - ◆ Uncheck Serial, Parallel, or Game Port
 - ◆ Press OK to save
 - ◆ Set typing mode back to → Click to select
 - ◆ Press OK to save
- **Button style**
A number of different styles are possible.
- **Background setting**
Requires the station to be locked down, and **User Identification cannot be set to Display all jobs**. This can be either a solid color background or a tiled background bitmap (in Windows BMP format).

Automatic logon

It's important for the station to be able to logon to the system and/or network automatically so that the Pcounter Station can run with permission to perform necessary operations. There is a basic username and password, which are used to access the local machine, and/or Windows network.

If Novell Client 32 is installed, then an additional NetWare username and password are required.

Vending

External accounting device

Pcounter Station includes built-in support for the following devices. All are serial devices that connect to a COM port on the Pcounter Station computer.

Cartadis TC4N and TCRS	Card readers
Danyl/Schlumberger D/AUX	Card reader
Debitek Magnetic/Chip Card Readers	Card readers
ITC 1015, 2015/ACT 350	Card readers
Jamex 6557	Coin/Bill pay station
Jamex 7114	Card reader
TBS 9500	Coin/Bill pay station
Diskette	For testing purposes, uses a diskette to imitate a card reader

If no accounting device is configured, then paused/held jobs are released without question. Only jobs that are paused or held will be passed to the DLL for accounting.

Custom accounting DLLs can be developed which interface to devices such as card readers or external databases, which can be used to accept payment for printing. Please contact A.N.D. Technologies for information on developing accounting DLLs for the Pcounter Station.

ITC 1015 Configuration Note - The following internal switch settings are recommended:

- Bank A, Switch 2 = Off
- Bank A, Switch 3 = Off
- Bank A, Switch 4 = Off (Allow refunds to card) or On (Do not allow refunds to card)
- Bank C, Switch 8 = Off

Debitek Reader Note

- Set the reader baud rate to 9600.

Logging transactions

All vending transactions can optionally be written to Transactions.csv in the Pcounter Station program directory.

Always display eject button

All user prompt windows and the main print jobs window will have an Eject button in case the user has inserted a card or cash in the vending device, and decides not to proceed. An eject action is always generated when the Logout button is pressed, regardless of this setting.

Check account balances

If the External accounting device above is used, Pcounter Station can optionally check Pcounter account balances to see if users have sufficient Pcounter credit to print selected jobs. This allows Pcounter Station to act as both a deposit station, and a print job release station. If Pcounter is deducting credit from user account balances as payment for print jobs, then this can make it possible for users to add credit directly to their accounts from the station using a payment device.

If the user has a sufficient account balance to cover the cost of selected jobs, then jobs are released for printing, without prompting the user. If an accounting device is configured, the user will be prompted for a deposit. Otherwise, the user will not be allowed to release the selected jobs.

This feature requires that the Global setting **User Identification not be set to Display all jobs**.

Pcounter for Windows - the Pcounter Data Server must be specified, and the logged on station user requires Read/Write permission to the Pcounter shared directory.

Pcounter for NetWare - the default file server where Pcounter global settings are stored must be specified, and the logged on station user must be granted attribute rights to modify account balances in NDS (press the ← Rights button).

If the External accounting device above is not used, Pcounter Station can still display the user's account balance for information purposes.

Account balance action

Pcounter server modifies balances

- If the account balance value is enough to cover the cost of the selected jobs, then the jobs are released to print without question.
- If the account balance value is **not** enough to cover the cost of the selected jobs, and a vending device is configured, then the user is prompted to make a deposit for at least the minimum amount required to cover the cost of the selected jobs.
- Otherwise the jobs will not be released.
- It is assumed that the Pcounter server is deducting the job cost from account balances at the time the job is printed.

Pcounter Station modifies balances

- If the account balance value is enough to cover the cost of the selected jobs, then Pcounter Station deducts the cost from the account balance and updates the display before releasing the jobs.
- If the account balance value is **not** enough to cover the cost of the selected jobs, and a vending device is configured, then the user is prompted to pay the amount required to cover the cost of the selected jobs.
- Otherwise the jobs will not be released.

Ignore

- Account balances are displayed, but there are otherwise no restrictions on job release.

Display/Use free quotas

Free quotas will be shown on the account balance display when this feature is enabled. In addition, if one of the Account balance actions are enabled, then the user's free quota will be added to the account balance to determine the available credit for releasing print jobs.

Disable deposits

Assuming that Pcounter is deducting credit from user account balances as payment for print jobs, this feature disables the ability for users to make deposits. If users do not have sufficient account balance to cover the cost of selected jobs, then users may not make payments which exceed the cost of the jobs. This is useful in scenarios where users are granted a certain amount of free printing, and after that amount is exceeded, users are forced to pay only the cost of the print jobs using the accounting device. However, deposits are still made in the background for the amount of each individual payment – Pcounter will deduct the cost from the balance after the job is printed.

Disable change on deposits

Disables the ability to "Eject" or make change from deposits. This setting is intended for coin/bill units such as the TBS 9500. All cash that is put into the machine will be applied to the deposit, and no change will be given.

Administrators - Bypassing vending

If Check Account Balances is off, free prints can be granted by pressing F9 while print jobs are selected. An administrator can then enter a password, which will bypass the vending functions.

Free printing schedule

It is possible to schedule free printing events during specific times. All vending prompts will be disabled during these events, and users will be able to release jobs without being asked for payment. Free printing events may be specified every day during time ranges, specific days of the week during time ranges, or during calendar date/time ranges. Free printing events may be specified for the local station, or globally for all stations. The global free printing event configuration file will be located in a network location, depending upon the type of network software being used.

Pcounter for Windows – PStation.ini will be located on the root of the Pcounter share on the Pcounter Data Server.

Pcounter for NetWare - PStation.ini will be located in \sys\public, on the default server specified in the Pcounter Station Networking configuration. Make sure that the Pcounter Station login accounts have Read permission to this file if global free printing events are specified.

Secure Release

Pcounter Station can be setup in two ways such that users require passwords to access their pending print jobs - using network passwords or individual print job passwords.

Network passwords

On the **Global Settings** page of the **Pcounter Station** configuration, set **User Identification = Require net password**. The user will be required to enter the password associated with his/her network account in order to access pending print jobs. This method should be used if print job owner names are to be preserved for recording by Pcounter.

Individual print job passwords

This method should be used in situations where users are logged onto public computers with shared logon names, and jobs can be identified with a more descriptive username and/or password.

Pcounter 2.07 or later (Windows) or Pcounter 5.12 or later (NetWare) are required for support of these features.

- On the **Global Settings** page of the **Pcounter Station** configuration, **User Identification** can be set to **None (Show all print jobs)** or **Job user list**.
- **Pcounter Popup** (PPopup.exe) is required to be running on the workstations.
- In the **Pcounter server** configuration, on the **Popup** tab, set the **Window type = ID and Password**. **Password authentication** should be set to **Job ID - Job Password Optional** or **Job Password Required**.
- In the **Pcounter printer or queue** configuration, make sure that **Enable popup window** and **Keep job paused after popup** are selected. **Count jobs in advance for display** should be selected in order for Pcounter Station to show the page count and cost for each job.
- The user will use PPopup to enter a new username and password for each individual print job.
- If any print jobs require a release password, then they will have a **key icon** shown next to them in Pcounter Station's display. Jobs will not be released for printing if the job password entered at Pcounter Station is not the same as the password entered at the PPopup prompt.

Remote to local printing

Pcounter Station supports secure methods of receiving print jobs from remote servers so that they can be printed on locally attached printers.

- A print queue should be installed locally for each printer. Typically the printer will be connected to a parallel or USB port on the Pcounter Station computer.
- Local print queues **should not be shared** for Windows users, so that printing will not bypass the remote print server. If remote administration of the Pcounter Station local queues is required using a GUI such as Pcontrol, sharing can be enabled, but restrict access to administrators only if possible.
- It does not matter which drivers are installed with the local print queues since printing will not be done directly to these local queues.
- If the local print queue is paused, remote print jobs will not be accepted.
- If the local print queue has more than one job waiting, remote print jobs will not be accepted until only one job is waiting or the local queue is empty. In cases such that the local printer has an error and has stopped printing, this will prevent local jobs from backing up in the queue and users being charged for print jobs which have not been printed yet.

LPD Server

Pcounter Station can receive print jobs via LPR from remote print servers.

To activate LPR printing to a local print queue:

- Assign an LPR queue name to the local print queue.
- For extra security, add IP addresses of remote print servers to the host access list in order to prevent anyone from printing to the local queue via LPR. If the host access list is empty, then anyone who knows the IP address of the Pcounter Station computer and the LPR queue name will be able to print without restriction.
- On the remote print server, configure LPR printing by using the IP address of the Pcounter Station computer and the local LPR queue name.
- If Pcounter for Windows is running on the remote print server, configure the remote print queue to use the Pcounter LPR port.
- If Pcounter for NDPS is running on the remote print server, configure the Novell Printer Gateway to print via LPR to the Pcounter Station queue.
- If Pcounter for NetWare queues is running on the remote print server, these options are available:
 - ⇒ Configure Pcounter to use Active Printing Mode and setup a Pcounter printer object to service the queue, using the LPR port configuration.
 - ⇒ Use the Pcounter Station NetWare queue server and configure Pcounter to use Queue Monitor Mode on the server.

NetWare queue server

Pcounter Station can retrieve print jobs from NetWare queues to local print queues.

To activate the NetWare queue server:

- Assign a NetWare queue to the local queue.
- The user object which is configured for **Automatic logon** will be designated as a queue server for the NetWare queue. If the Automatic logon configuration is incomplete, then Pcounter Station will not be able to retrieve jobs from NetWare queues.
- If Pcounter for NetWare queues is running on the remote print server, configure Pcounter to use Queue Monitor Mode on the server.
- The NetWare queue server should not be used on source queues which are configured with multiple destinations.

Other information

Station security

When Pcounter Station is running, nothing else on the desktop is accessible. It enlarges to the full screen size and prevents the taskbar and other programs from being seen. All Windows hotkeys are disabled. Make sure that the software component is installed that disables Ctrl-Alt-Del so that malicious users cannot shutdown the system or logoff.

Testing the station

During setup and testing, Pcounter Station can be run without being locked down, so that other software is accessible on the desktop. Make sure that the Global Setting: **Program functionality** is set to **Operator Console**.

Customizing station text

All text that is shown on Pcounter Station can be changed. Create a text file called StationText.ini in the same directory as PStation.exe. All entries should be placed in the [Strings] section. The text shown below demonstrates the English default values.

```
[Strings]
0=Username
1=Document
2=Status
3=Pages
4=Cost
5=Printer
6=Client code
7= Size
8=Submitted
9=Number
10= &Print
11=&Delete
12=&Refresh
13=&Logout
14=&Deposit
20=Error
21=&Cancel
22=Error opening %s.\n\n%s
23=No printers have been configured.\nUnable to continue.
24=The document %s\nuses the paper size %s, which is not allowed.
25=The logon was incorrect.
26=Error moving print job:\nNo output queues are configured for %s.
27=Error creating print job:\n%s\n\nRetry?
28=Error deleting print job:\n%s
29=There are no print jobs waiting for %s.
30=Enter exit password
31=Checking %s
32=Reading print job
33=Reading file: %d%%
34=Password:
35=Select print job username:
36=Print selected jobs
37=Delete selected jobs
38=Refresh list of print jobs
39=Exit and logout
40=Unable to load %s.
```

41=Error resuming print job:\n%s
42=&Restore
43=Mi&nimize
44=/Error
45=/Paused
46=/Deleting
47=/Spooling
48=/Printing
49=/Offline
50=/Paper out
51=/Printed
52=/Deleted
53=/Blocked
54=/User intervention required
55=/Restarting
56=/Ready
57=Add to account balance
58=&Print Jobs
59=Select printer
60=Error %X moving print job.
61=Documents waiting
62=Printer is paused
63=.\nPrint anyway?
64=Information
65=Account balance
66=Computer name
67=Select computer:
68=&Eject
69=&Transfer
70=No card is in the reader.
71=No response from device.
72=Insufficient credit available.
73=Bad card in reader.
74=Total cost required:
75=Available credit on card:
76=Available cash:
77=Deposit to account balance
78=Restore credit to card
79=Current account balance:
80=Please wait...
81=Available cash:
82=Invalid amount specified.
83=Amount exceeds maximum allowable value on card.
84=Amount to transfer:
85=&Finish
86=&Next >
87=\nPlease enter your card ID number,\nor swipe your card in the card reader.
88=\n\nPlease enter your PIN number.
89=Duplicate print jobs have been deleted.
90=Print jobs larger than %d pages have been deleted.
91=Deposit received:
92=Free quota
93=Amount of credit used:

Configuration Scenarios

Using Pcounter account balances and vending devices

- Summary
- Pcounter server printers are configured with Accounting = User Account Balances and Log File. If the user does not have enough credit in their account to cover the cost of the print job, then Pcounter will not allow jobs to print.
 - Pcounter Station is configured to use a vending device and account balances (PSConfig vending tab)
- Action
- If the user has enough credit to print, then the jobs are released without question, and Pcounter on the server deducts the cost from the user's balance after the job has printed.
 - If the user does not have enough credit to print, then Pcounter Station prompts the user to make a deposit, for the minimum amount required to pay for the job. The user is able to deposit more than the minimum, which can then be applied to future print jobs. Once the deposit has been made, and the user has sufficient credit in their account balance, then the jobs are released, and Pcounter on the server deducts the cost from the user's balance after the job has printed.
 - The Deposit button can be used to make deposits, without requiring any selection of print jobs.

Using secure release print job passwords without network accounts

- Summary
- Pcounter Popup and Web Client can allow individual print job passwords to be set, without requiring a network user account. An ID is used for users to identify their jobs, and the password is required in order to release the jobs.
- Pcounter server
- **(Pcounter server configuration)** On the Popup tab, set the **Window type** = ID and Password. **Password authentication** should be set to Job ID – Job Password Optional or Job Password Required.
 - **(Pcounter printer configuration)** On the Settings tab, make sure that **Enable popup window** and **Keep job paused after popup** are selected. **Count jobs in advance for display** should be selected in order for Pcounter Station to show the page count and cost for each job.
 - **Ppopup.exe** should be running on client workstations (except if Web Client is being used).
- Pcounter Station
- **(Global Settings – User Identification)**
 - If one of the password options is being used, then that password will be used to find any jobs which require the same password, and is the password is automatically used in that user session, until logout.
 - If User Identification is not using a password option, then one password can be used to release multiple jobs, if the password on all of the jobs match.
 - Jobs that require a secure release password are displayed with a key icon.

Pcounter Station with USB/Parallel printer connected

- Summary
- Pcounter Station has one local printer connected via USB or parallel
 - Jobs are spooled/queued on a Pcounter print server
 - When jobs are selected/released, the jobs are sent via LPR to the Pcounter Station local print queue, and prints on the Pcounter Station printer

- Pcounter server
- Create first printer with sharing.
 - Printer named PStation1, share name **\\SERVER\PSTATION1**
 - All users print to this share.
 - Configure Pcounter on PStation1 printer to Pause all jobs (Super Pause) and Count jobs in advance
 - Setup PStation1 printer to use Pcounter LPR port (Windows) or Novell Gateway (NDPS) or Active Printing Mode LPR (NetWare Queues)
 - IP address = IP address of **Pcounter Station**
 - Queue name = Printer1

- Pcounter Station
- Create a local printer on a USB or parallel port (Do not share), named Printer1
 - Run PSConfig on **Pcounter Station**
 - Add **\\SERVER\PSTATION1** to the list of monitored print queues.
 - Leave the destination for **\\SERVER\PSTATION1** as Release Paused Jobs.
 - Choose Remote to Local Printing, LPR
 - Enable LPR, set LPR queue name for Printer1 to Printer1
 - Restrict IP addresses to the Pcounter server, so that users cannot print via LPR to this printer and bypass the Pcounter server.

Windows server – 2 Pcounter Stations - 2 USB/Parallel printers

Each Pcounter Station has one local printer connected via USB or parallel
Users select jobs at Pcounter Station where printer is not busy

- Summary
- **\\SERVER\STATION** prints to **Pcounter Station #1** local printer Printer1 via LPR
 - **\\SERVER\STATION2** prints to **Pcounter Station #2** local printer Printer2 via LPR
 - All users should print to **\\SERVER\STATION**
 - Printers should be similar or identical models.
 - Use a compatible printer driver for Printer1 and Printer2 if they are different models
 - Users at **Pcounter Station #1** release jobs to Printer1
 - Users at **Pcounter Station #2** release jobs to Printer2
- Pcounter Windows server
- Create first printer with sharing.
 - Printer named PStation1, share name **\\SERVER\STATION**
 - All users print to this share.
 - Configure Pcounter on PStation1 printer to Pause all jobs (Super Pause) and Count jobs in advance
 - Setup PStation1 printer to use Pcounter LPR port
 - IP address = IP address of **Pcounter Station #1**
 - Queue name = Printer1
 - Create second printer **without sharing**.
 - Printer named PStation2
 - Users should not print directly to this printer.
 - Configure Pcounter on PStation2 printer as needed, but **do not** Pause all jobs and Count jobs in advance is **not necessary**.
 - Setup PStation2 printer to use Pcounter LPR port
 - IP address = IP address of **Pcounter Station #2**
 - Queue name = Printer2
- Pcounter Station #1
- Create a local printer on a USB or parallel port (Do not share), named Printer1
 - Run PSConfig on **Pcounter Station #1**
 - Add **\\SERVER\STATION** to the list of monitored print queues.
 - Leave the destination for **\\SERVER\STATION** as Release Paused Jobs.
 - Choose Remote to Local Printing, LPR
 - Enable LPR, set LPR queue name for Printer1 to Printer1
 - Restrict IP addresses to the Pcounter server, so that users cannot print via LPR to this printer and bypass the Pcounter server.
- Pcounter Station #2
- Create a local printer on a USB or parallel port (Do not share), named Printer2
 - Run PSConfig on **Pcounter Station #2**
 - Add **\\SERVER\STATION** to the list of monitored print queues.
 - Set the destination for **\\SERVER\STATION** to **\\SERVER\STATION2**.
 - Choose Remote to Local Printing, LPR
 - Enable LPR, set LPR queue name for Printer2 to Printer2
 - Restrict IP addresses to the Pcounter server, so that users cannot print via LPR to this printer and bypass the Pcounter server.

Novell NDPS – 2 Pcounter Stations - 2 USB/Parallel printers

Each Pcounter Station has one local printer connected via USB or parallel
Users select jobs at Pcounter Station where printer is not busy

- Summary
- **PStation1.ou.org** prints to **Pcounter Station #1** local printer Printer1 via LPR
 - **PStation2.ou.org** prints to **Pcounter Station #2** local printer Printer2 via LPR
 - All users should print to **PStation1.ou.org**
 - Printers should be similar or identical models.
 - Use a compatible printer driver for Printer1 and Printer2 if they are different models
 - Users at **Pcounter Station #1** release jobs to Printer1
 - Users at **Pcounter Station #2** release jobs to Printer2
- Pcounter NDPS server
- Create first printer called **PStation1.ou.org**.
 - All users print to this printer.
 - Configure Pcounter on PStation1 printer to Hold all jobs (Operator Hold) and Count jobs in advance
 - Setup PStation1 printer to use Novell LPR gateway
 - IP address = IP address of **Pcounter Station #1**
 - Queue name = Printer1
 - Create second printer called **PStation2.ou.org**.
 - Users should not print directly to this printer. Permissions should be set accordingly.
 - Configure Pcounter on PStation2 printer as needed, but **do not** Hold all jobs and Count jobs in advance is **not necessary**.
 - Setup PStation2 printer to use Novell LPR gateway
 - IP address = IP address of **Pcounter Station #2**
 - Queue name = Printer2
- Pcounter Station #1
- Create a local printer on a USB or parallel port (Do not share), named Printer1
 - Run PSConfig on **Pcounter Station #1**
 - Add **PStation1.ou.org** to the list of monitored print queues.
 - Leave the destination for **PStation1.ou.org** as Release Paused Jobs.
 - Choose Remote to Local Printing, LPR
 - Enable LPR, set LPR queue name for Printer1 to Printer1
 - Restrict IP addresses to the Pcounter server, so that users cannot print via LPR to this printer and bypass the Pcounter server.
- Pcounter Station #2
- Create a local printer on a USB or parallel port (Do not share), named Printer2
 - Run PSConfig on **Pcounter Station #2**
 - Add **PStation1.ou.org** to the list of monitored print queues.
 - Set the destination for **PStation1.ou.org** to **PStation2.ou.org**.
 - Choose Remote to Local Printing, LPR
 - Enable LPR, set LPR queue name for Printer2 to Printer2
 - Restrict IP addresses to the Pcounter server, so that users cannot print via LPR to this printer and bypass the Pcounter server.

NetWare queues – 2 Pcounter Stations - 2 USB/Parallel printers

Each Pcounter Station has one local printer connected via USB or parallel

Users select jobs at Pcounter Station where printer is not busy

- Summary
- **Pcounter Station #1** local printer Printer1 retrieves jobs from queue **PStation1.ou.org**
 - **Pcounter Station #2** local printer Printer2 retrieves jobs from queue **PStation2.ou.org**
 - All users should print to queue **PStation1.ou.org**
 - Printers should be similar or identical models.
 - Use a compatible printer driver for Printer1 and Printer2 if they are different models
 - Users at **Pcounter Station #1** release jobs to Printer1
 - Users at **Pcounter Station #2** release jobs to Printer2
- Pcounter NetWare server**
- Create first queue called **PStation1.ou.org**.
 - All users print to this printer.
 - Configure Pcounter on PStation1 queue to Hold all jobs (Operator Hold) and Count jobs in advance

 - Create second queue called **PStation2.ou.org**.
 - Users should not print directly to this queue. Permissions should be set accordingly.
 - Configure Pcounter on PStation2 queue as needed, but **do not** Hold all jobs and Count jobs in advance is **not necessary**.
- Pcounter Station #1**
- Create a local printer on a USB or parallel port (Do not share), named Printer1
 - Run PSConfig on **Pcounter Station #1**
 - Add **PStation1.ou.org** to the list of monitored print queues.
 - Leave the destination for **PStation1.ou.org** as Release Paused Jobs.
 - Choose Remote to Local Printing, NetWare Queue Server
 - Assign local print queue Printer1 to service **PStation1.ou.org**
- Pcounter Station #2**
- Create a local printer on a USB or parallel port (Do not share), named Printer2
 - Run PSConfig on **Pcounter Station #2**
 - Add **PStation1.ou.org** to the list of monitored print queues.
 - Set the destination for **PStation1.ou.org** to **PStation2.ou.org**.
 - Choose Remote to Local Printing, NetWare Queue Server
 - Assign local print queue Printer2 to service **PStation2.ou.org**

Windows server – 1 Pcounter Station - 2 Network printers

Users send jobs to the printer that is not busy

- Summary
- **\\SERVER\PRINTER1** prints to Printer1 via IP (AppSocket/RAW/LPR)
 - **\\SERVER\PRINTER2** prints to Printer2 via IP (AppSocket /RAW/LPR)
 - All users should print to **\\SERVER\PRINTER1**
 - Printers should be similar or identical models.
 - Use a compatible printer driver for Printer1 and Printer2 if they are different models
 - Users at Pcounter Station choose whichever printer is available

Pcounter Windows server

- Create first printer with sharing, named Printer1, share name **\\SERVER\PRINTER1**
- All users print to this share.
- Configure Pcounter on Printer1 printer to Pause all jobs (Super Pause) and Count jobs in advance
- Setup Printer1 printer to use Pcounter AppSocket or LPR port (IP information for Printer1)

- Create second printer **without sharing**, named Printer2
- Users should not print directly to this printer.
- Configure Pcounter on Printer2 printer as needed, but **do not** Pause all jobs and Count jobs in advance is **not necessary**.
- Setup Printer2 printer to use Pcounter AppSocket or LPR port (IP information for Printer2)

Pcounter Station

- Run PSConfig on the Pcounter Station machine
- Add **\\SERVER\PRINTER1** to the list of monitored print queues.
- Double-click on **\\SERVER\PRINTER1** and configure **\\SERVER\PRINTER1** and **\\SERVER\PRINTER2** as destinations.

Novell NDPS – 1 Pcounter Station - 2 Network printers

Users send jobs to the printer that is not busy

- Summary
- **Printer1.ou.org** prints to prints to Printer1 via LPR
 - **Printer2.ou.org** prints to Printer2 via LPR
 - All users should print to **Printer1.ou.org**
 - Printers should be similar or identical models.
 - Use a compatible printer driver for Printer1 and Printer2 if they are different models
 - Users at Pcounter Station choose whichever printer is available

- Pcounter NDPS server
- Create first printer called **Printer1.ou.org**.
 - All users print to this printer.
 - Configure Pcounter on Printer1 printer to Hold all jobs (Operator Hold) and Count jobs in advance
 - Setup Printer1 printer to use Novell LPR gateway (IP information for Printer1)

 - Create second printer called **Printer2.ou.org**.
 - Users should not print directly to this printer. Permissions should be set accordingly.
 - Configure Pcounter on Printer2 printer as needed, but **do not** Hold all jobs and Count jobs in advance is **not necessary**.
 - Setup Printer2 printer to use Novell LPR gateway (IP information for Printer2)

- Pcounter Station
- Run PSConfig on the Pcounter Station machine
 - Add **Printer1.ou.org** to the list of monitored print queues.
 - Double-click on **Printer1.ou.org** and configure **Printer1.ou.org** and **Printer2.ou.org** as destinations.

NetWare queues – 1 Pcounter Station - 2 Network printers

Users send jobs to the printer that is not busy

- Summary
- Printer1 retrieves jobs from **Printer1.ou.org**
 - Printer2 retrieves jobs from **Printer2.ou.org**
 - All users should print to **Printer1.ou.org**
 - Printers should be similar or identical models.
 - Use a compatible printer driver for Printer1 and Printer2 if they are different models
 - Users at Pcounter Station choose whichever printer is available

- Pcounter NetWare server
- Create first queue called **Printer1.ou.org**.
 - All users print to this queue.
 - Configure Pcounter on Printer1 queue to Hold all jobs (Operator Hold) and Count jobs in advance
 - Setup Printer1 internal queue server to service **PStation1.ou.org**.

 - Create second queue called **Printer2.ou.org**.
 - Users should not print directly to this queue. Permissions should be set accordingly.
 - Configure Pcounter on Printer2 queue as needed, but **do not** Hold all jobs and Count jobs in advance is **not necessary**.
 - Setup Printer2 internal queue server to service **Printer2.ou.org**.

- Pcounter Station
- Run PSConfig on the Pcounter Station machine
 - Add **Printer1.ou.org** to the list of monitored print queues.
 - Double-click on **Printer1.ou.org** and configure **Printer1.ou.org** and **Printer2.ou.org** as destinations.