
Altman Technologies
Intelligent Software Solutions
www.altman.co.uk

Pcounter for NT/2000

Quick Start Guide

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Pcounter for NT/2000: Overview

Pcounter is a comprehensive network-oriented printer accounting and management software suite. Pcounter is essentially a server-based application that allows network administrators to manage printing centrally.

Pcounter will track print jobs from any platform (PC, Mac, Unix) that can print to Windows NT/2000. Pcounter integrates everything: accounting, load balancing and queue management into a single cross-platform interface that works with both Microsoft Windows (NT, 2000) and Novell NetWare networks at the same time.

This version of Pcounter consists of a Printer Control service, a Data Server service and Port Monitors that control printing to network printers. This provides a flexible, modular, and expandable system.

Queue configurations determine how Pcounter handles each print job serviced in that queue. Many options (such as those pertaining to accounting) are specific to Pcounter; others (Job notify, Banners) provide extensions to Microsoft's printing services, allowing you to define global print job configurations for jobs in selected queues.

If queue configurations are modified, the Pcounter services do not need to be restarted. The print control service will need to be restarted, however, if queues are added, removed or the hold-status changed.

Server configurations are global and affect all queues managed by Pcounter on the server.

Pcounter for NT 2.x works with Windows 2000 in mixed or native mode. It works with and can display user lists in NT4-compatible and Active Directory domains and organisational units directly without any need to import or create printing accounts.

Use Pcontrol to set up all configuration settings. Pcounter is designed so that you can configure your entire NT printing parameters from any Windows NT/2000/XP computer on your network. In addition to Pcounter-specific functions, PControl provides a network-centric view of print queues, jobs and permissions. SNMP & Web monitoring are also available.

Important Concepts:

Print spooling must be done to the server - not peer to peer. You cannot allow users to print directly from workstations to network printer addresses, or Pcounter will not see those print jobs (unless of course you install Pcounter services and monitors on each workstation).

If you want to keep track of print jobs from users who are logged on/authenticated to NT servers, it is not necessary to import or create Pcounter database entries for these users. Pcounter automatically looks up usernames on a PDC or other server that contains user accounts. If Pcounter is enforcing user account balances/quotas, then users who have had no printer activity are assumed to have an account balance of zero unless you have set a default balance & low-balance limit.

For tracking printing from users sharing logons, see the section in the manual/help: **Popup - Enabling printer accounting while using shared logon names.**

When a print job is processed by Pcounter, it verifies the existence of the print job owner by looking up the name on the server you've designated in Global Settings, Get User Information From (typically the Primary Domain Controller). If the user is not found in the current domain, trusted domains will be searched next.

The print job owner's home domain is logged, along with the username - e.g. DomainName\UserName - in the first field of the log file. You can prevent unknown users from printing in each printing configuration.

Any operating errors, e.g. configuration problems, etc. will be recorded in the system event log. To view this, use the **NT Event Viewer** utility (in the Administrative Tools program group). Select **Log, Application** and you will see any messages issued by Pcounter. There is also a file "reject.txt" that logs jobs that don't print with a reason.

SUPPORTED FEATURES

- Counts pages printed on any PostScript or PCL printer, from all major manufacturers such as HP, Xerox, Lexmark, Canon, and more. Also included are Ricoh RPCS, Canon BubbleJet, and Epson (ESC/P, ESC/P2) inkjet printers. This covers most lasers, inkjets, and multi-function devices on the market today. Support for TIFF printing is included, and Pcounter also tracks plot size on HPGL/2 and PostScript plotters.
- Enforces printing account balances/quotas for users. Account balance and Popup recording use DBF database files. Users can check their balances via web browser or using WBalance, a small Windows utility that runs in the system tray.
- Keeps a log file of all print activity - for printers hosted on multiple servers the log can be kept in one central location for easy access. The log file includes user name, document name, printer/queue name, date, time, client station, client code, sub code, paper size, features, byte size, page count, cost, and account balance.
- Windows users may have a popup window for billing print jobs to clients/job numbers.
- The cost for each page is determined by the paper size used in the print job, allowing variable costs for printers that support multiple paper sizes. Print jobs requesting an invalid paper size can be discarded. Roll plotters can be accounted for based on image size.
- Can generate various printing usage reports and print histories of users, printers, and client codes. Reports and histories can be saved as HTML, CSV, or formatted text, can be directly launched into Excel or web browsers, and can be sent by email.
- Rules-based printing for load balancing based on maximum and minimum byte sizes and/or page counts - print jobs can be deleted, moved to the end of the queue, or moved to another print queue.
- All print jobs can be automatically held/paused, and global (print job configuration) settings for queues can be automatically enforced. Each server has a default template, which can be used globally for all print queues on that server.
- A Plot Manager handles batch submission of printer-ready files to printers and plotters, including support for client billing codes and scheduling.
- Reject incorrect print job types such as Postscript on PCL printers.
- Network broadcast messages can be customised and sent at any time to keep users informed.
- Customisable banner pages can be used which contain all information about the print job, including the page count and account balance.
- Administration can be done from any Windows workstation or server on the network, including printer/queue set-up, configuration, properties, permissions, and print job management.
- The Pcounter workstation tools (popup and account balance information) are internationalised in French, Spanish, Portuguese, Italian, German, Finnish, Dutch, Czech, Swedish, Danish, Polish, and Norwegian.
- Pcounter works on networks where Samba is authenticating logons.
- Pcounter can automatically assign print job ownership from other platforms (such as Mac and Unix) or delete the job if an owner cannot be found.
- Pcounter works with multiple and/or trusted domains.
- Printing accounts for network users do not need to be created or imported - Pcounter creates them automatically if necessary.

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1. Getting Started

For further information - or if you encounter any problems installing - see the files:

README.TXT in the "Program Files\Pcounter for NT" folder,

PCOUNTER.PDF (Adobe Acrobat) in the "Program Files\Pcounter for NT\NT" folder,

PCOUNTER.HLP (Help) in the "Program Files\Pcounter for NT\NT" folder.

For additional information, please try our Web support page (www.altman.co.uk/support), which has a Frequently Asked Questions (FAQ) section; if this does not help, contact **Altman Technologies** (see front-sheet for contact details).

The "PcounterNT-InstallGuide.pdf" contains the text of this Acrobat/Word document; you are advised to read it before proceeding further if you require more information to help you with the installation.

The software is available as a download from the web or can be supplied on CD. The zip file you are provided with specifies the version number in its name & needs to be unzipped.

Please read this entire document before starting the installation. The installer must be logged into the licensed Server as the ADMINISTRATOR or equivalent in order for the required files to be properly installed.

System Requirements:

Server:

Windows 2000 Professional or Server (Intel-compatible) (SP 2 or above recommended)

Windows NT 4.0 Workstation or Server (Intel-compatible) (SP 5 or above recommended)

1MB disk per 10,000 users + 1MB disk per 12,000 print jobs logged (+ 6MB temp. for installation)

Workstation (for administrator utilities):

Windows NT, Windows 2000 or Windows XP.

2. Server Installation

1. Run **Setup.exe** on the Windows NT Workstation/Server where you want to install; i.e. where printers are defined or where you wish to host the central data server, if this does not also have printers.
2. Read the information screen, click **Next**.
3. Confirm default directory, click **Next**.
4. Confirm default program folder, click **Next**.
5. Await completion of install, click **Finish** to end Setup.

3. Configuring & Loading Pcounter

Much of the Pcounter software is in the form of NT/2000 services & drivers. After installing Pcounter but before it can be used, these need to be configured, installed & finally started. Running Setup to install the software does not automatically install the services and port monitors.

PControl enables you to do any Pcounter configuration from any Windows NT/2000/XP machine on the network (except for port configuration, which must be done locally at the "server").

Use **PControl** to install (or uninstall) the **Global Settings**, **Data Server service**, **Printer Control service** and **Port Monitors** *in that order*. For each of these (see below for specifics) browse the network in PControl, select the required NT computer and click the **P** icon on the toolbar (or choose

the **Server, Pcounter, Pcounter configuration** menu or right click on the NT computer & choose **Pcounter configuration**).

Configuring Global Settings

This needs to be done first for the Data Server & then, subsequently, for any extra Print Servers, i.e. which are not also the Data Server.

1. In PControl, select the NT/2000 computer that will be the Data server and choose Pcounter configuration. Click the **Global Settings** tab
2. We suggest setting "Log rejected jobs" by ticking the box next to it. We also suggest leaving the "Numerical Format:" at **Currency**, rather than **Pages**; Pcounter counts pages in either mode but using currency for pricing allows you extra flexibility.
3. Confirm all other options. Click the **Apply** button to save the configuration.
4. For subsequent servers, use the "Import global/popup settings from:" link to pull the settings from the original Data Server.

Configuring the Data Server service

1. In PControl, select the NT/2000 computer which will be the Data server - this should preferably be a server which is expected to be available most of the time, e.g. PDC or BDC - and choose Pcounter configuration.
2. Ensure that the Global Settings (see above) have been configured and saved.
3. Create the share for the directory where all Pcounter printing data is to be stored (i.e. the directory on the Data Server). Click Data Server tab. Click Create Share button. Enter a local path-name to be used as the base for Pcounter information to be stored (note; do not use quotes ["] if entering long-filenames for the path). Click Create Share button.
4. Check - and if necessary, set - the appropriate permissions to the share and its contents. Administrators, users who need to manage account balances, and users who need to get printing statistics should be given create/read/write permission to the shared directories Data sub-directory. For privacy and security purposes, normal users should not be given any access to this directory. Users should be given read permission to the Pcounter share.
5. Select the Services/Ports tab. Click the Install button for the Data Server service (middle third of the screen). Confirm successful install, click OK.
6. Click the Start button for the Data Server service. Confirm in the Data Server service status area that the service is running.

Configuring a Printer Control Service

1. In PControl, select the NT/2000 computer that is hosting printers and choose Pcounter configuration. A printer host can also be the Data server.
2. If this is not also the Data Server, set the Global Settings (see above). On the **Global Settings** tab, you can import them from the Data server - or any other previously configured computer - so that you don't have to enter them again.
3. Select the **Services/Ports** tab. Click the **Install** button for the **Printer Control** service (top third of the screen). Confirm successful install, click **OK**.
4. Click the **Install** button for the **Port Monitors** (bottom third of the screen). Confirm successful install, click **OK**. Note: This and the next step must be done from the server being configured.
5. Select the **Printers** tab. In turn: **Select** each printer that Pcounter is to keep track of, click the **Port Wizard** button to add and configure Pcounter ports for the printers; Confirm present details, click **Next** to create new Pcounter Port; Confirm Pcounter's suggestions for it's Port, click **Next** to save it to the printer's configuration; Confirm successful install, click **Finish**.
6. Either: You can set a default printer-accounting configuration, which will apply to all printers on this server that do not have their own configurations. Click **Global Settings** tab, click **Default printer configuration** link; see 8. below.

7. Or: If you want different printers configured separately for accounting (e.g. different page costs), select the Printers tab. In turn, **Select** each printer, click the **Configure** button; see 8. below.
8. In the Printer Configuration window, set Pcounter accounting configuration according to requirements. For evaluation purposes, we suggest the following. **Settings** tab: set Accounting: to "*User account balances & Log File*"; set "Action if below credit limit:" to "*Print job anyway*" if there are any current users of the printer. (This allows users to continue to print while Pcounter is being set-up. However, "*Delete job*" is a better option for live running). **Prices** tab: set the Default size / price to the printers standard paper size; for each valid page size, check the Allow Paper Size box next to it and enter a positive value in its Price, which will be per page. Optionally, in a test environment or later, make any other configuration changes required: see the manual or Help for details of all configuration options.
9. Select the **Services/Ports** tab. Click the **Start** button for the **Printer Control** service. Confirm in the **Printer Control service status** area that the service is running. The 60-day evaluation starts now, Pcounter is up & running!

To use the advanced PControl features, click the double-headed arrow (second icon in at the bottom left in the Status Bar). Choose the NT2000 Data Server type, enter the Server Name & click **OK**. Documents & details can now be viewed for all printers.

Setup client utilities

No workstation set-up is necessary; however we recommend that all workstations have their spooling set to "Start printing after last page is spooled" to ensure that Pcounter counts the whole job to ensure it is within quota, before printing commences.

If you wish to use the client utilities, the following applies:

You don't need to run Setup to install the Pcounter software program group and icons on every desktop; you can install it in a shared network folder and access the programs through network browsing.

1. For PPopup and/or WBalance, all that is necessary is to add an icon or shortcut to local Startup groups or login scripts.
2. Users who will be managing user account balances and reports will need the PAdmin.exe utility.
3. Web CGI utilities are available to allow users to check their balances via a web page or for managers to amend balances, see the section in the manual/help: **Accounting – Web CGI application**.

Uninstalling

Uninstalling the software from your server desktop does not automatically uninstall the services and port monitors. You need to uninstall the services and port monitors *first* by running **PControl**.

Take the Pcounter ports off all printers (i.e. no thick black arrows to the left on the printing tab).

Then stop & uninstall the services from the Services/Ports tab.

Then uninstall the ports.

Finally, run uninstall for the Pcounter software from the Control Panel, Add/Remove programs.

Registering

Once the 60-day evaluation for Pcounter is over, its functions will cease to work. Before this time, if you wish to buy the software, see the file "HOW2BUY.htm" in the installed directory. After buying Pcounter, a registration code will be sent to you. To register the software:

1. Go to the **Global Settings** tab on each server for which you have bought Pcounter, click the **Registration and trial period** link and enter the code in the Registration number: box provided under **This computer**. If you have any workstation licences, enter this extra code in the Registration number: box provided under **Workstation printer licenses**. Click **OK**, confirm no errors.

2. Select the **Services/Ports** tab. Click the **Stop** button for the Data Server service. Confirm the service is stopped, click the **OK** button.
3. Click the **Start** button for the **Data Server service**. Confirm in the **Data Server service status** area that the service is running.
4. Your Pcounter software is now fully functional.

Updating versions

There is no need to un-install first. New versions can safely be installed over previous so long as you are within your maintenance licence period; otherwise the update will change Pcounter to be an expired evaluation!

(To check this, use the Register link from the Global settings tab in PControl, Pcounter configuration. Check-

Registration status: Registered

Maintenance valid through m/yyyy

such that the date m/yyyy is Greater than the date specified in the version warning.)

Running Setup to install the software does not automatically update the Ports & Services. These need to be updated using PControl.

1. Select the NT/2000 computer and press the **P** icon or choose the Server, Pcounter, Pcounter configuration menu.
2. Next, select the **Services/Ports** tab. **Stop** both services, click the **Update** button for each service, then re-**Start** both services.
3. Click the **Update** button for the Ports. This takes you through a 5-stage menu, temporarily interrupting printing.
4. Ensure that any utilities being used, e.g. WBalance for workstations or Balance for Web, are also updated if they are being run from anywhere other than the default Pcounter install directory.

All configurations are left as before the update.

Testing

To test everything is running correctly, we recommend you send a test print job to each printer you have configured and then check the "print history" for the user who printed each job. Load **Pcounter Administrator** (Padmin.exe) from the Pcounter for NT program group. Select the user name, click **Print History** (open book) icon.

The print history shows a full list of all print job details for the selected user:

Document name, Printer/queue, Date & time, Workstation, Paper size, Job size, Number of Pages, Cost and User Balance.

For summary reports on printing usage, in PAdmin click **Reports** (calculator + square-paper) icon. Then choose the report type & any other parameters, to create a report on screen, in HTML or Excel format.