



PaperCut ChargeBack^{6.1}

Advanced Print Tracking and Cost Recovery for Windows Networks

User Guide

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About This User Guide

The manual covers the use and installation of **PaperCut ChargeBack**. It is divided into a number of sections:

- **Section 1** – Overview of PaperCut ChargeBack - features, components, and how it works. Introduction to accounts, and the data logged for each print job. Suitable for all users of PaperCut ChargeBack (Chapters 1 & 2)
- **Section 2** – Administrative tasks, suitable for the account and user administrator (Chapters 3, 4 & 5)
- **Section 3** – Client tools, suitable for all users of PaperCut ChargeBack (Chapter 6)
- **Section 4** – Reports (Chapter 7)
- **Section 5** – Implementation and installation, suitable for the system administrator / network engineer. Assumes windows networking experience. (Chapters 8, 9 & 10)
- **Section 6** – Web administration (Chapters 11 & 12)
- **Section 7** – Troubleshooting, and Frequently asked questions (Chapter 13 & 14)

IMPORTANT: It is especially recommended that both Chapter 2 (Accounts, print jobs and invoices) and Chapter 8 (Possible Implementation Scenarios) are read before installation, as they explain the ways in which **PaperCut ChargeBack** can be used, and how it can be configured to achieve different results.

1. PaperCut ChargeBack 6.1

Overview

PaperCut ChargeBack provides advanced print tracking and cost recovery features by allowing the tracking of print job costs by *account* (job number, client, project, department, etc) as well as by *user*. It works by requesting the user to allocate each print job to an account or job number via a mandatory Pop-Up window. This makes PaperCut ChargeBack especially suitable for businesses and organizations that:

- Need to track costs by account (job number), such as:
 - accounts for *clients* and their *jobs/projects*. (eg. for businesses that need to pass on printing costs to their clients)
 - accounts for the *service, purpose* or *category* of a printout. (eg. for organizations that might provide multiple services and need to gather printing statistics)
 - accounts for each department / faculty of an organization. (eg. a university or school environment)
- Need to track costs by user:
 - monitoring employees' print usage and applying quotas.
- A combination of tracking by account and/or user

If your organization is tracking user printing only, we recommend our **PaperCut Quota** application. More information on PaperCut Quota is available from the www.papercut.biz website.

The installation and use of PaperCut ChargeBack will:

- Provide accurate print job cost tracking
- Enable easy cost recovery through powerful reports, such as the invoice report
- Promote environmental and economic responsibility when printing.

Features

- Track print jobs by account and user
- Hierarchical account structure to allow grouping – especially useful for reporting purposes
- Full archiving of print job details
- Powerful reporting and statistics
 - Reports are generated as HTML, or in Access 97, 2000, or later
 - Reports may be customised to suit your needs

- Support for large and small networks, with multiple print server capability
- Easy setup. No special drivers to install. No backend databases to configure
- Differential print charging allowing different costs for each printer
- Allows an appropriate cost to be set on Color Printers
- Works with common laser and inkjet printers
- Integrates into the network users and groups environment
- Easy account setup and simple administration
- Facility for the importing of accounts (which represent job numbers, clients, departments, etc)
- Optional integration with accounting packages
- Upgradeable *Page Counting Machine* allowing future printer/hardware support (similar to virus protection "dat" updates)
- Ability to detect and delete duplicate print jobs and filter documents by type, cost or size.
- Client-side COM and command-line tools to assist with batch or scripted print tasks

How it works

PaperCut ChargeBack is a client-server application. Its core operation is described as follows:

- The **PaperCut ChargeBack Server** consists of a **Windows Service** runs on each print server. It monitors and intercepts incoming print jobs, counting the number of pages in each print job. It then performs the following tasks:
 - Wait to be notified of the account for the print job (depending on configuration settings)
 - Debits the cost of the print job from the appropriate user's credit
 - Increments the page and cost counters for the appropriate printer
 - Increments the page and cost counters for the appropriate account (or job number)
 - Stores the print job information in its internal database
- The **PaperCut ChargeBack Client** that runs on users' workstations. It runs in the background during users' sessions, listening for print jobs that the user may print. When a document is printed to a printer that requires account information, it pops up a window, prompting the user to enter an account. The **PaperCut ChargeBack Client** runs automatically when users log on.

Components

PaperCut ChargeBack consists of the following components:

- **Server** components:

- The **Windows Service** which operates as described above.
- An **Administration Console** that runs on each print server. This allows the administration of PaperCut, as explained in Chapters 2 to 4.
- An **Archive facility**, which is an application that is scheduled to run daily. It archives the print job logs from the working-database to archives for long-term storage and reporting capability.
- An **Automatic account import** program, which enables system administrators to schedule the bulk importing of accounts periodically. This means that when new job numbers or clients are created, they can be imported into PaperCut ChargeBack without the system administrator manually entering in their details.
- **Client** components:
 - The **PaperCut ChargeBack Client** which operates as described above.
 - The **User Inquiry Tool**, which is an application that shows users' credit
 - The **Report Generator**, a tool which collates account and job log information from all the print servers on the network into a single database which can be used for reporting purposes.

2. Accounts, print jobs and invoices

This chapter explains in detail the structure of accounts, and the data that is captured by PaperCut ChargeBack for each print job. It also explains how the data can be used for invoicing purposes.

What is an account?

Accounts in PaperCut ChargeBack can be used to represent your clients, departments, job numbers, projects and/or expense accounts. (Note: this should not be confused with *users* or *user accounts* on your network). Each account has the following attributes:

- Main account, or subaccount
- Active or inactive
- Deleted or not deleted
- Whether to allow non-invoiceable print jobs to be assigned to the account
- Whether to require comments / descriptions for each print job assigned to the account

These are explained below.

Main accounts and Subaccounts

Accounts in PaperCut ChargeBack are structured hierarchially. This means that there are two types of account – main accounts and subaccounts. Each subaccount belongs to a main account, and there are an unlimited number of main and subaccounts allowed in PaperCut ChargeBack.

This system allows you to group related accounts together for reporting and statistical purposes. For example, main accounts can be created for clients, and subaccounts for each project/job for each client. Alternatively, a main account can be created for each job number, and subaccounts optionally created for sub-items within each job number.

This is shown in the following screenshot.

	Title	Num Pages	Cost	
✓	Greentech	227	\$120.14	
✓	Air filter	465	\$278.06	
✓	Electroscopic ancillary machine	361	\$196.96	
✓	Nitrogen detector	346	\$175.06	
✓	Internal	238	\$131.98	
✓	Accounting	269	\$147.42	
✓	Intellectual property, trademarks and pater	296	\$168.00	
✓	Legals	345	\$216.88	
✓	Partnership agreements	243	\$104.10	
✓	Moreland shopping centres	387	\$214.78	
✓	Carpark	405	\$221.70	
✓	Lighting	431	\$232.96	
✓	Mall design	320	\$196.52	
✓	WellNow Chemists	240	\$103.14	
✓	Aromeo Therapy	297	\$153.96	
✓	Concept design	284	\$175.40	
✓	Property leases	325	\$206.84	
✓	Store layout	217	\$113.84	
✓	Suppliers	356	\$200.22	
✓	Wombat industries	192	\$118.30	
✓	Head office	232	\$137.44	
✓	Melbourne office	392	\$234.66	

Main account ✓ Active Job comments required
 ✗ Inactive Job comments optional

Figure 1. Example of main and sub-accounts

Active and Inactive Accounts

Over time, accounts may become redundant – for example, a project may be complete and no further printing will occur. The account can then be marked as Inactive so that it does not appear in the client-popup window. Thus, users will no longer be able to assign costs to it.

PaperCut archives all print jobs to allow for historical reporting. Active accounts are accounts that may have costs assigned to them, whereas Inactive accounts may not.

Deleting accounts

When you delete an account from the PaperCut ChargeBack Administration Console, it is removed from view in the console. However, if costs are assigned to that account, the account will still appear in the Report Generator.

Invoicable and non-invoicable print jobs

By default all print jobs are invoicable. That is, once they are assigned to an account, they will appear on the invoice report for that account, allowing for easy cost recovery.

However, some organizations require the ability to assign print jobs to accounts, but not all their print jobs will be invoicable.

In such cases, the relevant accounts can be set to allow print jobs to be non-invoiceable. Then when a user prints and selects the account, the user will also be able to choose whether to include the print job in the invoice report, or not.

This gives organizations extra flexibility when tracking costs. Reports can also be run on invoiceable, and non-invoiceable print jobs, thus allowing reporting of costs that are recoverable and not recoverable from clients or departments.

Comments for print jobs

You may choose to allow or require users to enter in a comment whenever they assign a print job to a given account. These comments can then show up in reports – such as showing a breakdown of costs for a client, or allowing a project manager to review costs.

By default, comments are not required for print jobs. However, you can change this default setting to make comments either mandatory, or optional.

Each account has its own setting for comments. For example, you may wish to enforce comments for internal expense accounts, but not require them for one particular job number. This flexibility is provided to suit your needs.

Reporting and invoices

Please note: the reporting process is further explained in Chapter 7.

All but one of the reports can be run to show data for invoiceable print jobs, non-invoiceable print jobs, or both. (The exception is the Invoice report, which will only show invoiceable print jobs in the report.)

This allows the reporting of cost recoverable, or non-cost recoverable, or all expenses for a given account.

3. Navigating the Administration Console

The **PaperCut Administration Console** is divided up into seven sections; Users, Groups, Printers, Accounts, Options, Event Log, and About. Each section may be viewed by clicking on the appropriate icon on the navigation bar located on the left hand side. The options available under each section are as follows:



Accounts

- Create and edit accounts.
- Reset the account counters
- View statistics for accounts
- Import accounts using the Import Account Wizard
- Set default account settings



Users

- View credit in each user's account
- View total pages printed by each user
- Assign or add funds to a user's account
- Select whether a user has the privilege to continue printing after exceeding their allocated funds
- View a users printing history



Groups

- Batch assign funds to members of a domain group
- Query information about group members, such as the number of pages printed.
- Set rules which govern the initial credit assigned to any new user added to the network in the future
- Schedule tasks to top-up user's accounts up at regular intervals



Charging

- Select the cost users will be charged to use printers.
- Select your internet charging method, based on either time or data usage
- Set the cost per page for the selected printers.
- Set filter rules and restrictions on selected printers.
- Set Internet charging costs, either cost per Megabyte or cost per time period.
- View the total number of pages printed on each printer.
- List recent print jobs and printing history



Options

- Set your printing and Internet charging configuration.
- Perform maintenance on the PaperCut user database.
- Set system defaults
- Customize “printing denied” *WinPopup* message



Event Log

- View detailed log of print jobs and Internet usage
- View detailed transaction logs to see a full audit trail credit changes
- View PaperCut application events and status
- Import, administer and track usage of TopUp cards
- Export detailed printing information to MS Access or MS Excel
- Run PaperCut’s customizable reports



About

- Licensing information
- Version information
- Enter license/registration key

4. Administration Console – Basic Operations

Setting up Accounts

Please ensure that you have an understanding of the concepts of main and sub accounts, active and inactive accounts and invoiceable print jobs (refer to Chapter 2) before setting up accounts on your system.

Accounts can be set up to suit different organizations' needs, as explained in Chapter 8. It is important that your organizations' requirements are considered when deciding upon a structure for accounts.

Each account may also be set to allow print jobs assigned to that account to have a comment (description) associated with each job, and also whether to allow print jobs to be non-invoiceable. These two features give organizations more control when reporting and invoicing.

Viewing and Searching for Accounts

To viewing and searching for accounts:

1. Click on the **Accounts** icon on the left-hand side of the PaperCut ChargeBack *Administration Console*. You will see a screen similar to that shown in Figure 2.
2. Accounts are displayed, grouped by main account. The main accounts are sorted alphabetically, and the subaccounts for each group are also sorted alphabetically.
3. When the **All Accounts** option is selected, all accounts will appear in the accounts list. When the **Active Accounts** option is selected, then active main accounts and active subaccounts (together with their parent account) are shown. The converse is true when the **Inactive Accounts** option is selected.
4. When the **Search** option is selected, then accounts containing the search string will be displayed, according to the following rules:
 - a. If a main account matches the search string, it and its subaccounts will be displayed. For example, if main accounts are created for your clients, then you can search for all accounts for a given client by typing the client's name in the search box.

- b. If a subaccount matches the search string, it will be displayed together with its main account, so you can at once see the subaccount's parent.

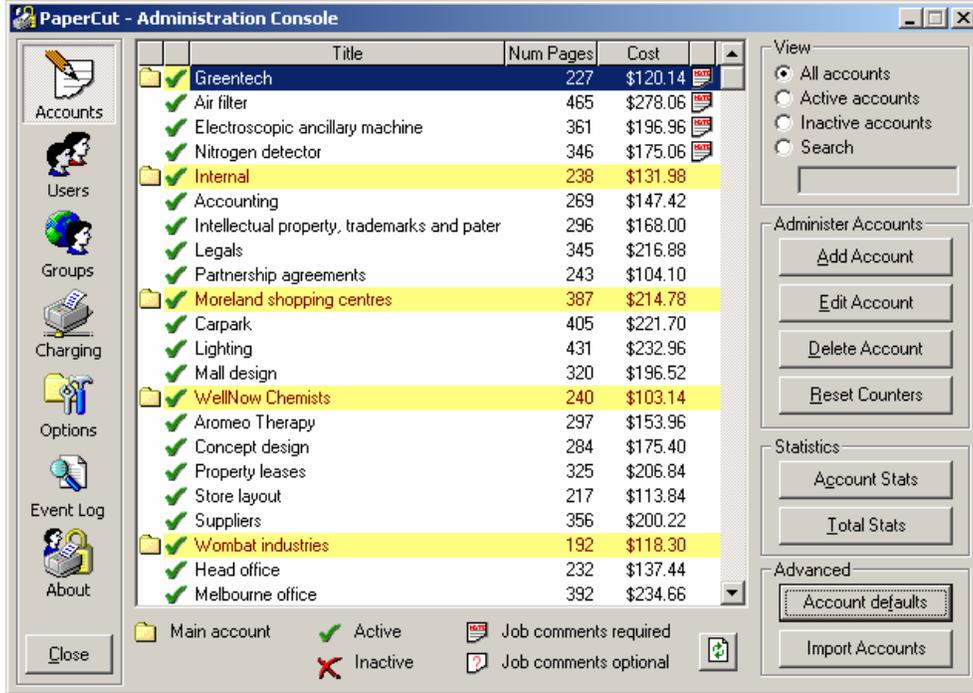


Figure 2. Account administration

Adding and Editing an Account

To add an account:

1. Click the **Add Account** button.
2. Enter the details for your account.

To edit an account:

1. Select the account you wish to edit from the list. Then double click the account, or click the **Edit Account** button. This will bring up a screen similar to Figure 3.
2. Modify the details for your account.

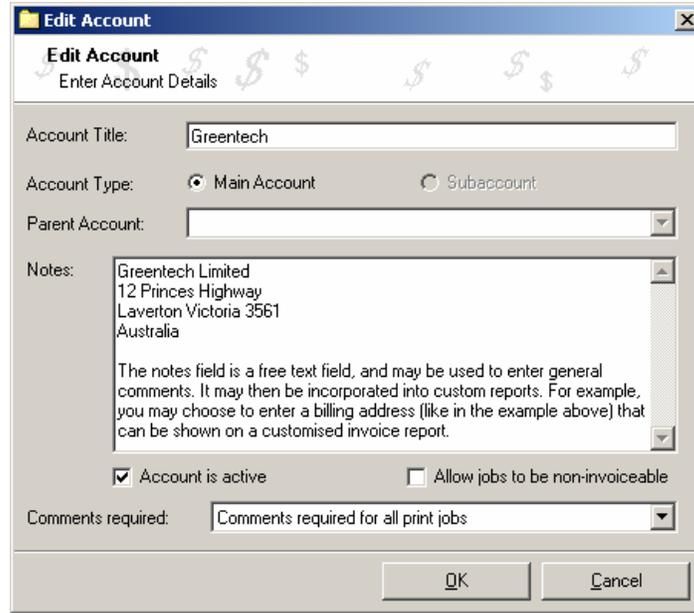


Figure 3. *Editing account details*

Viewing Account Statistics

PaperCut provides quick account statistics for print jobs that are printed to printers shared on the server on which the administration console is running. This enables the quick viewing of statistics. For more detailed information and statistics (and information that covers all print jobs across all print servers), reports must be used (Chapter 7).

To view statistics for an account:

1. Select the account you wish to view statistics for, and click the **Account Stats** button.
2. You may view statistics over a variety of time periods, grouped by users, printers or view recent print jobs. If the selected account is a main account that includes subaccounts, you also have to option of including subaccounts in the statistics. (See Figures 4a and 4b.)

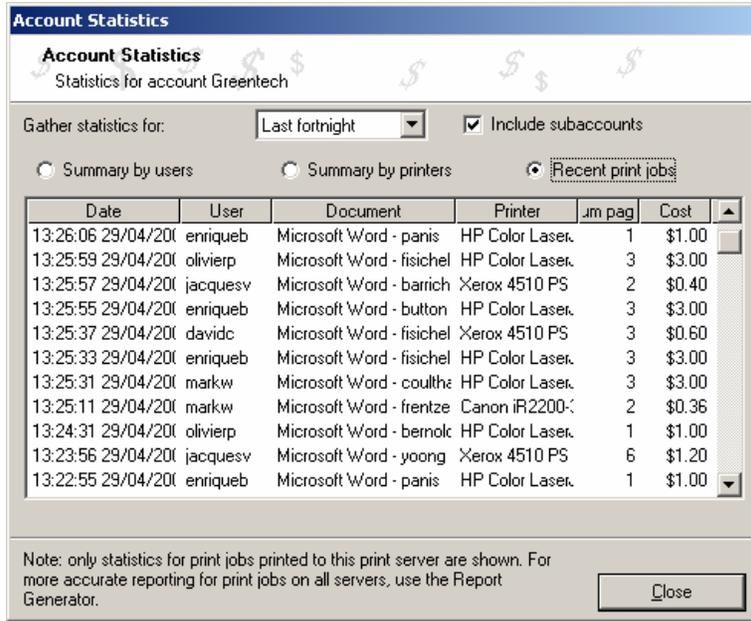


Figure 4a. Account statistics – recent print jobs

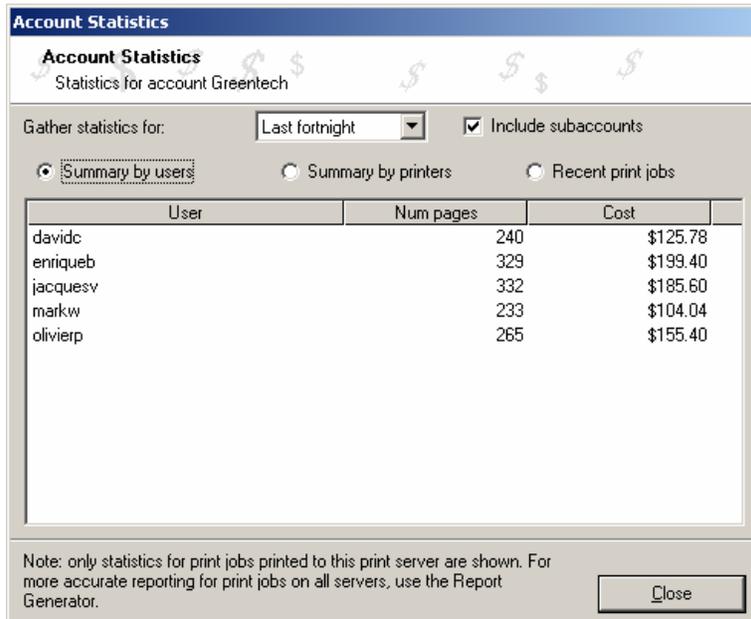


Figure 4b. Account statistics – summary by users

To view statistics for all accounts:

1. Click the **Total Stats** button.
2. You may view statistics over a variety of time periods, grouped by users, printers or view recent print jobs.

Advanced Account Operations

The advanced operations of setting account defaults and importing accounts are explained in Chapter 5.

Setting Printer Cost

To begin charging for jobs printed on a particular printer:

- Add the printer to the charging list.
- Set the cost per page for the printer.
- Check the “Requires Account” checkbox according to your needs. Refer to Chapter 8 for some examples where this feature is used.

Explanation: “Requires Account” option

If a printer “Requires Account”, then the PaperCut ChargeBack popup will appear on the users’ machine where the printout was printed, and the user will be required to enter an account. The cost of print jobs for this printer will be tracked against the account and deducted from users’ credit.

If “Requires Account” is not selected, then PaperCut will monitor print jobs to that printer silently, and popup will not appear on the user’s workstations. The cost of the print jobs to the printer will be deducted from the users’ account.

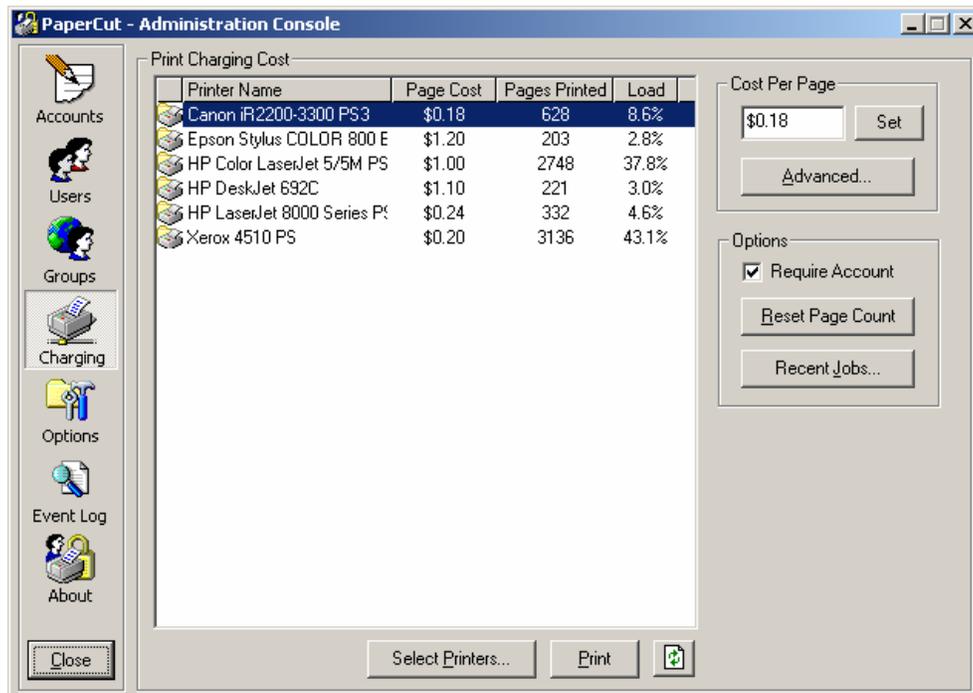


Figure 5. Printer section controls the cost of printing.

To add a printer:

1. Click on the **Printers** icon on the left-hand side of the PaperCut *Administration Console*.
2. Click **Select Printers...** to display a list of printers available on the server.
3. In the **Available** column, select the printer(s) you wish to add.
4. Click the **Add** button followed by the **OK** button.

The printer will appear in the charging list with a cost of \$0.00 per page printed. This cost should be changed to a more appropriate value.

To set the cost per page:

1. Select the printer in the charging list. The printer name will be displayed in the top right-hand corner.
2. Edit the cost in the **cost per page** edit box.
3. Click the **Set** button or press Enter to apply the change.

Tip: If you would like to track printed on a printer, but don't wish to charge users for its use, add the printer to the charging list and leave its cost per page at zero.

Assigning Funds to a User

The funds in a user's account can be changed with any one of the following methods:

- Credit can be set to any value
- Funds can be added with the Quick Add buttons.
- Any value of credit can be added to the funds currently in the users account.

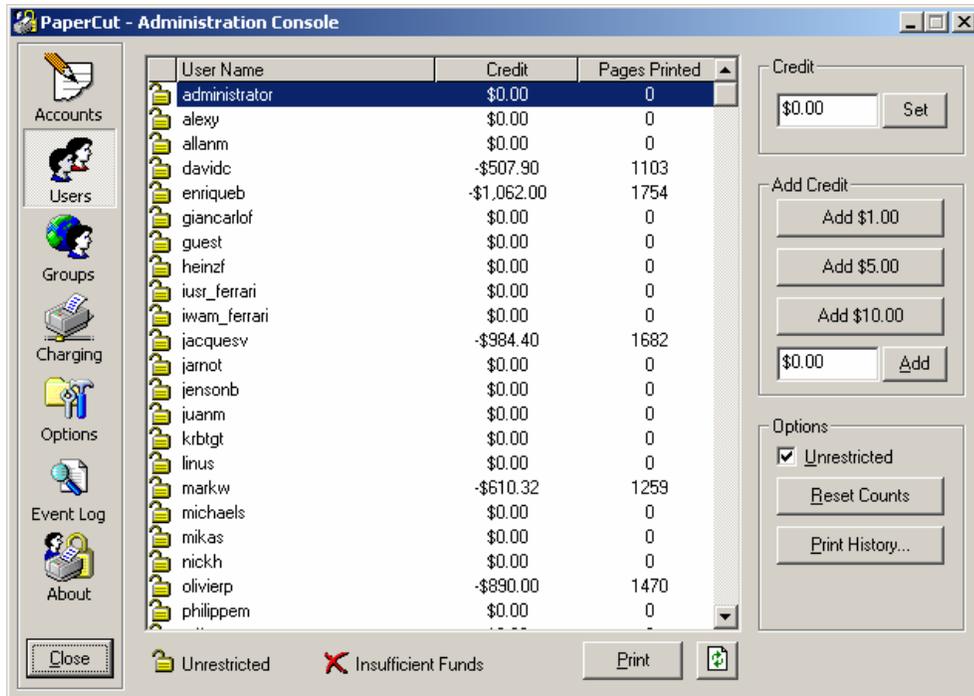


Figure 6. The user section lists users and their account balance.

To set the funds in a users account to \$50.00:

1. Select the user's **logon name** in the user list. The user's name should be displayed in the top right-hand corner.
2. Click in the **credit** box and change the value to 50 .
3. Click the **Set** button or press Enter to apply the change.

To add \$10.00 using the Quick Add buttons:

1. Select the user's logon name in the user list. The user's name should be displayed in the top right-hand corner.
2. Click on the **\$10.00** Quick Add button.

To add \$7.20 to a users account:

1. Select the user's logon name in the user list. The user's name should be displayed in the top right-hand corner.
2. Click in the edit box immediately bellow the Quick Add buttons, and change the value to 7.20 .
3. Click the **Add** button or simply press *Enter*.

Setting User Privileges

PaperCut gives you the option of tracking expenses by account and user, as explained in Chapter 8. Users should be assigned Unrestricted privileges according to the following guidelines:

- **Use Unrestricted privileges if:**
 - You wish to charge for print jobs by account, and individual users have no printing quotas
 - You wish to monitor printer costs incurred by users silently
- **Do not use Unrestricted privileges if:**
 - You wish to charge for print jobs by account whilst enforcing printing quotas for individual users
 - You wish to institute a user-pays policy

For users without the **Unrestricted** privilege, PaperCut determines if the user has sufficient funds when they attempt to print documents. If the cost of printing the document is higher than the credit in their account, printing will be denied.

Note: *In PaperCut ChargeBack, users are set to Unrestricted by default.*

To set a user to Unrestricted:

1. Select the user's logon name in the user list. The user's name should be displayed in the top right-hand corner.
2. Check the **Unrestricted** option located below the Quick Add buttons.
3. The user's icon in the user list will change to an unlocked padlock.

Viewing a User's Print History

PaperCut ChargeBack maintains a detailed audit of each user's print activity. All printing activity is logged in the PaperCut event log. All print job information can be viewed in the Event Log section. For convenience, a user's print history can also be accessed via the Users section.

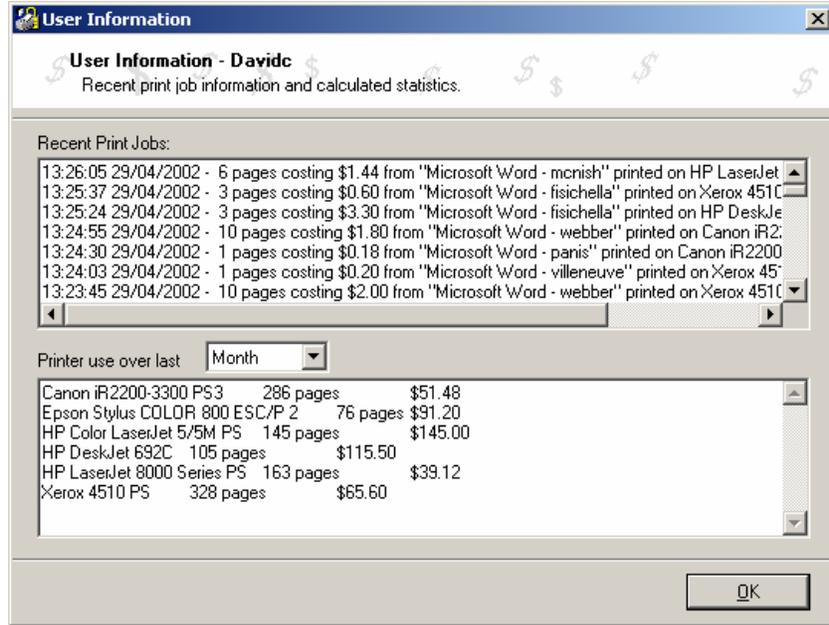


Figure 7. Click *Print History...* to view a user's recent print jobs.

To view a user's print history:

1. Select the user's logon name in the user list. The user's name should be displayed in the top right-hand corner.
2. Click the **Print History...** button. The *User Information* dialog box will appear.

To view recent print jobs printed on a particular printer:

1. Select the **Printers** section by clicking on the printer icon.
2. Select the appropriate printer from the printers list.
3. Click the **Recent Jobs...** button. The *Recent Print Jobs* dialog box will appear.

Note: the list of print jobs that are printed against accounts can also be accessed via the *PaperCut reports*, explained in Chapter 7.

5. Administration Console – Advanced Operations

Using Charge Rates

The **Charge Rate** button defined under the *Global Options* settings section provides a way for Administrators to allow users to “discount” or “increase” the cost of a print job shown on an account invoice or detailed report. By default, all print jobs are charged at 100%. Adding an additional charge rate in addition to the “Default” (100%) will enable a drop-down box on the Popup client.

Common uses of charge rates include:

- Discounting draft prints printed on low quality paper
- Charging full rate or increased rates for “final prints”
- Charging a premium if printing is performed on good quality drafting film

Charge rates are a global option – they are made available to all users and can be applied to all accounts.

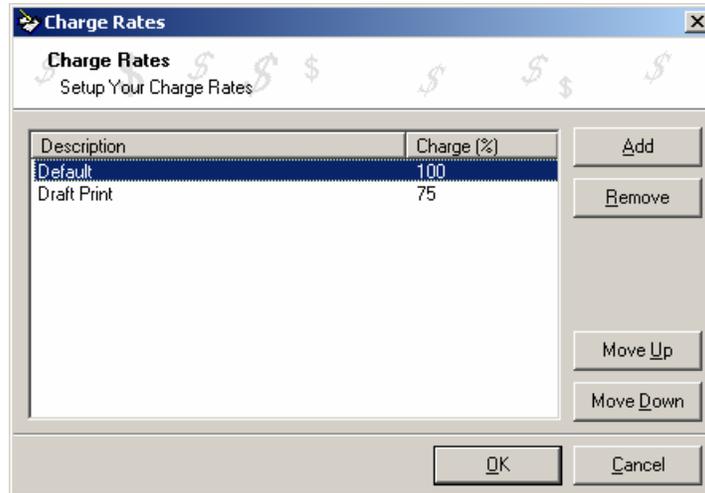


Figure 7.1. Editing Charge Rates

Setting the account defaults

Whenever a new account is created, whether through the administration console, web administration or account importer, a number of fields are defaulted. To change these defaults, click on the **Account defaults** button in the Accounts section of the Administration Console. This will bring up the window shown in Figure 8.



Figure 8. Account default settings

You can change the default policy for comments and non-invoiceable print jobs to suit your organization's needs. All **new** accounts will then default to these settings. You can also apply these settings to all existing accounts by clicking the **Apply defaults to all accounts** button.

Importing accounts

Organizations with large numbers of clients or job numbers will find it necessary to import the list of accounts into PaperCut . This is achieved easily using the Account Import Wizard. To start this wizard, click on the **Import Accounts** button in the Accounts section of the Administration Console. The wizard (Figure 9) will appear.



Figure 9. Account Import Wizard

The wizard will guide you through the import process. Two different sources of data are available in the standard PaperCut ChargeBack distribution:

1. Text file – the most versatile and flexible method of importing accounts
2. Directory structure – useful if your organization has a “clients” directory on your fileserver, and you wish to synchronise accounts against that directory

Note: importing accounts will add accounts to your PaperCut database if they do not already exist. It will not rename, remove or delete any existing accounts.

1. Text file importing

A text file can be used to represent the hierarchy of accounts, and inactive/active accounts. One line is used per account, and a subaccount is represented by starting the line with a ~ character, and an inactive account with a ^ character. This is best illustrated in the following example – the following textfile gives the preview shown in Figure 10.

```
Project number 1
~^Task 1
~Task 2
~Task 3
Project number 2
~Task 1
~Task 2
Internal costing
~Legals
~Accounting
~Promotion and marketing
```

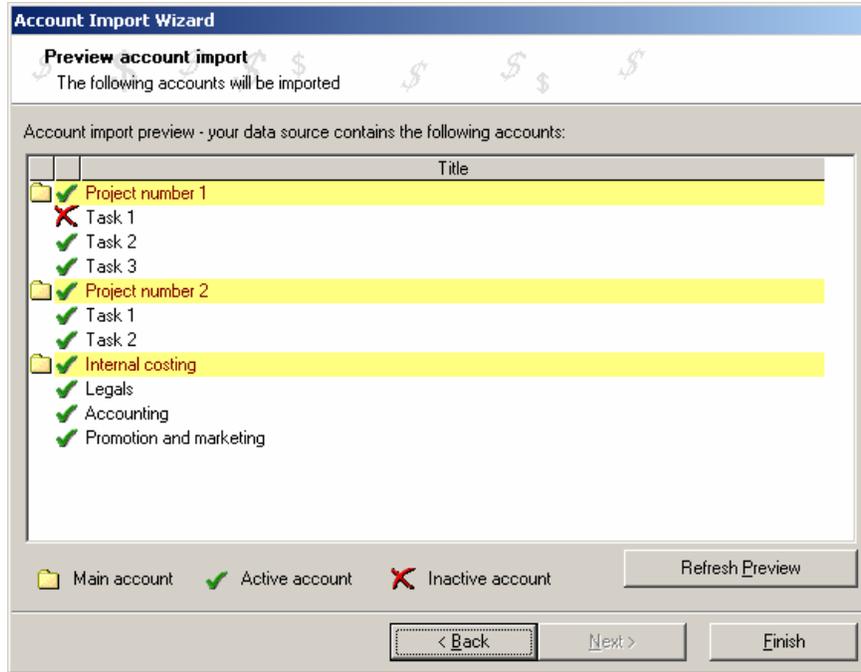
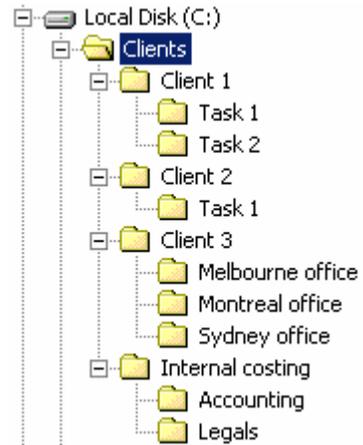


Figure 10. Account importing from an example text file

2. Directory structure importing

All accounts imported via a directory structure are assumed to be active. Importing the directory C:\Clients in the following example will give the directory structure shown in Figure 11. Note that you can also turn off the scanning of subdirectories so that only main accounts, and not subaccounts, are imported.



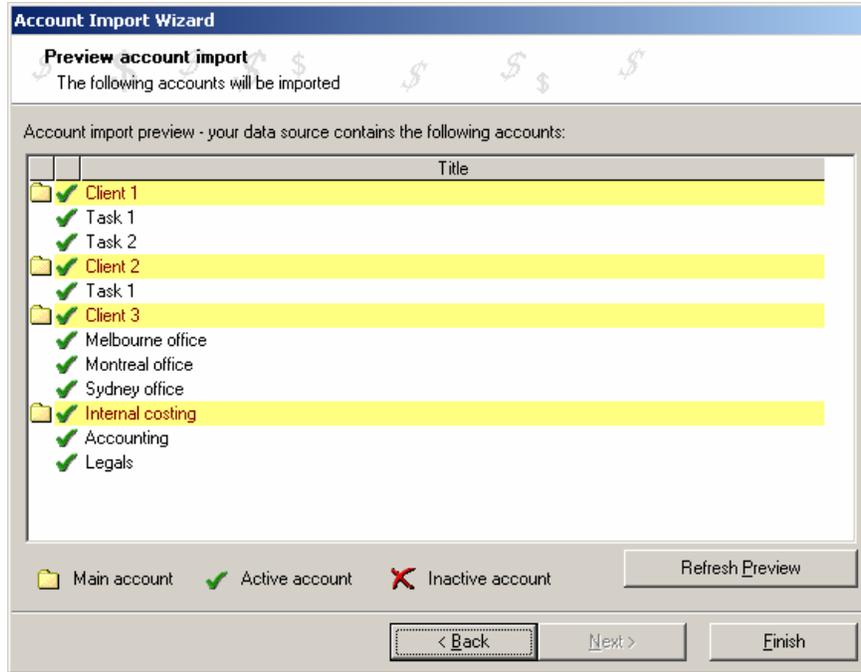


Figure 11. Account importing from an example directory structure

Once you have run the wizard for the first time, PaperCut will remember your settings for subsequent imports. You can also choose to schedule regular imports – for example, you may choose to import from a text file that gets updated whenever a new job number is created. A daily scheduled import will ensure that that new job number will be added automatically to the PaperCut database without any manual intervention. For more details, refer to Chapter 10.

Custom interfaces to accounting packages can also be built to suit your organization's needs. Contact support@papercut.biz for more details.

Charging different amounts for page size, color and duplex documents

PaperCut has the ability to set different costs for documents printed on different paper sizes, reduced cost for grayscale documents, and reduced costs for using duplex (double side printing).

The cost per page for a given document is determined by the PaperCut **Job Attribute Detector** (jad.dll). The JAD will analyze each print job and determine the cost as defined by the advanced printer charging rules.

Accessing the advanced print charging rules:

1. Select the **Charging** section by clicking on the printer icon.
2. Select the appropriate printer from the printers list.
3. Click the **Advanced...** button. The *Advanced Printer Options* dialog box will appear.

NOTE: *There is an Advanced Printer Options dialog for each printer in the charging list.*

By default, the advanced options are disabled for each printer. The advanced options should only be enabled for printers that support one of: duplex printing, different page size trays, or color.

There are three different ways of charging based on page size, duplex and color, which are tailored to different scenarios:

1. **Page size category charging** – simple charging for printers with multiple paper trays
2. **Page area charging** – simple charging for printers and plotters with multiple paper trays
3. **Charging by specific page sizes** (grayscale and color), with a default cost set at a flat rate, or by page area – **the most powerful method suitable for design, architecture, engineering firms with advanced printers and plotters**

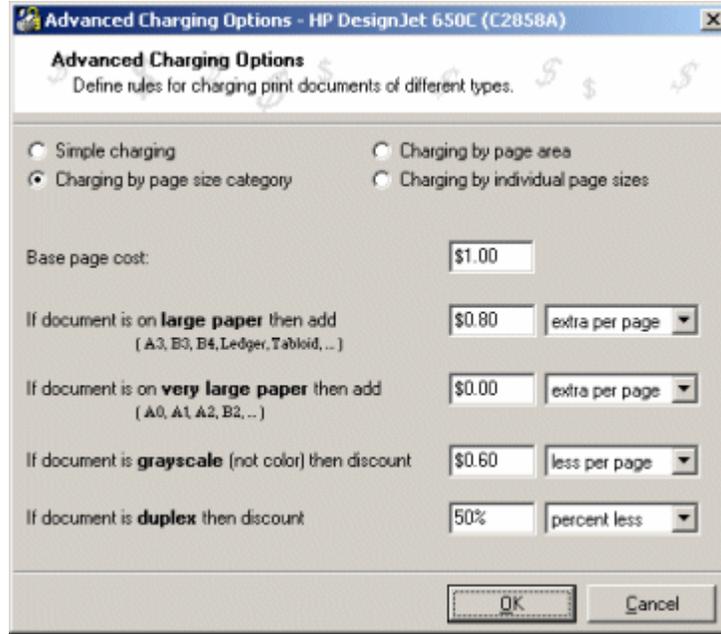
Page Size Category Charging

A practical example:

I have a color printer that supports A3/A4 printing and duplex. I would like to define rules to:

- Charge \$1.00 per page for A4 (standard size) color printing.
- Charge \$0.40 per page if the users select grayscale (black & white) – a \$0.60 discount for grayscale
- Charge an extra \$0.80 if they use large A3 paper
- Offer a 50% discount for duplex to encourage double sided printing.

To accomplish this complex set of charging rules, the user should setup the Advanced charging options for the particular printer as defined in the screenshot below:



Note that in this example, the user's printer does not support very large page size, so this option is left at the default "zero".

The PaperCut *Advanced Printer Options* offers a very powerful rule set to define a fair page cost. Rules can be defined using fixed markups or discounts, or percentage based modifications. The above example uses a mixture of fixed and percentage based modification of cost and should be used as a guide for setting up appropriate cost.

Attribute	Applies To
Grayscale	Documents printed with the "grayscale" or "black & white" options selected from the printer properties dialog box.
Standard Page Size	A4, A5, A6, A7, B5, Letter, Legal, Executive, Foolscap, Envelopes
Large Page	A3, B3, B4, Ledger, Tabloid, etc.
Very Large Page	A0, A1, A2, B2, etc
Duplex	Documents printed with the "duplex" or "double sided" options selected from the printer properties dialog box.

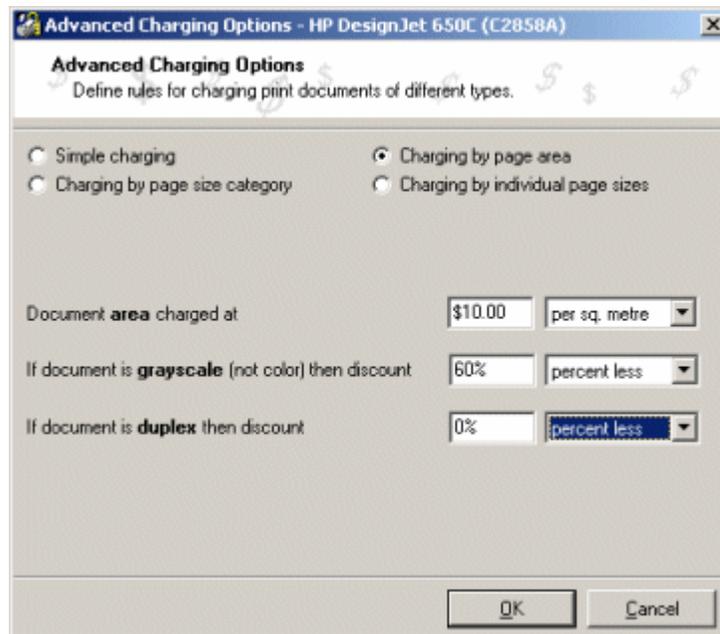
Page Area Charging

A practical example:

I have a color printer or plotter that supports a range of page sizes. I would like to define rules to:

- Charge \$10.00 per square metre of page size for color printing.
- Charge \$4.00 per square metre of page size for grayscale
- The printer does not support duplex, so the duplex discount is set to 0%

To accomplish this complex set of charging rules, the user should setup the Advanced charging options for the particular printer as defined in the screenshot below:



Note that in this example, the user's printer does not support duplex, so this option is left at the default "zero".

Charging by specific page sizes (grayscale and color)

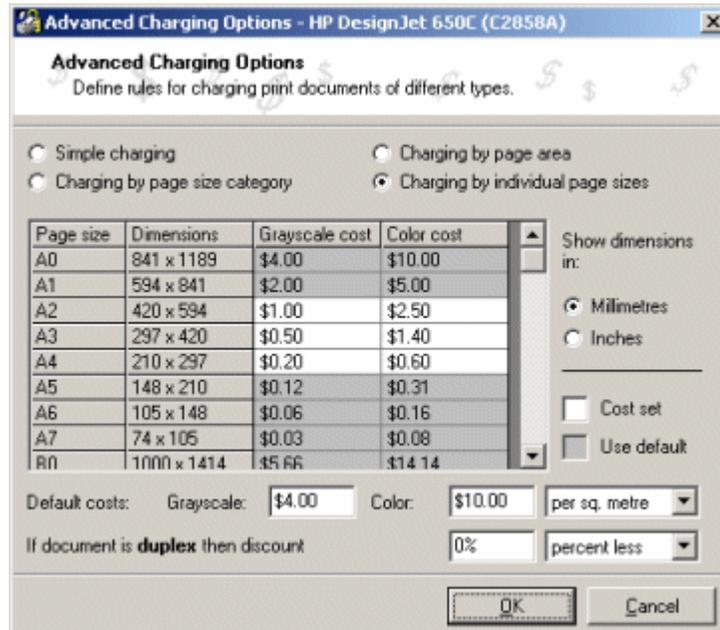
This method is most suitable for design, architecture and engineering firms.

A practical example:

I have a color plotter that supports a variety of page sizes. I would like to define rules to:

- Charge a default rate of \$10.00 per square metre of page size for color printing
- Charge a default rate of \$4.00 per square metre of page size for grayscale printing
- Override the default rates for grayscale and color for A2, A3 and A4 printing, setting the grayscale and color costs for each size explicitly
- The printer does not support duplex, so the duplex discount is set to 0%

To accomplish this complex set of charging rules, the user should setup the Advanced charging options for the particular printer as defined in the screenshot below:



Note: Once the default costs are assigned, they will appear in the grid cells with a gray background. To override any of the default prices, simply click on the appropriate grid, and type in the overriding cost. These costs will be shown with a white background, as shown above.

Applying filter rules or restrictions on print queues

PaperCut offers advanced network administrators the ability to filter, or restrict print jobs, on a per printer basis. Options available include:

- Detect and delete duplicate print jobs
- Define the maximum cost of a single print job
- Define the maximum number of pages allowed in a single print job
- Filter documents based on the file extension or name
- Allow only selected paper sizes

- Set a print to only allow color or black and white documents

Each printer has its own set of restrictions. The rules can either apply to all users or “restricted” users only.

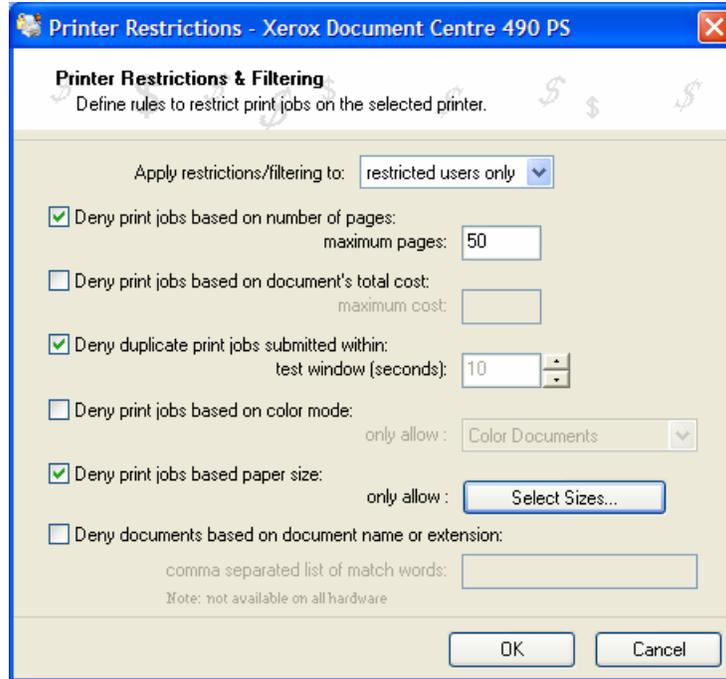


Figure: The restrictions screen with duplicate detection enabled with a 10 second window, and a maximum page count of 50 pages per job.

The printer restrictions provide Network Administrators with advanced control over printer usage. Some common examples include:

Reduce printer jams

Many printers expect print jobs to be on single size of paper, or maybe two sizes if the printer has multiple paper trays. A non-standard size will cause the printer to enter a “manual load” state causing the queue to halt. PaperCut *Restrictions...* section allows Administrators select the **allowed** sizes. Non-standard sizes are automatically deleted before they’re sent to the printer. It’s an effective way of reducing one of the most common causes of queue jams.

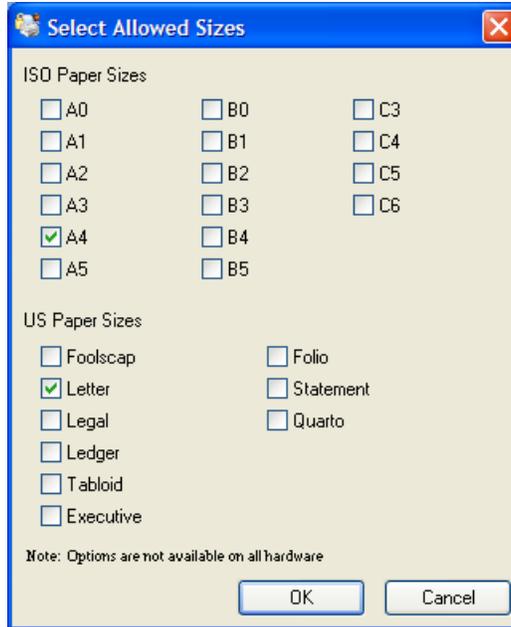


Figure: Allowed sizes are A4 and Letter only.

Controlling documents on slow Inkjets

Inkjet printers have very low throughput rates. A large color document can hold up a queue preventing other users from getting their “fair share” of print time. By setting an upper page count via the printer’s *Restrictions...* section, network administrators can prevent large print jobs, forcing users to split up large documents allow other users access to the printer.

Automatically deleting duplicate jobs

PaperCut can also monitor the print queues and automatically delete duplicate print jobs. This option is useful on networks with novice users. New users will often “double click” an application’s printer icon causing two identical print jobs to be sent to the queue wasting paper and their print quota. Network administrators can enable duplicate job detection via the *Restrictions...* section. Duplicate jobs will automatically be removed from the queue. The user will not be charged for the job and be warned via a popup message.

Note: *This option can affect multiple prints from Microsoft Excel and some other applications. Users wishing to print multiple prints from Excel may need to reprint the document 30 seconds apart.*

Force sensible use

Restrictions can be set to define a maximum cost per job. This will prevent users from “accidentally” spend all their credit in one print job.

Automatically delete documents based on file extension or name

There are many reasons why users should not print certain files. For example, maybe a report from the accounting application consists of 400 pages. Users may not be aware of this and “accidentally” print the report expecting only a few pages. PaperCut can be configured to match this document via its name and automatically deleted it from the queue. Use the Restrictions... keyword filter to implement this functionality.

Additionally it's also possible to filter documents based on file extension by entering a keyword like “.htm” or “.pdf”.

***Note:** This is not a security option. It is easy to circumvent the filter by simply renaming the document!*

Control who can print in color (Advanced)

By combining PaperCut's ability to restrict color printing (allow only grayscale), and standard Windows sharing permissions, it's possible to control which users have access to color printing.

To implement:

1. On the print server, **install** the drivers for the printer twice. Call one printer *Grayscale Only* and the other *Color*. You will now have two printer icons (logical printers) each connected to the same physical printer.
2. **Share** the printers as normal
3. Set Windows **access permissions** on each printer as required. Users who require color access should be able to print to the color printer. Other users should only be provided access to the “black and white” only printer.
4. **Add** the printers to PaperCut and define appropriate costs
5. Select **Restriction...** for grayscale only printer. Ensure that restrictions only allow black and white (grayscale) printing.

Providing users with an “overdraft”

An overdraft allows restricted users to overdraw their account to a defined limit. PaperCut allows a global overdraft limit to be defined. It is enforced for all users with “Restricted” privilege.

To defined the overdraft limit:

1. Select the *Options* section by clicking on the **Options** icon on the sidebar.
2. Click on the **Print Charging Option** tab

3. Modify the *Overdraft* value to the appropriate overdraft limit.

Setting the initial credit assigned to new users.

It is inevitable that new users will be added to your network in the future. To streamline user setup, PaperCut offers the option of having new users automatically assigned an initial starting credit the first time they print. This initial credit can be varied depending on the group(s) they belong too. For example, you may wish to automatically assign Managers/Staff \$100, but only \$10.00 to all other users.

The initial credit assigned to a user depends on the local and global groups they belong to. To set the initial credit given to members of a particular group:

- Add the group to the Groups List
- Set the initial credit to the amount you wish to automatically assign to new users belonging to this group

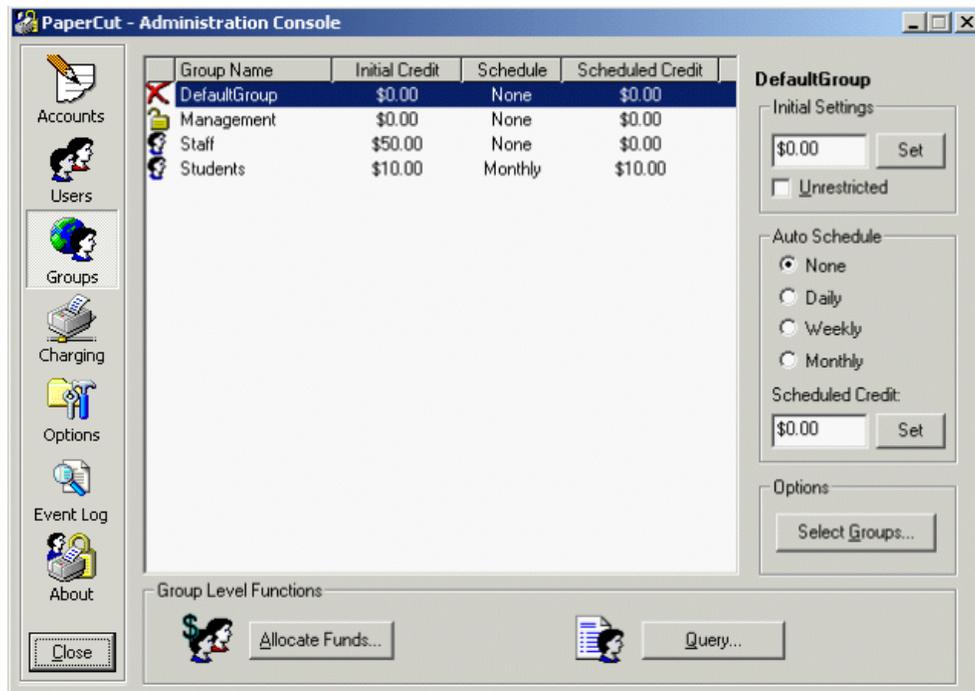


Figure 14. The Groups section allows group level administration.

To add the group to group to the Groups List:

1. Click on the **Groups** icon on the left-hand side of the **PaperCut** Administration Console.
2. Click **Select Groups ...** to display a list of Global and Local Groups.

3. In the **Available** column, select the group you wish to add.
4. Click the **Add** button followed by **OK**.

To set the initial credit:

1. Select the group in the Groups List. The group name will be displayed in the top right-hand corner.
2. Edit the credit shown in the **Initial Credit** edit box.
3. Click the **Set** button or press **Enter** to apply.
4. If you wish for new users belonging to this group to also have “Unrestricted” privileges, check the **Unrestricted** option.

If a new user belongs to two or more groups listed in the Groups List, they will be assigned the highest initial credit. If any one of the groups has *Unrestricted* privilege, the user will inherit unrestricted access. Any initial settings can be manually overridden in the user section at any time.

If a new user does not belong to any of the groups listed in the Groups Section, they will be assigned the initial credit given to the **DefaultGroup**.

Scheduling Credit

The automatic scheduling of credit can be a useful mechanism to encourage “budgeting” in a “user pays” environment. **PaperCut** can automatically add credit to members of a Domain group on a Daily, Weekly or Monthly schedule. To configure scheduling:

- Add the required group to the Groups List, if not already listed.
- Set the Schedule Period to the desired interval.
- Change the Scheduled Credit to the amount of credit to be automatically added to group members.

To set the Schedule Period:

1. Click on the **Groups** icon on the left-hand side of the **PaperCut** Administration Console.
2. Select the required local or global group in the Groups List. (If the group is not listed, add the group under **Select Groups ...**)
3. Set the schedule period by clicking on the appropriate daily, weekly or monthly option.

To set the Scheduled Credit:

1. Click on the **Groups** icon on the left-hand side of the **PaperCut** Administration Console.

2. Select the required local or global group in the Groups List.
3. In the **Scheduled Credit** edit box, set the amount of credit to be added each interval.

Credit will be assigned to group members at 12:00am (midnight) on the day of the schedule, or when the print server is first turned on during this day. Weekly schedules are rolled over Sunday morning, and Monthly schedules are rolled over on the first day of the new month.

When a scheduled allocation is completed successfully, a message will appear in the PaperCut Application Event Log.

Group Level Functions

In many network environments, working at group level is the most convenient method of administering user accounts. PaperCut integrates into the Windows Domain Users and Groups environment, and allows the manipulation of user accounts on a group level. For example you may wish to reset all users who belong to a departmental group, back to an initial starting value every quarter. This operation, along with basic group querying can be performed with the **PaperCut Group Level Functions**. These options are found under the Groups section.

Allocate Funds to Group Members

With **Allocate Funds**, the following operations may be applied to all primary members of a specified group:

- Set the credit to a specified value.
- Add credit to user's accounts.
- Change all group members' privilege to Restricted or Unrestricted.

The screenshot shows a dialog box titled "Allocate Funds" with a subtitle "Allocate Funds to Group Members". Below the subtitle, it states "These settings will be assigned to all primary members of the selected group." The dialog contains the following controls:

- Network Group:** A dropdown menu currently set to "Users".
- Select Action:** Two radio buttons are present:
 - Add Credit:** Selected, with a text input field containing "10.00".
 - Set Credit:** Unselected, with a text input field containing "\$0.00".
- Change Privilege:** A checked checkbox followed by a dropdown menu set to "Limited".
- Reset Page Count:** An unchecked checkbox.

At the bottom right of the dialog are "OK" and "Cancel" buttons.

Figure 15. *The Allocate Funds section of Group Level Functions allows credit to be assigned to group members*

To set all members of the “Management” group to \$50 and give “Unrestricted” privilege:

1. Click on the **Groups** icon on the left-hand side of the **PaperCut** Administration Console.
2. Click **Allocate Funds...**
3. Select the “Management” group in the group selection box.
4. Select the **Set Credit** option and change the value to 50.00
5. Select **Change Privilege**, and ensure **Unrestricted** is selected.
6. Click the **OK** button to apply the selection to the members of the Management group. The changes can be seen in the user list, under the Users section.

Query

The **Query** option is useful for determining total page count and other usage information specific to any Domain group.

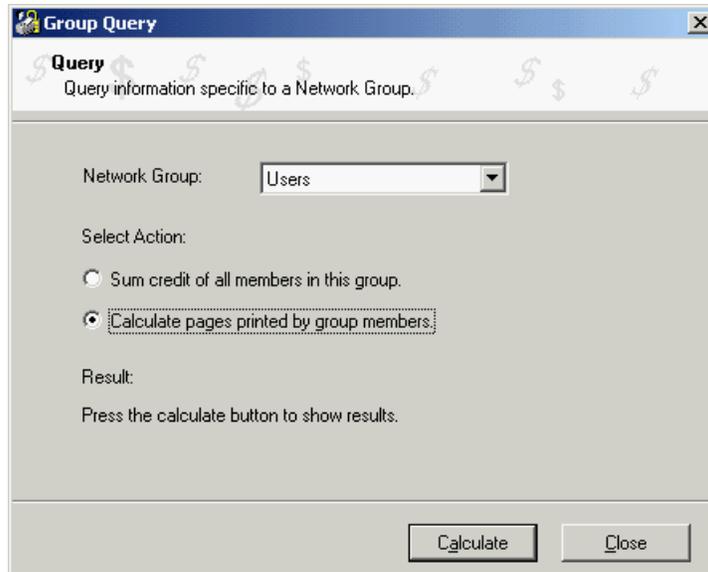


Figure 16. *Query information at Group Level.*

To query the number of pages printed by members of the “Engineering” group:

1. Click on the **Groups** icon on the left-hand side of the **PaperCut** Administration Console.
2. Click **Query...**
3. Select the “Engineering” group in the group selection box.
4. Select the **Sum Pages** option.

5. Click the **Calculate** button to display the number of pages printed by “Engineering”.

Database Maintenance

The PaperCut database stores all the user account information. If a user account is removed from the network domain, the username will continue to list in the PaperCut database. A database **Tune Up** will remove these deleted names from the PaperCut database. The **Tune Up** option will also:

- Add any new network users not yet listed in the database
- Optimize the database
- Create a backup and place it in the PaperCut *Backup* folder.

Although new users will be added automatically the first time they print, we recommended you use the **Tune Up** after added a number of new users. This will ensure the database is also running efficiently. New users will be added using the Initial Credit rules set under the Groups section. We encourage the Administrator to “Tune Up” every month or so for backup and optimization purposes.

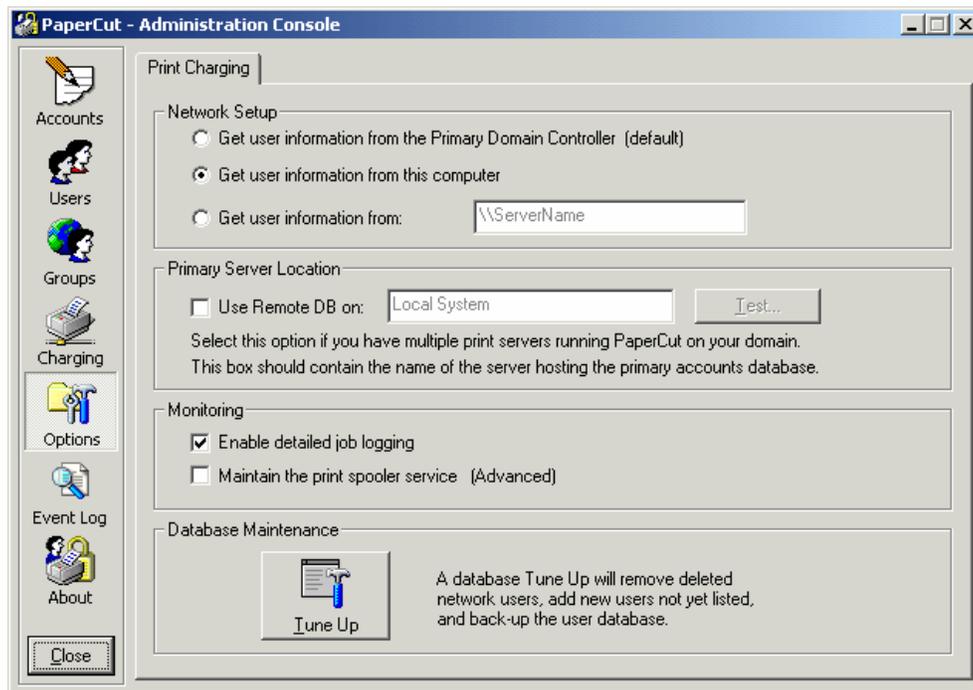


Figure 17. Use Tune Up in the Options section to clean and optimize the database.

Event Log

The PaperCut event log is divided into two sections (on two tabs). The first section is the **Job Log**. The *Job Log* provides a detailed history of all print jobs printed via the print server. The Copyright © PaperCut Software Pty Ltd , 1999-2006. All rights reserved.

second section, called the *Application Event Log*, lists application specific events. Examples of events include starting and stopping of the PaperCut service and the status of any schedules allowances. After adding new printers to your network and printing test documents, the event log should be investigated to ensure all is functioning correctly. Administrators should check the event log on a weekly basis.

6. The User Tools

There are three user tools supplied with PaperCut ChargeBack:

1. **PaperCut ChargeBack Client** – a background application that runs on users' workstations, monitoring print jobs. When the user prints a document to one of the PaperCut ChargeBack monitored printers on the network, an account notification window pops up, prompting the user to select the account for the document.
2. **User Inquiry tool** – so users can check their printing balance
3. **Reports Generator** – collates the job log information from all the PaperCut servers into a single database, from which reports can be obtained.

PaperCut ChargeBack Client

The **PaperCut ChargeBack Client** runs silently in the background. It is set to start when a user logs in, and its icon (a folder with a printer in front of it) will appear in the system tray (Figure 11)



Figure 18 – the PaperCut ChargeBack Client icon in the system tray

The client can also be launched manually from the Start menu, under “Start menu⇒ Programs⇒ PaperCut ChargeBack Client”.

When the application starts, it contacts the PaperCut primary server to obtain a list of printers and secondary servers. The client then monitors each of these printers. Double clicking on the PaperCut icon in the system tray will also display window in Figure 19.

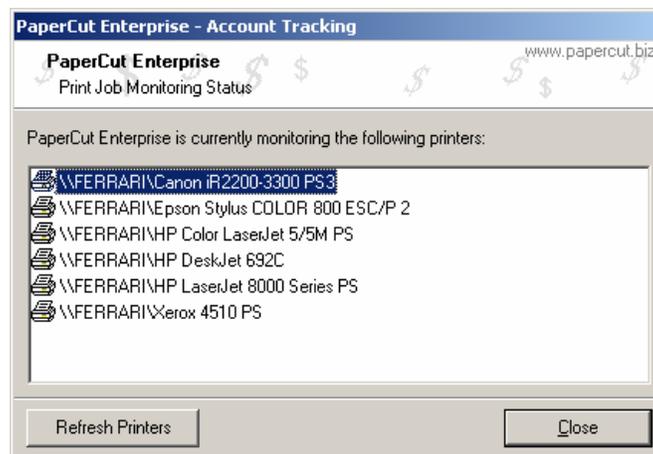


Figure 19 – the PaperCut Client

Pressing the **Refresh Printers** button forces the application to refresh the list of printers it's currently monitoring. The button should be pressed if a printer server has been rebooted or turned on since the application was started. A printer list will automatically refresh every hour.

The Popup window

When a user prints a document to one of the monitored printers, the popup window shown in Figure 20 will prompt the user to select an account for the print job. The application remembers the last selected account, and highlights this account by default.

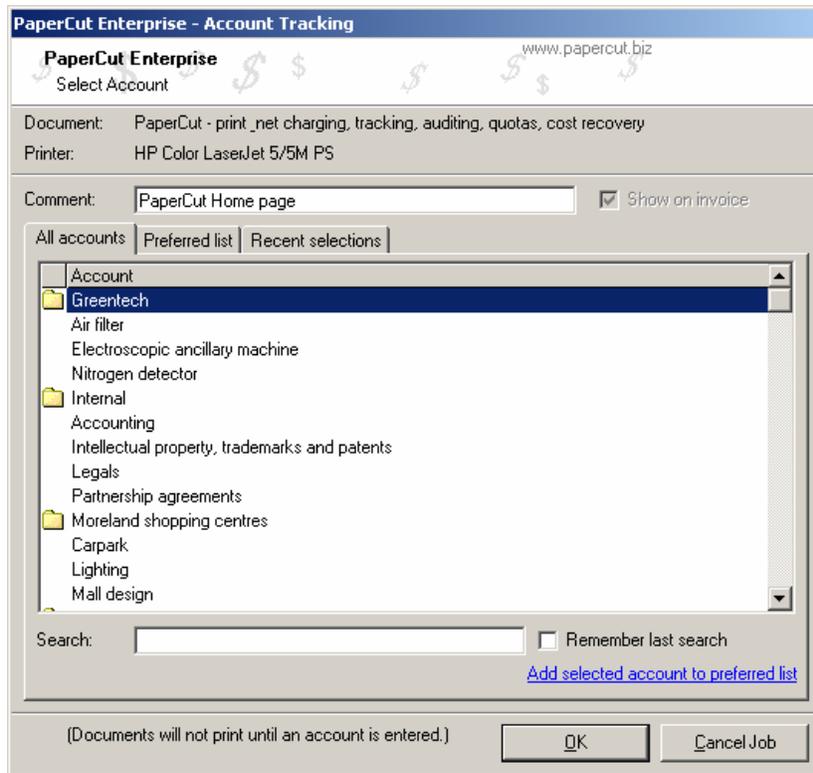


Figure 20 – the PaperCut ChargeBack Client popup

Users are also able to search by typing in the Search textbox. The searching functionality allows users to search for accounts in two ways:

1. By main account: typing a string that appears in any main account will cause that main account and all its subaccounts to be displayed in the list. For instance, this allows narrow the list to accounts belonging to a particular client by typing the client's name in the search textbox.

- By account name directly: typing a string at appears in any account will cause the account to be displayed. If it is a main account, then rule 1 applies. If it is a subaccount, then both the subaccount and its main account will be displayed.

To make account selection faster, users can also set up their own personal list of preferred accounts by selecting their preferred accounts (in the list on the **All accounts** tab) and clicking **Add selected account to preferred list**. The accounts will then appear in the preferred list, as shown in Figure 21. They can also be reordered and removed as need be.

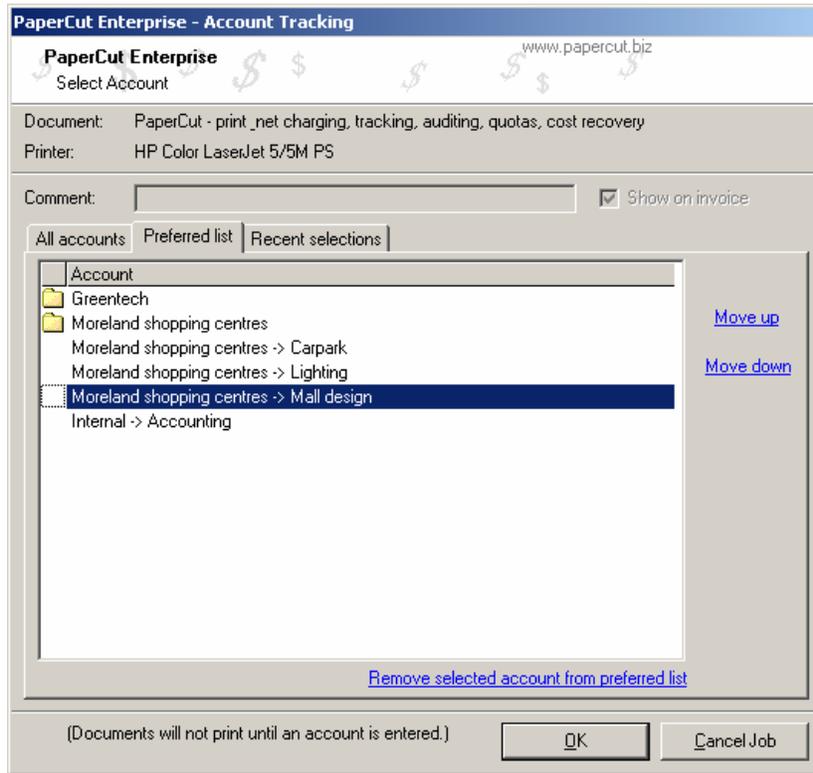


Figure 21 – the PaperCut Client popup preferred account list

The user can also a history of the previously selected accounts in the **Recent selections** tab.

The user also has the option of cancelling the job by pressing the **Cancel Job** button. If no account information is received within 5 minutes of the job being printed, the server automatically deletes the job. This prevents situations where many users print documents without selecting their account (which will cause congestion on the printer queues).

Client-side batch printing tools

One of the “side-effects” of introducing manual per-print allocation to accounts is that the process may interfere with automated, scripted or batch printing tasks. For example an advanced user may have written a Macro or program to print hundreds of document. Or a system administrator may schedule large print runs over night. In these situations manually allocating print jobs via a popup is either excessively tedious or not possible. To assist with batch print automation, PaperCut ChargeBack includes a set of tools to assist with automatic account selection. Two interface types are provided:

1. A commend-line tool suitable for use by scripts, batch files, and other programs.
2. A COM object suitable for use with Visual Basic for Application Macros or other programs.

To tools allow:

- The option to select an account to be applied to the all following print jobs (the batch) until told otherwise.
- The option to select an account to be applied to all following print jobs (the batch) for a given length of time (e.g. applied to account “Acme Inc.” for next 10 minutes)
- An option to revert back to normal popup mode.
- Helper function such as listing all valid account names

More information, including technical interface specifications and examples can be found in **Appendix III** and also the directory C:\Program Files\PaperCut\Tools\ on each workstation.

User Inquiry Tool



Figure 22. *The user Inquiry Tool for Windows.*

The *User Inquiry Tool* is an optional program for use on network workstations. It’s useful if you using PaperCut to enforce use quotas. The *User Inquiry Tool* can be started from the Start menu⇒ Programs⇒ PaperCut menu. This gives the user an indication of their account status

providing the user with a warning when balance is nearing zero. If the account credit displays red, the user has inadequate funds for printing. In addition to the *User Inquiry Tool*, users are also notified with a *Winpopup* message if they attempt to print with inadequate funds. The manual refresh button located in the top right-hand corner will update the balance.

The *User Inquiry Tool* optional and is not required for the printing process. If PaperCut is set up so that does not charge users for print jobs and print balances are not used, then the User Inquiry Tool will be of limited use.

Report Generator

The PaperCut ChargeBack Report Generator (Figure 23) is an application used to gather print job information from each server's archives into a single database that can be used for reporting. Depending on your network topology, there may be multiple PaperCut servers on your network, so job information will be spread across these servers. The Report Generator contacts each of the servers and consolidates the relevant job logs from each server into a single database.

When started, the Report Generator prompts the user for the date range for reporting – print jobs falling within the range will be included in the reports generated. The default date range is for the previous month.

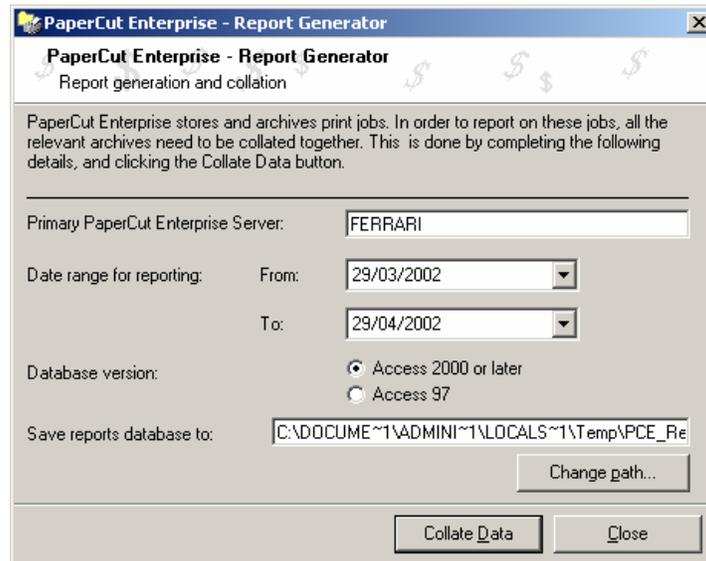


Figure 23. The PaperCut ChargeBack Report Generator.

By default, the generated database will be saved to a temporary directory – you can modify this by clicking on **Change path**. If you have MS Access installed on your computer, select the relevant database version.

To generate the report database, click on the **Collate Data** button. Note: all PaperCut servers must be available for report generation to succeed. (This safeguards against producing incorrect reports – data must be collected from each of the PaperCut servers to ensure accurate reporting)

Once report generation has finished, the Report Generator will allow you to launch the reports in MS Access (if it is installed on your system), run HTML Reports, or exit as shown in Figure 24. More details about reports can be found in Chapter 7.

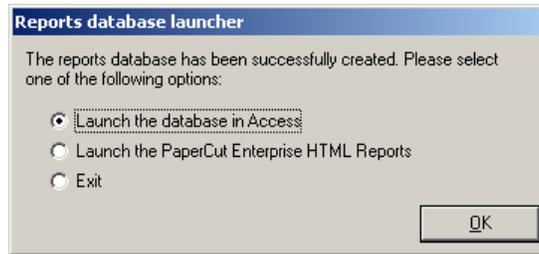


Figure 24. *Launch the reports database in Access, or run HTML Reports*

The PaperCut ChargeBack reports are explained in the following chapter.

7. Reports

The power behind **PaperCut ChargeBack** is its ability to report on printer usage in meaningful and useful way. In order to run reports, the PaperCut reports database must be generated first. The reasons for this, and instructions for doing so are explained in Chapter 6.

Access and HTML Reports

Since version 3.2, PaperCut ChargeBack allows you to generate reports in standard HTML, viewable in a web browser, or in MS Access. The same reports are provided in both HTML and Access format – so you do not require Access to view the reports, but if you do have Access installed, you are able to customise the reports to suit your needs.

The predefined reports

A predefined set of reports comes standard with PaperCut ChargeBack. When the Reports database is opened (in Access, or HTML format), a form appears (Figures 18a and 18b) which allows these reports to be launched.

PredefinedReports : Form

PaperCut Enterprise Reports

Start date: Wednesday, 22 August 2001
End date: Saturday, 22 September 2001

Summary of costs

- Main accounts summary - totals for main accounts [Preview Report]
- All accounts summary - totals for all accounts grouped by main accounts [Preview Report]

Account Reports

Select Account: [Select an account...]

- Account print jobs - Details of all print jobs for a given account [Preview Report]
- Account summary by user - totals of an account's print jobs, grouped by user [Preview Report]

Invoice

Select Main Account: [Select a main account...]

- Invoice - for selected main account, with itemised subaccounts [Preview Report]

Print Jobs by User

- Print jobs by user - totals for all print jobs, grouped by user [Preview Report]

User Print Jobs by Account

Select a user: [Select a user...]

- User print job summary by account - totals for a given user, grouped by account [Preview Report]

Figure 25a. The PaperCut Reports – Access version

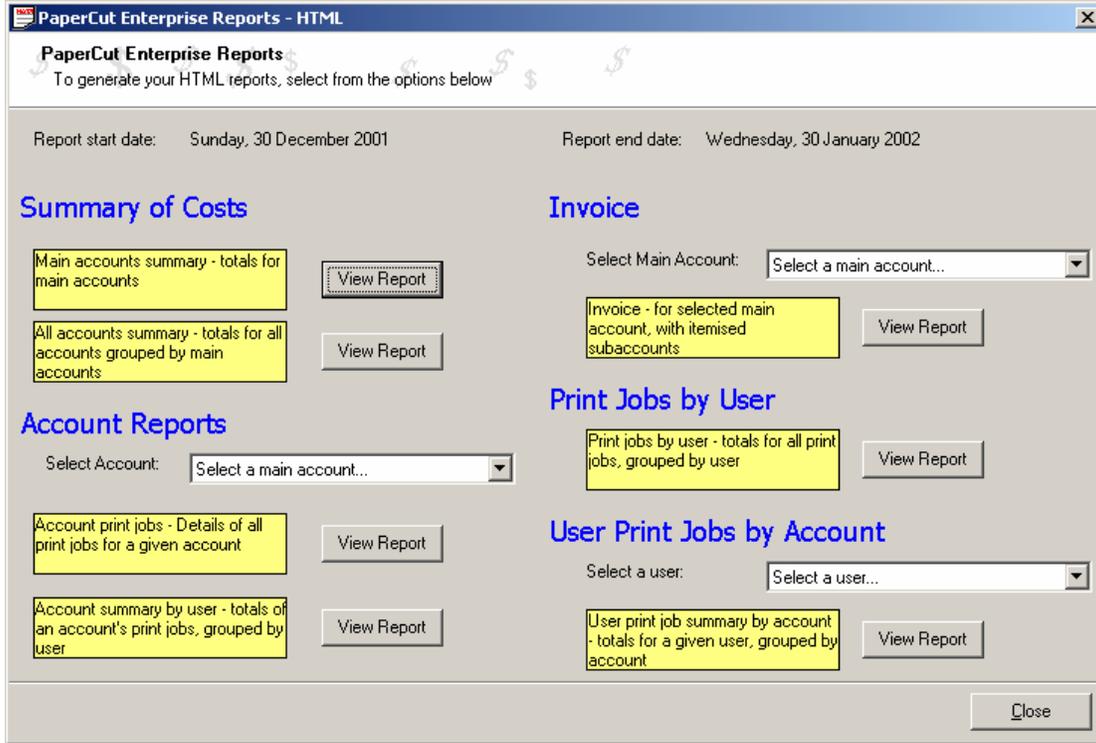


Figure 25b. The PaperCut ChargeBack Reports – HTML version

The following predefined reports are provided:

Report	Description	Uses
Main accounts summary	Summary information for main accounts – number of jobs, pages and cost – plus totals	See at quick glance the costs for each main account and overall costs.
All accounts summary	Summary information for all accounts – number of jobs, pages and cost – grouped by main account with subtotals and grand totals	See more detailed breakdown of costs by main account and subaccount, as well as overall costs.
Invoice	Invoice – number of jobs, pages and cost for a given main account (or client), with itemised subaccounts (or jobs)	Cost recovery - invoice a client.
Account print jobs	List of all print jobs for a given account	Shows all print jobs for a given account across all printers and servers.
Account summary by user	Summary information for a given account – number of jobs, pages and cost – for each user who printed to that account	Shows users who printed to a given account, plus shows each users' printing expenses for that account.
Print Jobs by user	Summary information – number of jobs, pages and cost – for each user across all accounts	Shows all users' printing expenses.
User Print jobs	Summary information – number of	Shows a given user's printing

jobs, pages and cost – for a given user, grouped by main account/subaccount, with totals	expenses broken up by account.
--	--------------------------------

Custom reports (Access only)

Report customisation is possible if you have Microsoft Access installed. You may wish to customise the reports in two ways:

1. **Modify** an existing report to use your organization's logo, fonts and/or stationery
2. **Create** a new report to obtain information that is not available in the predefined reports

In both cases the recommended method for creating custom reports is the same:

1. **Generate** the PaperCut reports database as explained in Chapter 6
2. **Create** your custom report in that database. This enables you to create the report with real data collected from your system.
3. **Export** your new custom report to the reports template, which is found on the PaperCut primary server, so that when future reports databases are generated using the Report Generator, your custom report is included in the new database.

Step 3 is important if you wish to reuse your custom report. The Report Generator works by copying a reports template database from the primary server to the local computer, and importing account and job log data from each of the PaperCut servers. Thus, if you do not export your custom report to the reports template database, it will not appear in future generated report databases.

The export process is outlined below. Your system administrator can help in this process.

1. **Copy** the file PCEActTrk_Reports.mdb from the PCEDData\$ share from the primary server to a temporary directory on your local hard drive.
2. **Remove** the read-only file permissions on the PCEActTrk_Reports.mdb file
3. From within **Microsoft Access**, open your database that contains the custom report. Then select the report and export the report to the PCEActTrk_Reports file that was copied to a temporary directory on your hard drive in Step 1
4. **Repeat** Step 3 for any other database objects (such as queries or forms) that your custom report depends on
5. **Copy back** the PCEActTrk_Reports.mdb file to the primary server. This file will need to be copied back to the PCEDData directory under the PaperCut installation on the primary server – usually c:\Program Files\PaperCut\PCEDData. Your system

administrator can assist in this process. (Note that the PCEData\$ share is shared as read-only, so access to the primary server will be required.)

Tip: *Be sure to create a backup of the PCEActTrk_Reports.mdb database so in case your custom reports version doesn't work, you can revert back to the original version.*

8. Possible Implementation Scenarios

The following scenarios outline some of the many ways in which PaperCut ChargeBack can be used in organizations. PaperCut is a very flexible program. It can be used to aid in cost recovery for businesses, provide cost statistics, implement a 100% user pays system, used to promote responsible use via budgeting, or just simply configured to silently audit printing activity. The following explanations may assist you in finding the right model for your printing environment.

There are three main scenarios under which **PaperCut ChargeBack** can operate:

1. Track printing expenses and assigning them to accounts (jobs)

This allows an organization to track costs irrespective of the user who printed the documents.

Example scenarios:

- Services business such as accounting, legal, advertising, marketing and consulting firms: many of these businesses will print out large volumes of documents for their clients. Many businesses also work on a time-and-materials basis, but keeping track of the costs manually of print jobs is rarely feasible. PaperCut ChargeBack allows for the tracking of print jobs by client and project/job to automatically enable such businesses to easily recover printing costs.

Configuration suggestions:

- Main accounts can be set up for each of the organization's clients, and subaccounts can be created for each project/job within each client. This configuration allows costs for multiple projects/jobs to be grouped by client, and invoices can be generated accordingly.
 - Users are set up to have unrestricted credit, as the print jobs they print are assigned against the client / project, instead of their own personal credit.
 - The Invoice report may be customised to suit the business' needs, such as the use of the business' fonts and logos, and accommodating printing on special letterhead stationery.
 - The PaperCut ChargeBack Client is installed on all client workstations
-
- Organizations that provide services: such organizations might require information such as the cost of providing different services. Such information may be important when the organization next applies for funding, or simply just to budget for the upcoming year. For

example, a non-profit organization or government department would benefit using **PaperCut ChargeBack**.

Configuration suggestions:

- Main accounts can be set up for each of the organization's services. Subaccounts can be used for specialisations within a particular service.
- Users are set up to have unrestricted credit, as the print jobs they print are assigned against the client / project, instead of their own personal credit.
- The PaperCut ChargeBack Client is installed on all client workstations

2. Track printing expenses by user, and optionally charging users

This allows an organization to track costs by user and charge the user directly.

Example scenarios:

- User pays systems: this scenario is common in schools and universities where a "user pays" system is implemented. Users are assigned credit either manually or automatically, and each the cost of each print job is deducted from the users' credit.

Configuration suggestions:

- Accounts are not used in this scenario, and the PaperCut ChargeBack client does not have to be installed.
- Users are set up in the PaperCut database and assigned a fixed amount of credit.
- The cost of each print job a user prints out will be subtracted from their credit. The user will be unable to print when his/her credit reaches zero.
- Special users (such as staff members) may be assigned unlimited credit.
- Manual and automatic scheduling of credit can be used to top-up a user's credit.

- Silent monitoring: an institution or business might not wish to charge users directly for print jobs, but might want to monitor usage silently.

Configuration suggestions:

- Accounts are not used in this scenario, and the PaperCut ChargeBack client does not have to be installed.
- All users are set up in the PaperCut database to have unrestricted credit.

3. A combination of account and user tracking

In certain scenarios, it may be desired that some users may print to expense accounts, whereas other users will have to pay for their print jobs themselves.

Example scenarios:

- University: A university, where staff and lecturers might bill their print jobs against a faculty or subject. Some lecturers and tutors may teach multiple subjects across different faculties, so it is not possible to use the individual lecturer's printing credit to gather information, but information is required for the expenses of each subject. Students are required to pay for their print jobs.

Configuration suggestions:

- Accounts are created for each faculty, and subaccounts for each subject taught by each faculty.
- The PaperCut ChargeBack Client is installed on the workstations of lecturers and tutors who need to assign costs to the faculty / subject
- A set of "logical" printers are created and shared for use by the lecturers and tutors. These printers are marked as "Require Account" in the PaperCut Administration Console. Staff will print to these printers.
- The PaperCut Client does not have to be installed on the student workstations
- A set of "logical" printers are created and shared for use by students. These printers are **not** marked as "Require Account" in the PaperCut Administration console. Students will print to these printers.
- **Note:** the one physical printer may be installed multiple times on a server, so it is possible to have one logical instance of it requiring account information (lecturers / tutors print to this instance) and another instance not requiring account information (students print to this instance)

9. Setup Guide

This section covers the basic installation of PaperCut ChargeBack onto a network print server. Complex installations, such as configuring multiple print servers on a domain, or automated deployment of client tools, are covered in Chapter 10. *A basic to intermediate knowledge of Windows network is expected.*

It is assumed that this is your first installation of PaperCut on your network, and as such, the server you choose for the installation will be the designated **PaperCut Primary Server**.

Explanation : Primary Server

On larger networks, it may be necessary to split your printer sharing across multiple print servers. In these situations, one of your print servers will be designated the **primary server**, and the other servers are secondary servers. A full explanation of the relationships between primary and secondary servers is described in Chapter 10.

When selecting one of your servers to be the **primary server**, you should try to select the server which:

1. Remains up for the longest period of times (fewest reboots)
2. Is readily accessible for account administration

If you only have one print server on your network, then this will be by default, the **primary server**.

Configuring the Network

For accurate tracking of print jobs, PaperCut requires network clients to be configured to use a Windows print server. PaperCut will be installed on this print server. If your network currently uses a Windows NT / Windows 2000 server or workstation as a print server, then chances are, no modifications will be required.

The steps in configuring a network are as follows:

1. **Connect** (or Capture) all network printers on a Windows NT or Windows 2000 print server.
2. **Share** the added printers.
3. **Configure network clients** to print to the shared printers on the print server.

This configuration will ensure all clients print **via** a Windows Print Server. Clients should NOT be configured to print directly to the printers.

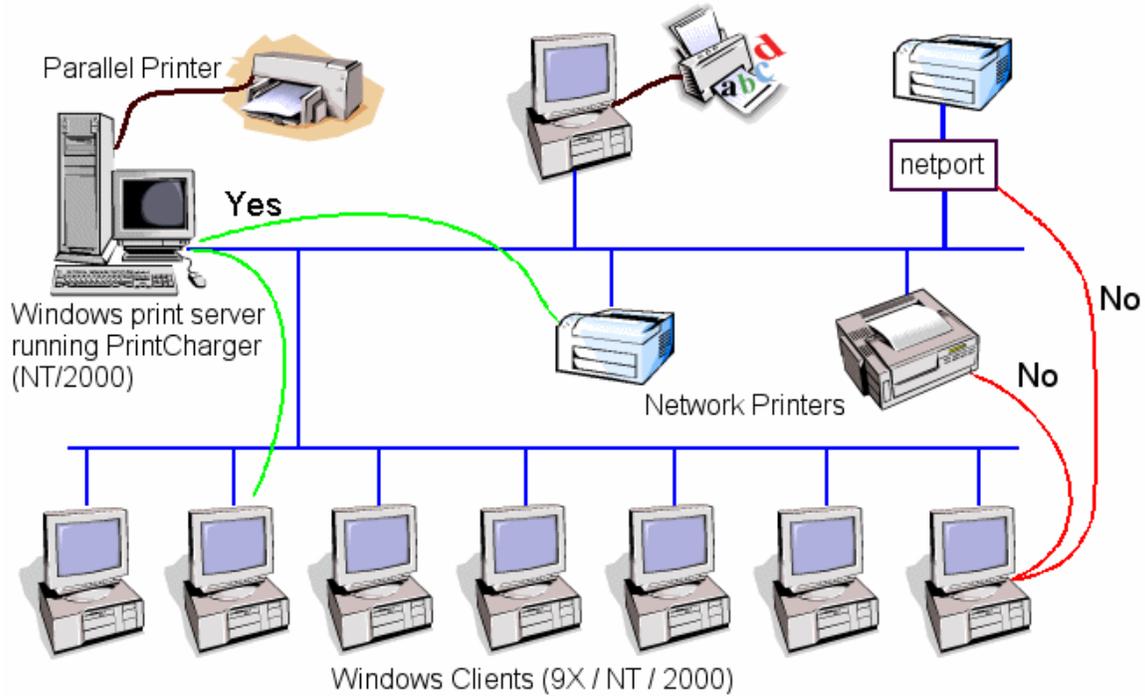


Figure 26. Network Diagram including clients, print server and printers.

Printing via a Windows Print Server allows PaperCut to intercept print jobs and gather the jobs' statistics accordingly. Using a printer server as an intermediate step between network clients and printers offers other advantages, including centralized queue management and increased load capacity.

A *Primary Domain Controller* can be used as a print server, although we recommended that a separate NT/2000 machine be configured for this job.

Connecting printers to the print server

Printers may be connected to the print server via the Parallel Port(s), on remote computers, or network connected. Network connected printers may be either a printer with a built-in network card (eg. HP JetDirect) or a Parallel Port Printer interfaced to the network with a "Print Server Box" (eg. Netgear PrintServer). An old, or little used computer can also be used as a network interface for a parallel printer, although this is less suitable as it is more prone to locking up due to user interaction. For further information on connecting network printers to your print server, consult the Windows help or your hardware documentation. TCP/IP networked printers such as HP JetDirect are recommended.

Sharing printers on the print server

The printers on the print server should now be shared with appropriate names. To share a printer:

1. Right Click on the printer icon and select **Sharing...**
2. Select **Shared** and assign an appropriate name.

Configuring Network Clients

A printer can be configured on your network clients simply by adding a new network printer.

1. Open the **Printers** folder in the **Control Panel**.
2. Double-click on **Add Printer**.
3. Select **Network Printer**.
4. Click on **Browse...** and locate a *shared printer* on your print server.
5. The appropriate drivers will be downloaded and the printer installed.

Installing the PaperCut Software on your Print Server

- *Before installing PaperCut ChargeBack ensure you are logged on as a user with "Administrators" privileges.*
- You may be requested to restart your computer after running the install program. Before continuing, ensure that a restart is not going to upset your network users.

The setup program is straightforward to use. When asked to select components to install, select "**Print Server Installation**". Installation of the other client tools will be covered later.

Setup Wizard

After installing, and restarting if required, select "**PaperCut ChargeBack**" from the start menu. You will be presented with the PaperCut setup wizard. This wizard will ask a few questions about your network configuration, and configure PaperCut accordingly.

Screen 1: Primary / Secondary Server

As this is your first installation of PaperCut, your server will be the Primary PaperCut Print Server. Ensure that the Primary Server is selected.

Screen 2: Network Configuration

PaperCut must query information about your domain users. For normal network configurations, select "Get user information from the Primary Domain Controller". PaperCut will call the main server on your network to request a network user list.

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If you are installing PaperCut on a standalone Windows NT (2000) system or a Peer-to-Peer network, select “Get user information from this computer.”

If your print servers are trusted by a domain that contains all of your user accounts, you can specify the trusted domain with the 3rd option.

PaperCut Security Wizard

The PaperCut security wizard will attempt to set up the necessary security settings (file permissions and sharing) for PaperCut to function. If all goes well, the security wizard will run (shown below), perform the necessary security changes, and close itself.

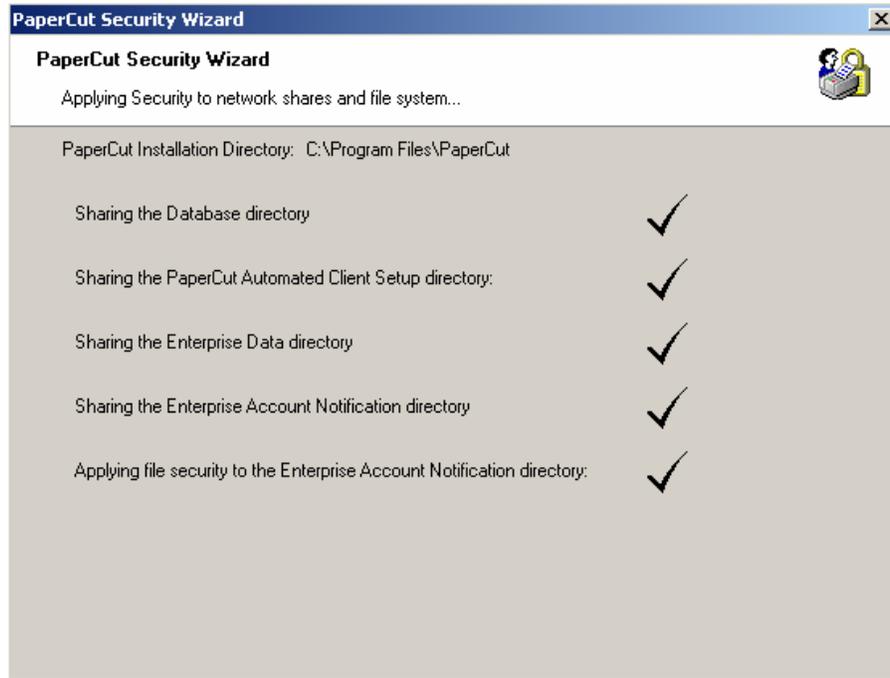


Figure 27. Network Diagram including clients, print server and printers.

Under normal setups, the wizard should be able to perform the necessary changes. However, under some circumstances (such as a strict security policy for the Administrator account) it may fail. If any of the steps fail, you will be notified of this. You should then check the security settings as listed in the Appendix to ensure that PaperCut will work smoothly.

Primary Server setup tasks

At this point, the technical setup of PaperCut on the server is complete. There remain some outstanding tasks:

1. **Add Printers** to your charging list.
2. **Assign** a cost to each printer.
3. **Add accounts** to track print expenses against.
4. **Install** the client popup utility on your clients, where required.

These tasks are explained in Chapter 4. When adding accounts, you should bear in mind the requirements of your organization. Refer to Chapter 8 for some sample strategies and uses of accounts.

Please note: that when you add printers to the charging list and check the **Require Account** checkbox, that printer is marked as requiring account information in order to print. This means that the PaperCut ChargeBack client software must be installed on the workstations of those who wish to print to that printer. This in turn will interrupt printing services for those without the client software installed.

In some cases it is possible to deploy the PaperCut ChargeBack client to all your workstations via automated techniques, or to install the software manually if you only have a small number of workstations. However, on large networks with many clients, it may take some time to install the clients, and as such to prevent printing interruption during that time, it is necessary to install PaperCut ChargeBack according to a **minimal impact strategy** (described below).

The **minimal impact strategy** should also be used if you wish to trial PaperCut ChargeBack on only some of your workstations, before deciding on an installation on all workstations.

Explanation: Minimal Impact Strategy for installation

A minimal impact strategy for installing PaperCut is one that does not disrupt current printing services.

Interruptions will occur if a user prints to a printer that is set to **Require Account**, but the PaperCut ChargeBack client is not installed on the user's workstation. This is because the server expects to be notified of the print job's account, but will never receive that notification.

It is possible to avoid this situation by taking the following steps:

- On the print server, install the printer drivers for the printers you wish to monitor again, but with different names. For example, you may have a "HP DeskJet 550C" installed on your print server that users are currently printing to. You can install the printer driver for that printer again, but name it "HP DeskJet 550C Mon". (the Mon prefix standing for "Monitored"). *Thus the same physical printer has two logical installations.*
- When adding printers to monitor in the PaperCut Administration Console, select the monitored printers but not the unmonitored printers. In the example above, you would select "HP DeskJet 550C Mon" to monitor, but not "HPDeskJet 550C".
- Install the PaperCut ChargeBack client on your workstations, and instruct users on these workstations to print to the monitored printers. From now on, whenever a print job is sent to the monitored printers, the PaperCut ChargeBack client will pop up, prompting the user for the account.
- If you wish to enforce account tracking for all print jobs on your network and all your workstations have the client installed, you can remove the non-monitored installations of the printers to force all users to print to the monitored printers.

Installing the PaperCut ChargeBack Software on Network Clients

You may need to install the PaperCut ChargeBack Client on some or all of your workstations, depending on your organization's use of PaperCut ChargeBack (refer to Chapter 8 for more details).

The setup may be done either manually or automatically. The manual installation process is described here; the automatic version is described in Chapter 10. For installations of more than a few workstations, it's recommended to invest the time to test and use the "silent install" method.

Run the setup file from the client workstations

When the PaperCut server was being installed, a share called PCSetup was automatically created. This share contains the client installation program.

To run the program, simply connect to the share [\\<primary server name>\PCSetup](#) and run the program `pce-setup.exe`. When prompted, select the installation component “Client Installation (for Workstations)”.

Note that if you choose to use your PaperCut Primary Server as a workstation as well, you will need to install the Client Installation on the server as well.

Tip: *Try installing the PaperCut ChargeBack Client on one workstation at first to familiarise yourself with the process and to perform some testing.*

Testing the Installation

It is important that you take some time and do some testing. It is recommended that your print test documents on all your printers from a number of different network clients. Ensure that the “Page Count” in the user list, and printer list, and account list increase corresponding to the number of test pages. Remember to press the *Refresh* button in the Administration Console (the icon in the bottom right corner) after printing your test documents. We also recommend you inspect the PaperCut *Event Log* after printing the test documents. If PaperCut ChargeBack does not recognize the printer language for any one of the printers, a message will appear here.

10. Advanced PaperCut Setup

An intermediate to advanced knowledge of Windows network is required.

Domains with Multiple Print Servers

On a large network it may be necessary or desirable to split your printers among two or more print-servers. PaperCut can be installed on all print servers, and configured to use one central accounts and user database. The following diagram illustrates the communication that occurs between servers and clients.

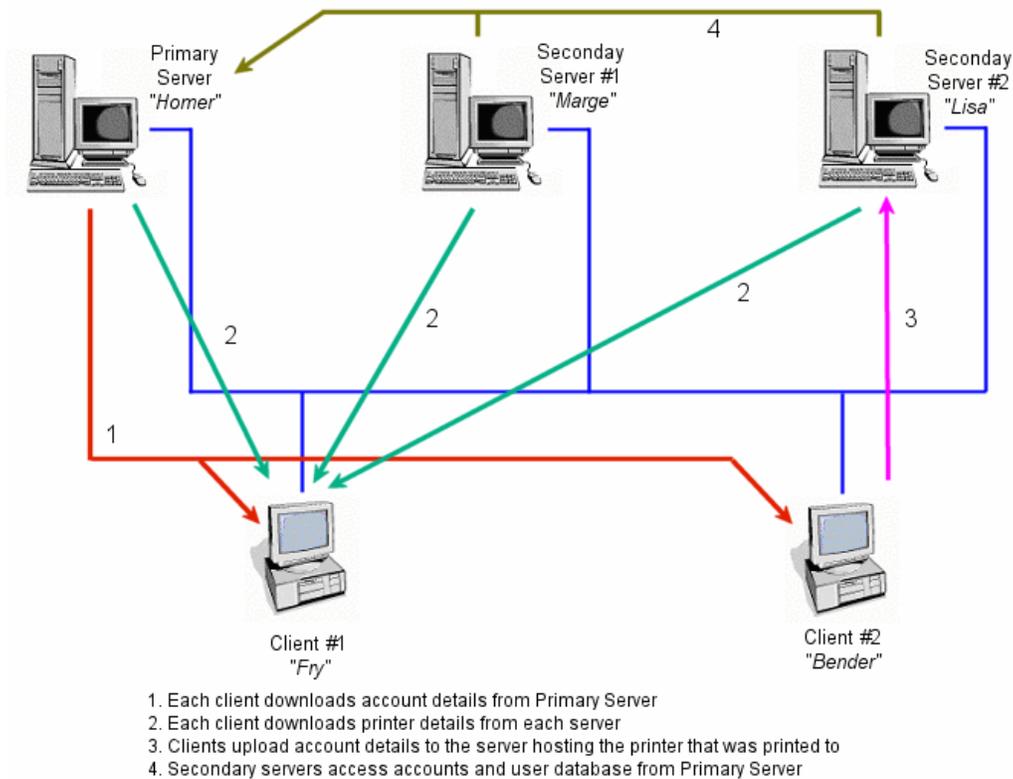


Figure 28. Network Diagram – interaction between clients and server.

All communication is done through reading and writing to network shares. Thus, for multiple servers some additional configuration is required.

Sharing the Centralised Accounts and User database

The accounts and user database is hosted on the **primary server**, and accounts may only be added or edited from that server.

As shown in the diagram, all secondary servers require access to the centralised accounts and user database for two reasons:

1. The PaperCut ChargeBack service will increment the cost and page counters for the relevant account when a print job is printed.
2. The Administration console, which runs on both Primary and Secondary servers, needs access to the database to display user and account information

The centralised accounts and user database is placed in the Database directory under the PaperCut installation directory – usually c:\Program Files\PaperCut\Database. It is shared as PCDB\$ after installation with read permissions for everyone (Read-Only sharing permissions, not NTFS permissions)

However, if you wish to install multiple PaperCut servers, you will need to add **Full Permissions** on the PCDB\$ share (Database Folder) to the **Administrators group**. (It is possible that on Windows 2000 the Administrators group does not appear on the list of available groups – if so, then set **Full Permissions** on the **Domain Admins group** instead.)

Create the “PaperCut” user

The PaperCut service on your secondary server will run as a dedicated user that has permissions to access the shared Accounts and User database across the network. It's recommend that a user named **PaperCut** be added to the **domain** – this user will be the identity of the PaperCut Service.

- Run User Manager.
- Add a new user named PaperCut and assign a password.
- Set the password to **Never Expire**.
- Add the user to the **Administrators Group**. (Or if you assigned **Full Permissions** on the PCDB\$ share to the **Domain Admins group**, then add the **PaperCut** user to the **Domain Admins group**.)

Installing PaperCut on the secondary servers

1. Ensure that the PCDB\$ share on your primary server has **Full Permissions** for the **Administrator Group**, and that you have created the **PaperCut** user, as explained immediately above.
2. Follow the instructions as given in the section “Installing the PaperCut Software on your Print Server” in Chapter 8 with the following exceptions:
 - a. When the Setup Wizard asks whether you are installing a Primary Server or Secondary Server, select the latter.

- b. You will be prompted to enter the name of the Primary Server. The Setup Wizard will then check that you have access to the Primary Server.
- c. When next screen prompts you for the **System Service Setup** - you will be requested for a username and password for a user for the PaperCut service. Enter **PaperCut** – this user was created previously for the identity of the process, and its password.

If you experience difficulties with locating the PaperCut Database, and receive the message “The PaperCut database could not be found in its set location”, this means that the shared accounts and user database could not be opened. This could be due to:

- The database share name was entered incorrectly (should be PCDB\$)
- Permissions have not been granted for you to read and write to the share. You should be logged into the machine as a user with administrative rights, and the PCDB\$ share should have **Full Permissions** for the **Administrators** (or **Domain Admins**) group. Double check these permissions.

After installing each secondary server, you must ensure that that server is registered with the Primary PaperCut server. To register the server, run the Administration Console on the primary print server, navigate to the Options section, and add it to the list in the **Secondary print servers** tab.

Automated installation of PaperCut ChargeBack Client

If you have many clients, you may wish to automate the install process with SMS or logon scripts. The PaperCut ChargeBack Client comes with a “Silent Install” mode which can be used for such schemes.

Silent Install (advanced)

1. Use “logon scripts”, or equivalent, to map the share [\\<primary server>\PCSetup](#) to a drive letter on each network workstation.
2. Edit the “client-silent-install.bat” script as required.
3. Execute the batch file “client-silent-install.bat” on the mapped drive. Again, this can be automated with SMS, logon scripts, or custom install scripts.

Additional Command Line Options:

Additional command line options can be specified in the “client-silent-install.bat” batch file:

`/VERYSILENT`

The installation progress window is not displayed. Error messages are shown.

/NORESTART

Instructs Setup not to reboot even if it's necessary.

/DIR="x:\dirname"

Overrides the default directory name displayed on the Select Destination Directory wizard page. A fully qualified pathname must be specified.

/GROUP="folder name"

Overrides the default folder name displayed on the Select **Start Menu** Folder wizard page.

Client setup file

The setup.txt file in the PCSetup share contains default parameters that PaperCut ChargeBack client tools need. It was created automatically when the PaperCut server was installed – it is found under the “PCSetup” directory under the PaperCut installation (usually c:\Program Files\PaperCut\PCSetup).

This file may be customised to suit your preferences. You can modify the banner link that appears in the client tools, and whether the client tools should be shown upon startup.

The parameters in the setup.txt file are placed on a line each, as shown in the following example:

```
PCEPrimaryServer=KEATING
PaperCutUserDBPath=\\KEATING\PCDB$\PCUserDB.mdb
ShowOnStartup=0
ShowLink=1
LinkName=About printing...
LinkPath=http://myserver.com/printing.html
```

<i>Parameter</i>	<i>Description</i>
PCEPrimaryServer	The name of the primary PaperCut server
PaperCutUserDBPath	The path to the shared User and Accounts database
ShowOnStartup	Relates to the User Enquiry Tool (Chapter 5) The first time it is run, the ShowOnStartup parameter is read. If set to 1, the User Enquiry Tool will then register itself to run every time a user logs in on the given machine. If set to 0, the User Enquiry Tool will run only when started explicitly from the Start menu. (This may be useful for implementations where users are charged individually for printouts.) Default to 0.
ShowLink	Whether to show the link in the banner of the client tools (see Figure 22). Must be 0 or 1.
LinkName	The name of the link that appears in the client tools. Default is “www.papercut.biz”
LinkPath	The url of the link displayed in the client tools. Default is “http://www.papercut.biz”

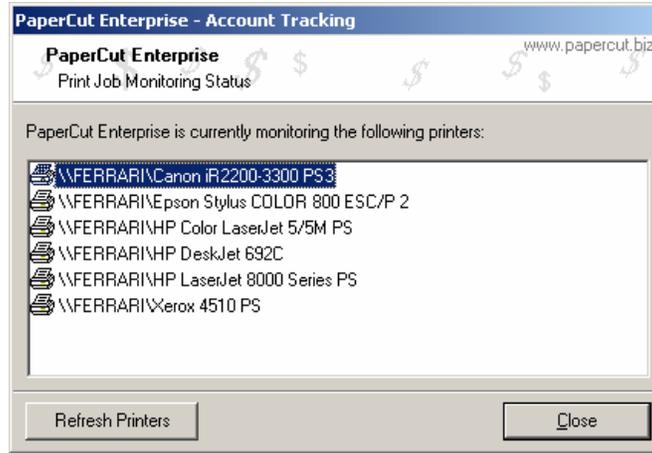


Figure 29. PaperCut ChargeBack Client – customizable link

For example, the link www.papercut.biz in Figure 23 can be customised to point to your company's intranet page on printing procedures.

Whenever you install the PaperCut ChargeBack clients from the PCSetup share on your primary print server, the setup.txt file is copied to the workstation and its parameters are used in the setup of the client (changing the file has no effect on current installations). Thus **it is recommended that any customisations be performed before deploying the client on your workstations.**

Automatic archiving of print logs

When PaperCut was installed, an “at” job was setup to schedule the automatic archiving of print logs. This archiving process transfers logs older than 3 weeks from the main “working” database (named PCEActTrk.mdb in the PCEData subdirectory of the PaperCut installation) into archives, named (ATA_YYYY_MM.mdb where YYYY=year, MM=month). This improves PaperCut performance on both the server and report generator.

The default scheduling of archiving was done with the following at job:

```
at 2:00 /every:M,T,W,Th,F,S,Su "c:\Program Files\PaperCut\ActTrkArchive.exe" /silent
```

(Or the appropriate path for your installation of PaperCut ChargeBack.)

Thus, archiving is scheduled for 2:00am every day. If such a scheme is not suitable for your network (eg. 2:00 am happens to be a high-load time for printing, or your network is shut down for maintenance at that time) then you can modify the schedule. Try to pick a time when printing load is either non-existent or light, and try to schedule archiving at least once a week (once a day is even better).

For example, if you need to change the schedule to 6:00pm every Friday, you should delete the existing default at job, and use the command:

```
at 18:00 /every:F "c:\Program Files\PaperCut\ActTrkArchive.exe" /setup
```

Automatic importing of accounts

The account import feature in PaperCut ChargeBack allows the creation of new accounts, without the manual intervention of the administrator. Therefore you might wish to schedule regular imports – for example, you may choose to import from a text file that gets updated whenever a new job number is created. A daily scheduled import will ensure that that new job number will be added automatically to the PaperCut ChargeBack database without any manual intervention.

Once your settings are set up in the Account Import Wizard, you can repeat the import by running the program “C:\Program Files\PaperCut\ActImport.exe”.

To achieve daily imports, use an “at” job such as:

```
at 2:00 /every:M,T,W,Th,F,S,Su "c:\Program Files\PaperCut\ActImport.exe"
```

The PaperCut event log will record the import process and detail any imported accounts.

11. Installing Web Tools & Remote Administration

The Optional Web Administration Add-On offers remote administration of PaperCut ChargeBack accounts and users using a standard web browser. In addition, it can be used to browse recent print jobs printed on a printer or by a user. It's ideal for applications where remote access is required for simple account management. For instance, the company financial officer might need to add a new expense account for a new client, but does not have administrative privileges, or login access to the PaperCut primary print server. The company financial officer can then use the web administration console to add the account.

Changes to individual user credits can also be performed using the web administration module.

Note: The PaperCut Admin Console software offers more advanced management features. The web based administration option offers ease-of-use and has the advantage of not requiring the installation of additional software. It is ideal for the day-to-day user management tasks. For remote management of advanced features such as costs, filter rules and other features, consider accessing the PaperCut Administration Console using remote server access software such as VNC or Windows Terminal Server.

System Requirements for Web Administration

- ❑ Microsoft Internet Information Server (IIS)
- ❑ A standard web browser (IE 5+, Mozilla, or Firefox)

Installation

Installing the Web Tools Add-On is optional. PaperCut will function fully without the Web Tools, however all administration will have to be done using the main Administration Console. It is strongly recommended that you take the time to configure the web tools.

1. Install the Internet Server Software

Microsoft Internet Information Server (IIS) with ASP extensions is required on the primary PaperCut server, and can be installed either before or after the installation of PaperCut. IIS with ASP is available with the NT Server Option Pack or comes as an optional component with Windows 2000 Server/Pro and Windows 2003.

NOTE for Windows 2003: Windows 2003 Server does not run ASP pages by default, so this must be enabled after installation. To do this, open Control Panel->Administrative Tools->Internet Information Server. Select the “Web Service Extension” node, and “Allow” the “Active Server Pages” extension.

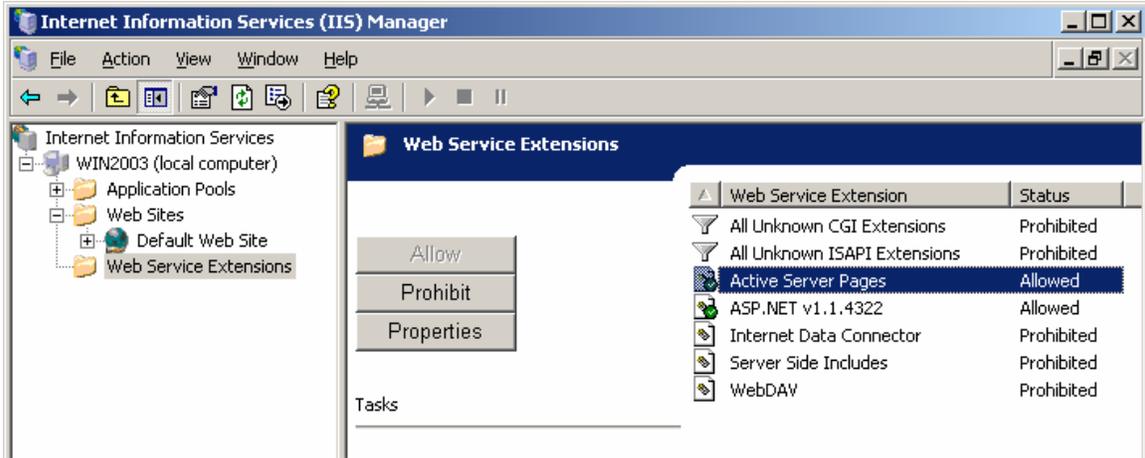


Figure 1: Enabling Active Server Pages on Windows 2003 Server

2. Adding a Virtual Directory to IIS

You need to create a virtual directory for the PaperCut Web Tools. To do this:

- Open the IIS console (Control Panel->Administrative Tools->Internet Information Services)
- Right-click on the Web site you want to create the virtual directory under (the default is “Default Web Site”)

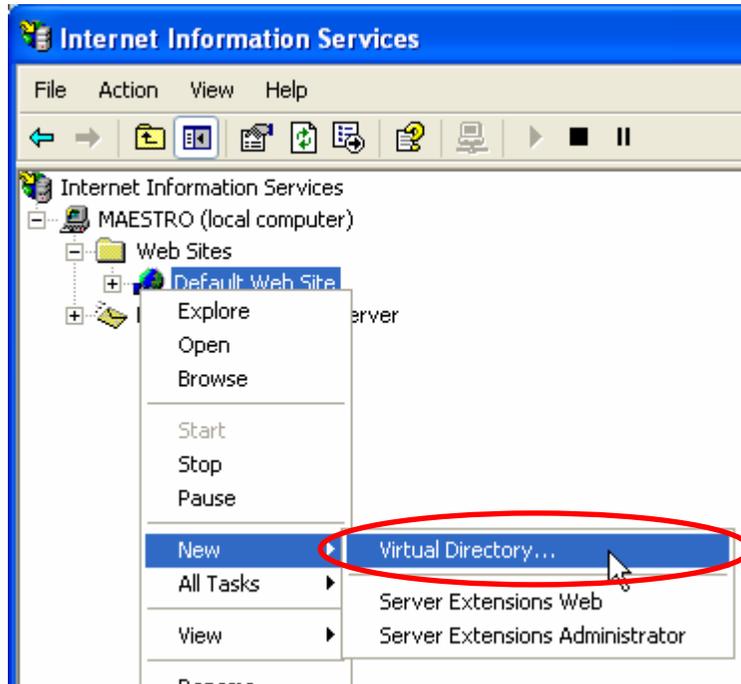


Figure 2: Creating an IIS virtual directory for PaperCut Web Tools

- Enter the name of the virtual directory in the “Alias” field. E.g. “papercut”. Then press “Next”
- Select the directory where PaperCut Web tools are installed. i.e. `C:\Program File\PaperCut\WebAdmin`. Then press “Next”.
- Ensure that the “Run scripts” option is enabled. Then press “Next”.
- Press the “Finish” button

The PaperCut web tools require users to authenticate with IIS. To configure IIS to force user authentication, you need to deny anonymous access on the PaperCut virtual directory. To do this:

- Right-click the PaperCut virtual directory in the IIS console and select properties
- Select the “Directory Security” tab
- Press the “Edit” button in the “Anonymous Access and Authentication Control” section
- Disable anonymous access and make sure “Integrated Windows Authentication” is enabled (see below)

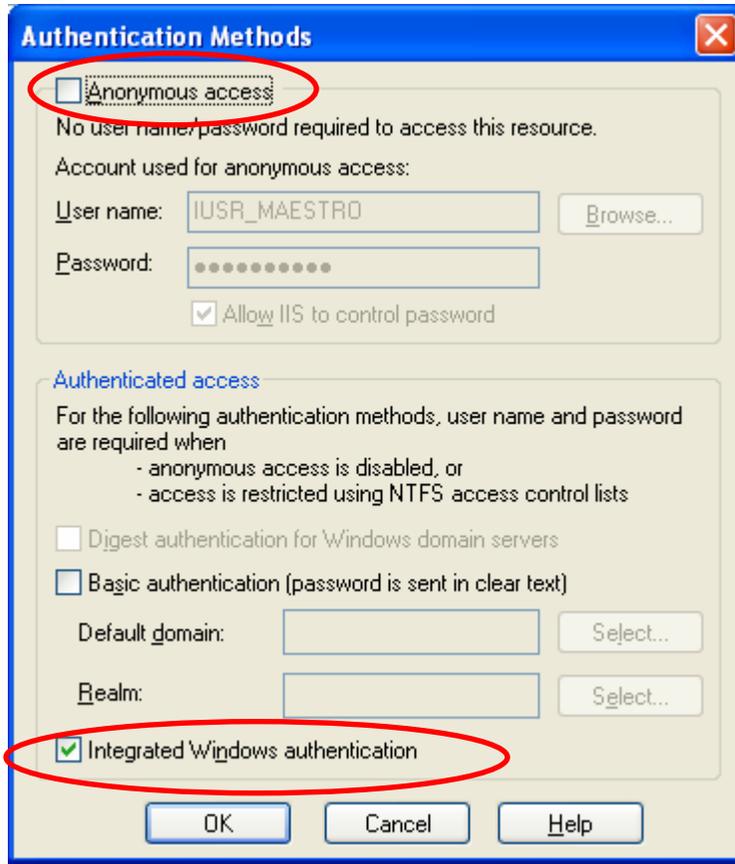


Figure 3: Configure IIS to require user authentication

3. Configure File Permissions

The PaperCut installer will set the file permission correctly for most organizations, so will not need to be modified.

If you want people in addition to the Administrators group to have access to admin pages you will need to modify the permissions. If you do not want to modify these permissions you can skip to point 5: *Testing the Setup*.

File permissions must be carefully configured so to allow only users with adequate permissions access to account management functions. Log on as Administrator and configure the file permissions as follows:

Administration Pages

The following Administration pages should only be accessible to users who are allowed to perform user administration (e.g. Administrators, Admin staff, etc). **Normal users should be allowed to access these pages otherwise they will be able to modify user credit, etc.**

C:\Program Files\WebAdmin\Admin.asp

C:\Program Files\WebAdmin\UserList.asp

1. Read and Execute (or Full Control) permissions to Administrators (or other administrative group)
2. No privileges to any other normal users

All Other pages and files under C:\Program Files\PaperCut\WebAdmin

All other files should be readable by all users (administrators and your other users)

1. Read and Execute permissions to Domain Users (or other group that your users belong to)

PaperCut Databases

The PaperCut databases need to be readable and writable by all users.

C:\Program Files\PaperCut\Database\ &

C:\Program Files\PaperCut\Database\pcuserdb.mdb

C:\Program Files\PaperCut\Logs\ &

C:\Program Files\PaperCut\Logs*.mdb

1. Ensure all users have full control (i.e. Users or 'Domain Users' have full control)

4. Testing the setup

Open a web browser on the print server (or another computer on the network) and connect to <http://PrintServerName/papercut/Admin.asp>. Where **PrintServerName** is the network name associated with the print server running PaperCut. If requested, enter a username and password of a user with printing account administration access (as configured in step 3). The PaperCut Web Administration – Welcome page should appear (refer to Figure 24).

We recommended that you try and access the page while logged on as a non-privileged user. Unprivileged users should be denied access to this page. If access is granted, check the permissions allocated to the **Admin.asp** and **UserList.asp** file in the WebAdmin directory.

Advanced Configuration & Customization

Often the options available in the **Config.inc** don't cover the full range of customization required. Many organization may want to fully integrate the PaperCut web tools interface into an existing Intranet or portal website. PaperCut's web tools interface is developed using Microsoft's Active Server Pages (ASP) technology. System Administrators with HTML experience should quickly be able to modify the look-and-feel of the web tools pages. Most colors and fonts are controlled via the **PaperCut.css** file and the **header.inc** file controls the header and logo layout. PaperCut Software Pty. Ltd. is happy for customers to modify the pages and/or use any of the code for customization purposes. *Please remember to take a backup copy of the pages as future PaperCut upgrades may overwrite the changes.*

PaperCut Software Pty. Ltd. is also able to assist customers with custom page designs if required.

12. Using the Web Administration

All Users

All network users may use the page at <http://PrintServerName/papercut/> (change *PrintServerName* to the name of your print server). The Printing Account Query page gives network users access to their current account balance and other information. Users simply enter their logon ID in the Username field and press the show button. Users can only view their account information. This web page replaces the functionality offered by the User Inquiry Tool.

Administration Welcome Page

The welcome page can be accessed at <http://PrintServerName/papercut/Admin.asp>, as shown in Figure 30. From here you can perform account administration, user administration and view recent print jobs on the primary print server.



Figure 30. The Web Administration – Welcome page.

Account Administration

Clicking on the Account Administration link will bring up the Account List, as shown in Figure 31. This list is similar to the Account List in the Administration Console, shown in Figure 2.

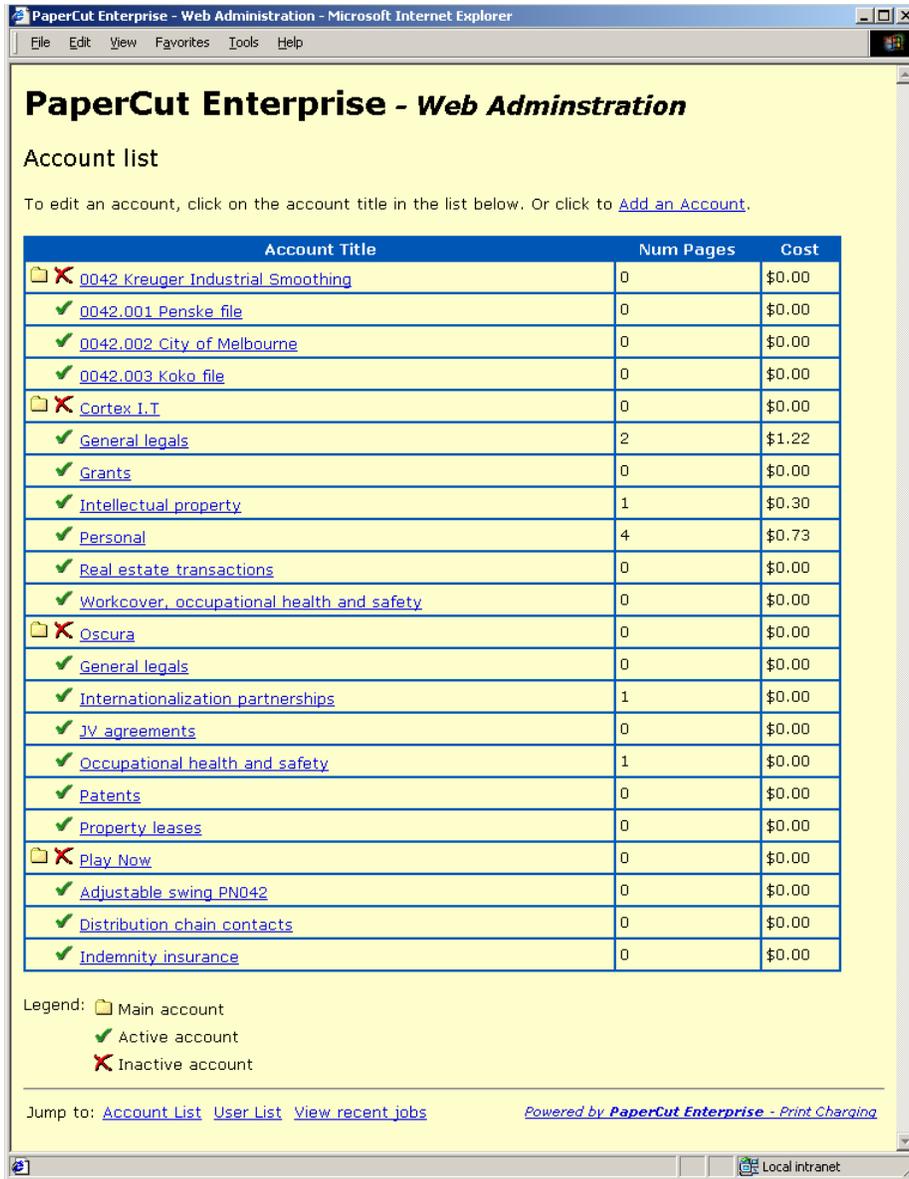


Figure 31. The Account List page.

To edit an account, simply click on its link. To add an account, click on the “Add an Account” link. In both cases, the Account Details page will appear, as shown in Figure 32.

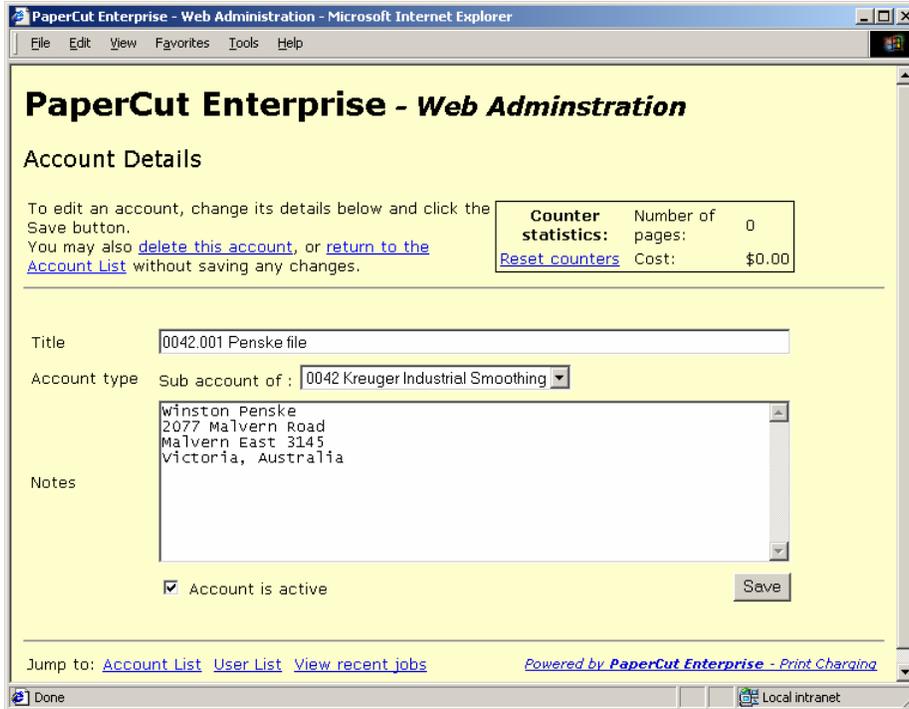


Figure 32. The Account Details page.

Follow the instructions given to edit the account details. You may also reset an account's counters or delete the account by clicking on the appropriate links.

User Administration

Clicking on the "User Administration" link on the Welcome page will invoke the User List page. This page displays a list of network users and their current account balance. Clicking on the user's name will open a page where account credit and other privileges can be altered. After editing a user's account balance, press the "Save" button to commit changes, as shown in Figure 33.

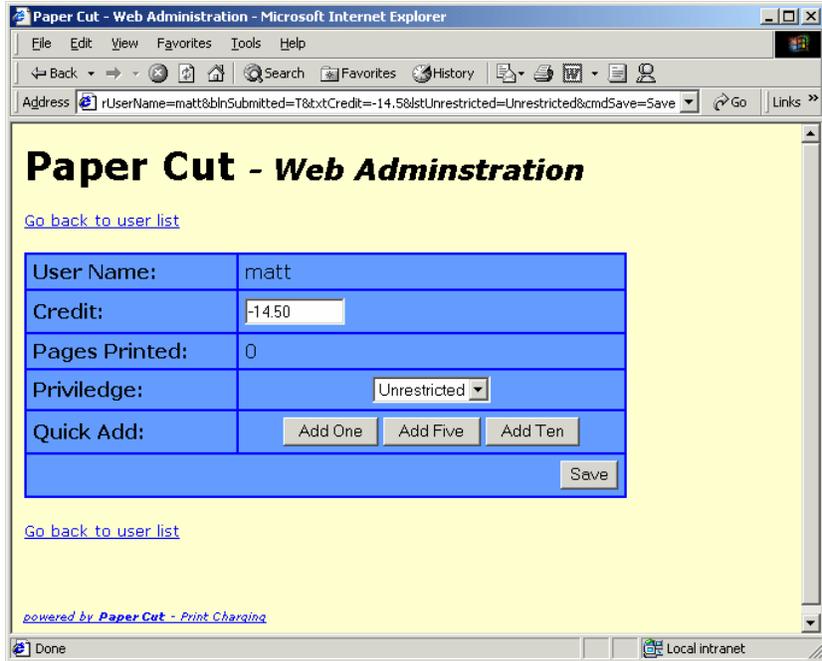


Figure 33. After editing a user's account balance, press the "Save" button to commit changes.

Viewing Recent Print Job Information

Account Administrators have access to the Log page at <http://PrintServerName/papercut/Log.asp>.

This page displays a list of recent print jobs. The URL

<http://PrintServerName/papercut/Log.asp?strUserName=USERNAME> (change <USERNAME> to the user of interest) will display recent print jobs printed by <USERNAME>.

13. Installation Troubleshooting

The share PCSetup is not visible on my primary print server

This indicates that the setup wizard was not able to share the PCSetup directory properly. Please ensure that all the shares listed in Appendix are created on your primary print server, with the relevant permissions.

There are communication problems between the print servers and the clients.

This is indicated when the client complains that it could not contact the primary print server, or that it could not upload account notification information to the server. It is caused by either:

- The user does not have permissions to access the required shares on the print server.
- The print server shares are not correctly set up.

In both cases, you should check that the shares listed in the Appendix are created on your primary print server, with the relevant permissions.

PaperCut ChargeBack is not detecting jobs printed from a network client.

There are two possible causes of this problem:

- Users are not correctly logging on to your network domain. If the domain server does NOT authorize users, PaperCut ChargeBack has no way of knowing who submitted the print job. With system policies login onto the domain can be made mandatory, eliminating this problem. Alternatively printer permissions can be set on the print server to ensure only valid domain users may print to the printers.
- Alternatively the client computer may be configured to print directly to the network interface printer. Ensure all network clients are configured as outlined in the PaperCut ChargeBack installation guide. All print jobs must pass through the print server running PaperCut ChargeBack.

PaperCut ChargeBack is not working after the installation. What do I do?

Try restarting the print server. The PaperCut ChargeBack service will be Automatically restarted and this resolves most installations issues.

Every time I print to one of my printers, I get message in the PaperCut ChargeBack Event Log informing me that the printer language is not recognized.

OR

Print is not counting pages correctly.

PaperCut currently supports Postscript, PCL, PCLXL and ESC/P2 printer languages. Most printers on the market support one of these languages. Some printers support a proprietary language, but also accept PCL or Postscript. In this case install PCL or Postscript driver. We recommend you try the following problem resolution actions in this order:

1. Install **Postscript** drivers if they're available for the printer. Do this on both the Print Server and all network clients. We recommend the Postscript language over PCL.
2. Try the drivers included with the Windows CD. PaperCut supports the majority of drivers distributed with recent Windows releases.
3. If you have an all Windows NT/2000 network (all network clients run WinNT/2000) then disable the "Always Spool in RAW format" by reversing the changes made in "Print Job Datatype" section of the Setup Guide.

If your printer does not support PCL or Postscript, then check the PaperCut web site for an updated version of the "Page Counting Machine". We may now have support for your hardware and drivers. If you're still having problems, contact us at support@papercut.biz

14. Frequently Asked Questions

General

How do I turn off visible account monitoring for a given printer, and instead use PaperCut ChargeBack in “silent monitoring” mode?

PaperCut ChargeBack will use account monitoring if a printer is marked as “Require Account”. You can mark each individual printer to run in “silent monitoring mode” by unchecking the “Require Account” checkbox. This is explained in Chapter 3 on page 9. When users print to that printer they will no longer be prompted for an account.

PaperCut screen-shots show a “\$” currency symbol. My country uses a different symbol?

PaperCut ChargeBack fetches the currency format from the Windows Operations system “locale” settings. PaperCut will adapt to the regional settings configured under the Windows Control Panel-> Regional Options.

What hardware is recommend?

Postscript, PCL or compatible networked printers are strongly recommended. Most printers now come with a built-in network card option. Printers without network cards can be used with network interface boxes such as AXIS boxes or Netgear PrintServer boxes. These can usually be purchases for under US\$100 . Parallel Port connections direct to either the print server or to network clients are also supported, however this is not the preferred option.

Will PaperCut ChargeBack slow printing?

Users will experience no notable slowing of normal print jobs. Very large jobs may experience a few seconds delay as the job spools to the printserver.

What printers are supported?

PaperCut ChargeBack works with PCL, Postscript, ESC/P2 and compatible printers. PCL is a language supported by Hewlett Packard and many other printer manufactures make their products compatible with PCL. We strongly recommend Postscript compatible printers. ESC/P2 is a printer language used by Epson. We are currently compiling a list

of printers that work with PaperCut, but in the meantime, we suggest you download the evaluation version and make sure it meets your needs.

Does PaperCut support different charging prices for color, duplex and different page size printing?

Yes. PaperCut supports a variety of charging techniques, including charging by specific page size (with different color and grayscale rates), page area charging, page size category charging, and discounts for duplex printing to encourage paper conservation.

The powerful print charging capabilities of PaperCut make it suitable for both simple (eg. schools) and complex (eg. design, architecture, engineering firms) applications.

I only want to monitor or charge a small number of users on my domain. Do I have to buy a license that supports all users?

PaperCut Quota: The license is based on the number of user logon accounts registered on the domain. PaperCut counts the number of users within the domain, and will prompt you if you exceed your license quota. If you only intend to monitor a small percentage of your users, email us with your situation and we can arrange a special agreement.

PaperCut ChargeBack: You'll only need to purchase licenses for the users who will print to monitored printers. (These are the users who will usually have the popup window installed.) Only these users should be added to the PaperCut Database.

To achieve this, you should create a new group on your domain called **PaperCut Users**, and add in the users you wish to use PaperCut.

Then if you're setting up PaperCut for the first time, in the Setup Wizard, when prompted where to import the list of users from, select **Get user information from network group** select the group **PaperCut Users**.

If you have an existing installation, and wish to only import users from the PaperCut Users group, run the PaperCut Administration Console, navigate to the Options tab and select **Get user information from network group**, and select the **PaperCut Users** group. Now click on the Database Tuneup button near the bottom of the screen. This will remove users that aren't in the group, and add all the users in the group. Now only your users from that group will be imported.

Account Tracking (PaperCut ChargeBack only)

How do I turn off visible account monitoring for a given printer, and instead use PaperCut ChargeBack in “silent monitoring” mode?

PaperCut ChargeBack will use account monitoring if a printer is marked as “Require Account”. You can mark each individual printer to run in “silent monitoring mode” by unchecking the “Require Account” checkbox. This is explained in Chapter 3 on page 9. When users print to that printer they will no longer be prompted for an account.

Installation

Can I upgrade/reinstall PaperCut ChargeBack and retain my user account values?

Yes, we’re currently working on an automated update program to streamline the process, and this will be made available on our website. In the meantime, if you wish to upgrade, contact support@papercut.biz for instructions on a manual upgrade. (This involves backing up the user and account databases, and installing the new version.)

Why is it not recommended to use a PC as a network interface for a parallel port printer?

Any Windows computer maybe used as a network interface for a parallel port printer. This printer can be shared and then recaptured on the Network print server, then shared again. This arrangement works with PaperCut, as print jobs will pass via the print server. However, this arrangement is less secure than using a network printer, as a client can be quickly reconfigured to print directly to the interfacing computer, bypassing the print server and PaperCut.

The chance of a user bypassing the print server can be minimized with the following strategy (For Windows 9x Systems only):

1. Install the parallel port printer on the interfacing computer.
2. Share the printer with a secret invisible name such as **cantseeme\$**
(The \$ will make it invisible to network browsers.)
3. Capture the printer on the print server by adding a new network printer with the UNC **\\computername\cantseeme\$**
4. Share this printer on the print server to make it available to your network users.

Now a user can only reconfigure a client to bypass the print server if they know the invisible name.

***Note:** Connecting a parallel port printer directly to the print server is a secure method, and can't be bypassed. Network printers, such as "Jet Direct" printers are recommended, as Parallel Ports are very CPU intensive.*

Operation

How do I assign credit to multiple users at once?

Try the **Allocate Funds ...** button under **Group Level Functions** in the *Groups* section of the Administrator Console. This offers powerful credit assignment and privilege setting assignment on an NT group level basis.

How do I set all users to "unrestricted" ?

Try the **Allocate Funds ...** button under **Group Level Functions** in the *Groups* section of the Administrator Console.

Can I prevent a user, or a group of users from printing on a particular printer?

Yes. PaperCut ChargeBack does not interfere with Windows permissions. You may restrict printing on any printer by setting share permissions in the printer properties. Other printers will function and be charged as normal.

I don't have MS Access installed on my Print Server. How do I use the reports option?

Try copying of the file "joblog.mdb" in the PaperCut ChargeBack program folder on the print server to a network workstation with Access 2000 installed. The copy will contain a snapshot of the data.

Advanced Operation

My Windows Event Log is full of printer pause messages from “Print”. What is this?

PaperCut ChargeBack temporarily pauses all print jobs while they’re analyzed. A message will appear in the event log if auditing of printer events is selected. To turn off printer auditing:

- Open the Printers folder in the control panel.
- Select **Server Properties** from the file menu.
- Under the Advanced section, turn off Log spooler information.

How can I prevent users from bypassing the print server?

The only way to bypass the print server is to configure a client to print directly to a networked printer. Connecting to a network printer usually requires special setup software supplied by the hardware manufacture, and other information such as the printer’s IP address. You should ensure that this software and information is not readily available to you network users. If “bullet-proof” security is required, investigate placing your printers on a TCP/IP subnet and/or configure routers to only forward TCP/IP packets from the designated Print Server(s).

The PaperCut ChargeBack database is corrupt. How do I restore a backup?

First, try the following:

- **Stop** the **PaperCut Service** on the print server under Start->Settings->Control Panel->Services.
- **Open** each of the following files in **MS Access 2000** and choose Tools->Database Utilities->Compact and Repair Database... :
 - PaperCut/joblog.mdb
 - PaperCut /PrinterDB.mdb
 - PaperCut /Database/PCUserDB.mdb

If the following actions do not fix the corrupt databases, PaperCut ChargeBack saves a dated copy of the database in the **PaperCut** program folder during the TuneUp process (*Options* section). To replace the corrupted database with the latest backup:

- Close PaperCut ChargeBack and stop the PaperCut service using the **Services** console in the **Control Panel**
- Delete the corrupt database located at:
Program Files**PaperCut**\Database\PCUserDB.mdb

- Copy latest backup file at: Program Files**PaperCut**\Backup*.mdb
To: Program Files**PaperCut**\Database\
- Rename the database file to: PCUserDB.mdb
- Restart the **PaperCut** service

You may have other backup solutions operating on your print server and may wish to use this option to replace the corrupt database. Ensure the **PaperCut** service is stopped before replacing any PaperCut* .mdb file.

How do I upgrade my Page Counting Machine?

Please see the FAQ on the www.papercut.biz website.

APPENDIX I

Security settings

In order for PaperCut ChargeBack to function fully, security settings must be set at a Share level, and at a filesystem (NTFS) level. Both are explained in the following pages.

Network shares created during install

The PaperCut Security Wizard automatically sets up the following shares when the PaperCut Administration Console is run for the first time. If this automatic process fails, or if you're experiencing problems with PaperCut, then check the following shares:

<i>Share Name</i>	<i>Physical Path</i>	<i>Permissions</i>
PCData\$	C:\Program Files\PaperCut\PCData	Read Only access for Everyone
PCEActN\$	C:\Program Files\PaperCut\PCEActN	Full Access for Everyone
PCEPrefs\$	C:\Program Files\PaperCut\PCEPrefs	Full Access for Everyone
PCDB\$	C:\Program Files\PaperCut\Database	Read Only access for Everyone
PCSetup	C:\Program Files\PaperCut\PCSetup	Read Only access for Everyone
(present only on Primary Server)		

To verify that a particular share is created properly, locate the physical directory in Windows Explorer, and right click on the directory, and select Sharing from the popup menu. (See Figure 34a and 34b).

You can then view the sharing permissions by clicking on the Permissions button. (The actual screenshots are for Windows 2000 machines and differ slightly for Windows NT.)

Advanced Setup: For security reasons, we recommend you place a "Disk Quota" of 50Mb on the PCEActN\$ and PCEPrefs\$ share (c:\Program Files\PaperCut\PCEActN). This will prevent malicious attacks from people uploading more than 50Mb of data to the share.

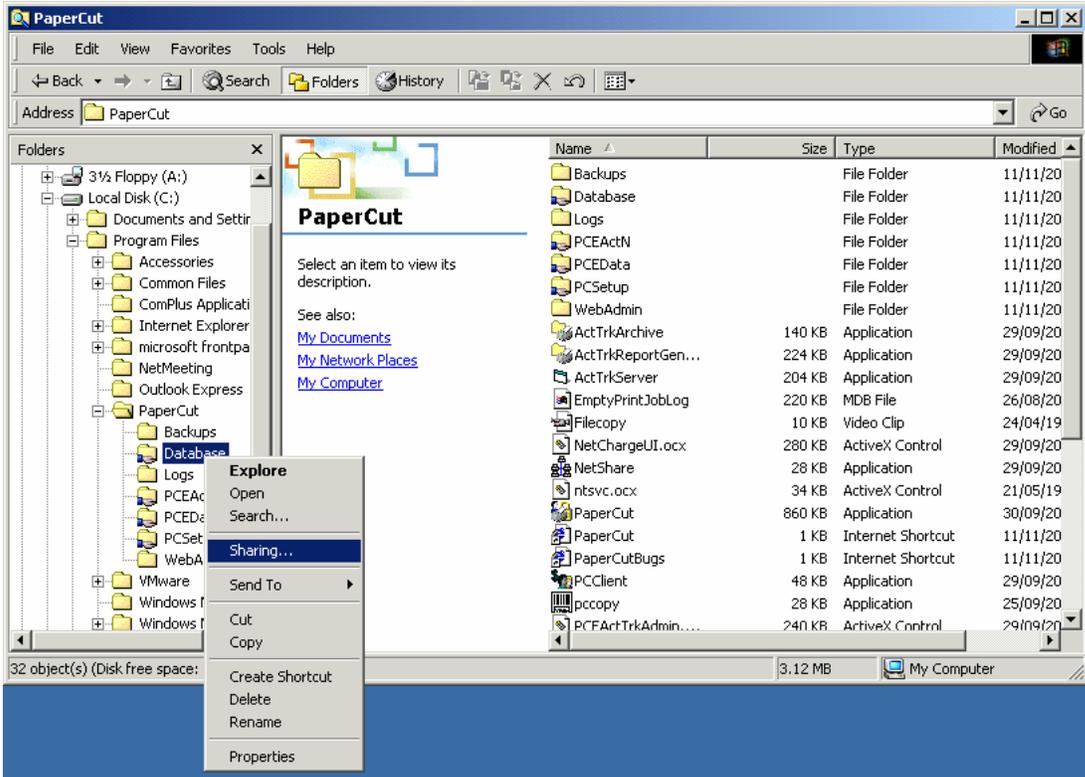
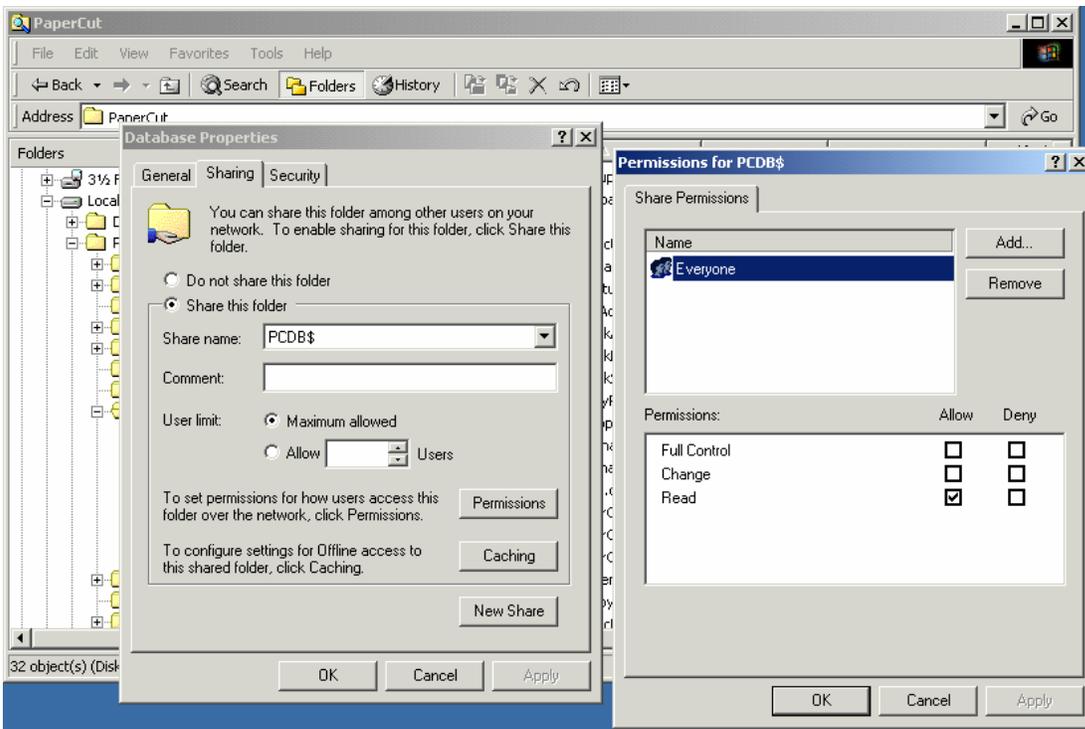


Figure 34 (a) and (b). Viewing a directory's sharing settings..



NTFS File permissions required for PaperCut ChargeBack Install

The PaperCut Security Wizard automatically sets up file security when the PaperCut Administration Console is run for the first time. If this automatic process fails, or if you're experiencing problems with PaperCut, then check the following permissions:

<i>Physical Path</i>	<i>Permissions</i>
C:\Program Files\PaperCut\PCEPrefs	Read and write access for Everyone. Also known as Change access.
C:\Program Files\PaperCut\PCEActN	Read and write access for Everyone. Also known as Change access.

The PaperCut ChargeBack client communicates to the server by writing files to the C:\Program Files\PaperCut\PCEActN directory. (PCEActN stands for PaperCut ChargeBack Account Notification.) Thus users must be able to write files to that directory.

The client will also save its preferences to the PCEPrefs share. This includes the preferred list of accounts, account selection history, and last search information. Users must be able to write files to that directory.

Technical Facts

- Database sharing between servers is done via standard Windows file sharing. This avoids the need for configuring ODBC interfaces.
- Client–Server communications is via standard Windows file sharing. This avoids the need to support and secure DCOM or other socket based communications protocols.

PaperCut Service command line options

The PCService.exe executables run as Windows Services. This Service maybe uninstalled from the system services list with the following command line options:

Uninstall

- PCService.exe –uninstall

NOTE: Please ensure that service is stopped before uninstalling.

Install

- PCService.exe –install

APPENDIX II - Printer Configuration & Hardware Guide

The following guide should be used if any problems are experienced with the page count detection or checking hardware compatibility. The most recent version of the appendix is always available online at:

<http://kb.papercutsoftware.com/Main/SupportedPrinters>

Page Description Languages (PDL's)

PaperCut will correctly handle printing for all printers that have drivers that conform to one or more of the following standards:

- Postscript
- PCL (all versions)
- PCL-GUI
- PCLXL
- HPGL
- Epson languages ESC/P2, ESC/PAGE and ESC/PAGE-COLOR
- Ricoh RPCS
- Canon BubbleJet
- Some support for proprietary GDI printers (Minolta, QMS, Samsung)

PaperCut does experience some difficulties with the proprietary Epson ESC/PAGE, OKI, and Brother page description languages (PDL's). Many Brother printers however will work correctly if the Postscript or PCL compatible drivers are used.

Many printer hardware comes with a selection of print drivers. We recommend that only one driver be installed. The recommended drivers listed in order of preference are:

1. Postscript
2. PCL 6
3. PCL 5, 4
4. Appropriate driver selected directly off the Windows CD
5. ESC/P2

Connection Methods

Printers should be directly connected to the system running the PaperCut server software with one of the following methods:

- Direct LPT port connection
- USB port connection
- JetDirect network connection
- LP over TCP/IP
- Standard TCP/IP port via build in network card
- Standard TCP/IP port via hardware “print server” network hub.

IMPORTANT: It’s important that network clients are NOT configured to connect directly to the printer using one of these methods. The network clients should print to the shared printer shared from the server running the PaperCut software.

Unsupported Connection Methods

Some printers offer software that makes their systems interface with a Windows network using the LanManager protocol. This connection method can cause problems when the printer is “reshared” from the server. In most cases, hardware offering LanManager connectivity, also support standard TCP/IP Port or LP over TCP. We recommend these connection methods over LanManager. Please consult your hardware documentation. In most cases using TCP involves adding a new “Local Printer” and selecting a standard TCP port.

Notes on individual printer models and manufactures

HP Laser Printers

PaperCut works with all HP Lasers produced over the last 7 years. Where possible, we recommend the Postscript drivers or recent PCL drivers.

HP Ink Jets - Deskjet

Most Inkjets work with PaperCut. Some older printers such as Deskjet 640C use nonstandard PCL and PaperCut can have problems analyzing documents printed from Windows 9X based clients.

Epson

The current range of AcuLaser, AL, and EPL mono and color laser printers are fully supported by PaperCut. Please ensure the very latest drivers are installed. The majority of inkjets produced

over the last 7 years supporting ESC/P2, ESC/PAGE and ESC/PAGE-COLOR will work. PaperCut may not correctly detect paper size on some inkjet printers. The development team is currently working to address this.

Canon

Canon laser printers and copiers work with PaperCut. Where possible we recommend Postscript drivers. The majority of Canon BubbleJet printers are compatible. Users running PaperCut 5.1 or earlier should install the latest [Page Counting Machine](#) for a full BJ support.

Ricoh

PaperCut supports the current range of Ricoh laser and multi-function printers. Ricoh provide a number of print driver options including PCL, Postscript and RPCS (Ricoh's own language). PaperCut supports all drivers.

Kyocera

Kyocera lasers have a Postscript driver range referred to as KPDL. These drivers are compatible with PaperCut. The Kyocera PCL drivers occasionally use non-standard language extensions (they claim to be PCL compatible). The Postscript (KPDL) drivers should be used in preference.

Lexmark

The current range of mono and color laser printers work with PaperCut. Postscript drivers are recommended. The "budget" inkjet printers use a proprietary GDI printer language and depending on the model, problems may be experienced.

Minolta-QMS

All high-end lasers work with PaperCut. Use the Postscript driver option if available. Some low to mid-end Minolta lasers such as the Magicolor 2300 DL (Minolta 2300DL) use a host based GDI driver based on technology from Zenographics. Users running PaperCut 5.1 or earlier should install the latest [Page Counting Machine](#) for a full support for this and other Minolta printers.

OKI

The OKI mono and color lasers support a number of print languages in compatibility mode. We recommend the Postscript Level 2 driver option.

Xerox/Tektronix

The DocuPrint and Phaser Series accommodate PCL and Postscript. Use the Postscript drivers if available. Some lower end DocuPrint systems only support PCL. We recommend the PCL6 drivers.

OCE

OCE printers and copiers support Postscript. Some OCE drivers use a proprietary header to set document attributes such as copy count, duplex, etc. The most recent [Page Counting Machine](#) supports this header. Users running PaperCut version 5.1 or earlier may need to upgrade their [Page Counting Machine](#). To ensure correct accounting, ensure the [Enable Advanced Printing Features](#) is turned off.

Samsung

PaperCut supports most Samsung Printers. Many recent Samsung (e.g. Samsung ML-1740, CPL-550) printers are supplied with proprietary GDI based drivers (QPDL) with no option for standard Postscript or PCL drivers. PaperCut Software has implemented support for most recent Samsung GDI printers. Model numbers and driver versions are constantly changing. PaperCut users are recommended to install the latest [Page Counting Machine](#) and contact PaperCut support if any printers do not account as expected.

APPENDIX III – Batch Printing and Script Support

To help facilitate batch printing or script based printing tasks, PaperCut ChargeBack provides a set of client tools to assist script developers. Interfaces include:

- A *command-line program* suitable for use with batch file and many other scripting methods.
- A *COM object* suitable for use with Visual Basic, VBScript and other Microsoft scripting and programming languages supporting COM.

The tools provide the ability to:

- Allocate jobs automatically to a pre-defined account. For example, allocate all print jobs sent in the next 60 minutes to account X.
- Revert to normal “popup” mode after the batch is printed
- Programmatically query a list of accounts/job numbers/matters

A developer would use the tools to script a batch print job using the following procedure:

1. Use the tools to instruct PaperCut to assign following print jobs to an account.
2. Perform the batch-printing task
3. Use the tools to instruct PaperCut to revert to normal popup mode.

Note: *These tools are “client-side” tools and are designed to run on workstations or other servers remote from the primary PaperCut server.*

The Command-Line Interface

The command line batch printing tool included with PaperCut ChargeBack is located at on the workstation/client under the directory:

```
C:\Program Files\PaperCut\Tools\
```

The program is called batchtool.exe. It's a Windows console application suitable for use in batch files or calling from other programs. The behavior of the application is controlled via command line switches. These switches may be invoked using the standard windows /option syntax or the Unix style –option style.

Documentation - batchtool.exe

SYNOPSIS

```
batchtool [-popupmode] [-select <account name> [-timeout <time>] [-comment <comment>] [-noinvoice]]
```

DESCRIPTION

batchtool instructs the PaperCut server to allocate print jobs to the account <account_name>. This allows a batch of print jobs (or a single print job) to be pre-assigned to accounts. It's designed to help facilitate non-attended printing or batch printing where a user would normally have to tediously assign each print job to a PaperCut account.

Call the program with no arguments for a usage message.

-select

Allocated future print jobs automatically to PaperCut <account_name>.

-timeout

Optional. Used in conjunction with select to define that the automatic account allocation should apply for <time> minutes. After the time has expired, PaperCut will revert to normal popup mode.

-comment

Optional. Used in conjunction with select to associate <comment> with the following print job(s). This is equivalent to the comment field in the PaperCut client popup window.

-noinvoice

Optional. Used in conjunction with select to define that an account should not be invoiced. This is equivalent to selecting disabling invoice checkbox in PaperCut client popup window.

-popupmode

Enable normal popup mode. Called after the using the select option to allocate jobs to an account to revert PaperCut

back to normal interactive popup mode. This option should not be combined with other options.

-list

List account names available for selection - one account per line. Sub accounts are denoted with a "main account / sub account" syntax. This option should not be combined with other options.

EXAMPLES

To allocate the following print job to the "ACME inc" account:

```
batchtool -select "acme inc"
```

To allocate the following print jobs to the "ACME inc" account using DOS syntax:

```
batchtool /select "acme inc"
```

To allocate print jobs printed during the next 20 minutes to "ACME inc" account. After 20 minutes revert to normal popup mode.

```
batchtool -select "acme inc" -timeout 20
```

To allocate print jobs printed during the next 20 minutes to "ACME inc" with a print job comment of "overnight batch".

```
batchtool -select "acme inc" -timeout 20 -comment "overnight batch"
```

To revert to normal interactive popup mode after printing an assigned batch of print jobs.

```
batchtool -popupmode
```

To list accounts available for selection (sent to the console):

```
batchtool -list
```

An example batch file can be found the tools directory alongside the batchtool command.

The COM Interface

COM is a Microsoft language independent component technology. Many programming and script languages on the Microsoft support COM. PaperCut ChargeBack registers a COM provider on the client systems called PCCBClientTool. This exposes a COM object "AccountSelector". Methods and properties are detailed below:

The PCCBClientTool.AccountSelector Interface Definition

Method Summary:

AllocateToAccount
AllocateToAccount2
AllocateToAccountWithTimeout
AllocateToAccountWithTimeout2
AllocateToAccountFull
AllocateToAccountFull2
EnableNormalPopUpMode
ListAccountsNames

Property Summary:

ErrorMessage

Function Boolean AllocateToAccount(Account As String)

Allocated future print jobs automatically to a PaperCut account.

Parameters

Account

A String representing the PaperCut account to assign following print jobs to. This string should be either the account name, or if a sub-account, in the format "main account / sub account".

Return Value

A Boolean value of true if the function succeeds. False on fail. If the method fails, the *ErrorMessage* property will contain the error message as a text string.

```
Function Boolean AllocateToAccount2(MainAccount As String, SubAccount As String)
```

Allocated future print jobs automatically to a PaperCut account.

Parameters

MainAccount

A String representing the PaperCut main-account name to assign print jobs to.

SubAccount

A String representing the PaperCut sub-account name to assign print jobs to.

Return Value

A Boolean value of true if the function succeeds. False on fail. If the method fails, the *ErrorMessage* property will contain the error message as a text string.

```
Function Boolean AllocateToAccountWithTimeout (Account As String, Timeout As Long)
```

Allocated future print jobs automatically to a PaperCut account/matter. This is an enhanced version of `AllocateToAccount` with an additional timeout option.

Parameters

Account

A String representing the PaperCut account to assign following print jobs to. This string should be either the account name, or if a sub-account, in the format "main account / sub account".

Timeout

A Long defining that the automatic account allocation should apply for *Timeout* minutes. After the time has expired, PaperCut will revert to normal popup mode.

Return Value

A Boolean value of true if the function successes. False on fail. If the method fails, the *ErrorMessage* property will contain the error message as a text string.

Function Boolean AllocateToAccountWithTimeout2 (MainAccount As String, SubAccount As String, Timeout As Long)

Allocated future print jobs automatically to a PaperCut account/matter. This is an enhanced version of `AllocateToAccount` with an additional timeout option.

Parameters

MainAccount

A String representing the PaperCut main-account name to assign print jobs to.

SubAccount

A String representing the PaperCut sub-account name to assign print jobs to.

Timeout

A Long defining that the automatic account allocation should apply for *Timeout* minutes. After the time has expired, PaperCut will revert to normal popup mode.

Return Value

A Boolean value of true if the function successes. False on fail. If the method fails, the *ErrorMessage* property will contain the error message as a text string.

Function Boolean AllocateToAccountFull(Account As String, Invoiceable As Boolean, Comment As String, Timeout As Long)

Allocated future print jobs automatically to a PaperCut account/matter. This is a full version of this overloaded method allowing all definable attributes to be set.

Parameters

Account

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A String representing the PaperCut account to assign following print jobs to. This string should be either the account name, or if a sub-account, in the format “main account / sub account”.

Invoiceable

Define that the following jobs should be invoiced (true) or not (false). This is equivalent to selecting the invoice checkbox in PaperCut client popup window.

Comment

A text string Associate a comment with all following print jobs allocated to the defined account.

Timeout

A Long defining that the automatic account allocation should apply for *Timeout* minutes. After the time has expired, PaperCut will revert to normal popup mode.

Return Value

A Boolean value of true if the function successes. False on fail. If the method fails, the *ErrorMessage* property will contain the error message as a text string.

```
Function Boolean AllocateToAccountFull2(MainAccount As  
String, SubAccount As String, Invoiceable As  
Boolean, Comment As String, Timeout As Long)
```

Allocated future print jobs automatically to a PaperCut account/matter. This is a full version of this overloaded method allowing all definable attributes to be set.

Parameters

MainAccount

A String representing the PaperCut main-account name to assign print jobs to.

SubAccount

A String representing the PaperCut sub-account name to assign print jobs to.

Invoiceable

Define that the following jobs should be invoiced (true) or not (false). This is equivalent to selecting the invoice checkbox in PaperCut client popup window.

Comment

A text string Associate a comment with all following print jobs allocated to the defined account.

Timeout

A Long defining that the automatic account allocation should apply for *Timeout* minutes. After the time has expired, PaperCut will revert to normal popup mode.

Return Value

A Boolean value of true if the function successes. False on fail. If the method fails, the *ErrorMessage* property will contain the error message as a text string.

```
Function Boolean EnableNormalPopUpMode ( )
```

This method should be called after the using an Allocation* method and all batch printing has completed. It reverts PaperCut back to normal interactive popup mode.

Parameters

None

Return Value

A Boolean value of true if the function successes. False on fail. If the method fails, the *ErrorMessage* property will contain the error message as a text string.

```
Function StringArray[] ListAccountsNames ( )
```

This method returns an array of strings representing accounts/matters. This is equivalent to the list of accounts seen in the PaperCut ChargeBack popup client window.

Parameters

None

Return Value

A variable length array of string values representing valid accounts/matters as defined on the PaperCut ChargeBack server.

Property ErrorMessage As String

This property is null by default (an empty string). If one of the above method calls fail as indicated by a false return value, this property contains a string indicating the cause of the error.

Examples

And example VBScript batch printing program is included in the file:

C:\Program Files\PaperCut\Tools\Example - COM.vbs

This file is found under the Tools directory on each workstation (i.e. not located on the server).

The script will run under any Windows operating system with the "Windows Scripting Host" support installed and enabled.

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