



Implementing PaperCut ChargeBack

A Guide for System Implementers

This document is designed to assist those responsible for the implementation of PaperCut ChargeBack in a business environment. PaperCut ChargeBack is a powerful server-based print management program which will become an integral part of your professional services tracking infrastructure. This guide addresses the procedural tasks associated with a typical rollout, while technical details are addressed in the associated User Guide (a separate download). This guide is designed as a starting point for your own plan and will need tailoring to fit individual requirements.

How it works

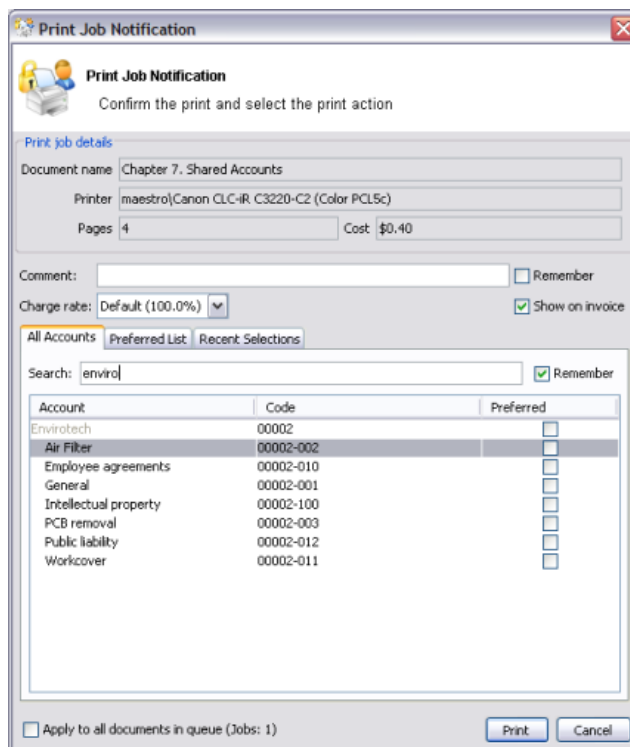
The design goal of PaperCut ChargeBack is to provide end-users with the ability to allocate the expense associated with print jobs to accounts. This is done by actively prompting users via a popup window at the time of print.

Users are asked to allocate the print job and its cost to either of two types of accounts - *Personal Accounts* and *Shared Accounts*. *Shared Accounts* represent areas of your business such as:

Professional:	Clients or Projects and Sub-projects or Phases
Legal:	Client/Matter
Corporate:	Cost Centers or Departments

The accounts may be a simple flat structure, or hierarchical (nested) representing more complex structures such as projects with sub-projects. Users can be granted rights to allocate to any account or maybe only a sub-set of accounts based on their role/area. The other type of account is a *Personal Account*. Each user may optionally be allocated a *Personal Account* that may be used for any jobs of a personal nature that should not be charged to a *Shared Account*.

To ensure data consistency the list of *Shared Accounts* is usually maintained by an Administrator or trusted individual. They can be added to PaperCut manually through the Administrative Console, synchronized with an account list or automatically imported from a file.



At the end of the billing period the print job transactions are sorted by Shared Account (e.g. client or project) and placed in an invoice report. This in turn can be used to invoice clients or determine project costs.

PaperCut™

Invoiced printing for Harvey Pianos Inc.
 For the period of Jul 16, 2008 to Jul 30, 2008.

Date	Username	Document	Pages	Cost	Attributes
Account: Harvey Pianos Inc.\Design					
Jul 30, 2008 11:33:13 AM	chris	http://slashdot.org/	60	\$6.00	Printer: server\Xerox Color 1930 LEGAL Duplex: Yes Grayscale: Yes Copies: 3
Totals for account "Harvey Pianos Inc.\Design":			60	\$6.00	
Account: Harvey Pianos Inc.\Distributor contacts					
Jul 30, 2008 11:33:43 AM	chris	Microsoft Word - Document1	136	\$13.60	Printer: server\Xerox Color 1930 LEGAL Duplex: No Grayscale: No Copies: 2
Jul 30, 2008 11:33:36 AM	chris	Stats - OpenOffice.org Writer	44	\$4.40	Printer: server\Xerox Color 1930 A4 (ISO_A4) Duplex: No Grayscale: Yes Copies: 4
Totals for account "Harvey Pianos Inc.\Distributor contacts":			180	\$18.00	
Account: Harvey Pianos Inc.\General					
Jul 30, 2008 11:33:56 AM	matt	http://slashdot.org/	89	\$8.90	Printer: server\HP LaserJet 5MP A5 (ISO_A5) Duplex: Yes Grayscale: No
Totals for account "Harvey Pianos Inc.\General":			89	\$8.90	
Account: Harvey Pianos Inc.\Intellectual property					
Jul 30, 2008 11:38:07 AM	matt	Microsoft PowerPoint - Presentation	14	\$1.40	Printer: server\HP LaserJet Comment: This is for Intellectual property
Jul 30, 2008 11:36:33 AM	matt	Untitled1 - OpenOffice.org Writer	39	\$3.90	Printer: server\HP LaserJet LETTER (ANSI_A) Duplex: No Grayscale: No Copies: 3
Jul 30, 2008 11:36:08 AM	matt	Budget - OpenOffice.org Calc	50	\$5.00	Printer: server\HP LaserJet 5MP 14mm x 60mm Duplex: Yes Grayscale: No
Totals for account "Harvey Pianos Inc.\Intellectual property":			103	\$10.30	
Totals:			432	\$43.20	



Implementation Plan

It is important to plan the setup and configuration carefully to assure that printing is tracked and reported according to your needs. Of equal importance are the non-technical areas including staff training and future system management. Careful planning will ensure a smooth rollout for everyone.

The Plan
TASK 1: Determining Project Scope
TASK 2: Understanding the System
TASK 3: Creating Shared Accounts
TASK 4: Pre Installation Preparation
TASK 5: Testing
TASK 6: Invoicing and Reports
TASK 7: Issue Resolution
TASK 8: Preparation for Rollout
TASK 9: Deploying the Client Software
TASK 10: Go-live
TASK 11: Maintenance

TASK 1: Determining Project Scope

Before diving in and installing PaperCut ChargeBack you should take a few moments to consider the following questions:

- What specific outcomes will result from implementing PaperCut?
- How will I configure and use PaperCut to achieve these objectives?
- What effect will PaperCut have on my staff and clients?
- Who else should be involved in these considerations and the implementation process?

PaperCut can be implemented using a number of different account structures and invoicing methods. Some firms will use a basic account list and a few reports. Others will want to set up sub-accounts, codes, and invoicing options. The account structure and billing method will influence internal policy and procedures and this should be considered prior to full deployment. It may only take a few mouse clicks to install PaperCut ChargeBack and have it up and running at the *technical level* but policy changes at the *operational level* may take longer to implement. Discuss this early with the people that will be impacted. Having “buy in” from all interested parties prior to deployment will ensure a successful project.



The PaperCut ChargeBack User Manual and Fact Sheet will give a good overview of the installation procedure and day-to-day operation. The documentation can be a good resource to use when determining the project scope. All documentation is available on the website at <http://www.papercut.com/products/chargeback/manual/>

TASK 2: Understanding the system

Before attempting a deployment on a live network, you may wish to take some time to evaluate and understand the capabilities of PaperCut ChargeBack. If you would like to become more familiar with the basic functions of PaperCut ChargeBack you can take a tour on our website at: <http://www.papercut.com/products/chargeback/tour/>

Once you are familiar with the basics you will probably want to try some of the transactions and reports that your firm will use in a “testing” environment. There is no better way of understanding how a software application works than actually installing and using the system. You can install the PaperCut ChargeBack trial version on a non-critical desktop system running Windows XP or higher. It only takes a few minutes to download and install PaperCut ChargeBack.

PaperCut Software runs unrestricted for 40 days to allow you plenty of time to evaluate the many features and functions the software has to offer. If you purchase a license key later, it can be added to the installed copy so you don't have to install and configure again. You can download PaperCut ChargeBack from www.papercut.com.

The user manual in PDF format is also available from this page.

TASK 3: Creating “Shared Accounts”

Shared accounts can be created manually or imported from a file (or directory structure). Most organizations will already have a source list of accounts. For example, a client list or an accounts list out of an accounting package. These can be idea starting points for your initial account list.

You can configure shared accounts to require comments on each print job, or restrict access to a group of users. In addition sub accounts can be defined to create multi-level invoices.

The account hierarchy and naming conventions as well as the access rules and invoicing options will be defined when you add and configure shared accounts. The following tasks are performed when setting up shared accounts:

1. Setting up accounts
2. Group access and security
3. Invoicing and comment options
4. Synchronization and import tools



In more detail:

Setting up accounts

If account names are structured they can be filtered for such actions as changing invoicing options, security settings, or account deletion.

Sub accounts and account codes can be used to structure account hierarchy to accommodate multiple layer account lists such as project/phase account lists used in engineering firms or client/matter account lists that are commonly used in legal firms. The hierarchical order that is configured in the shared accounts list will determine the way the accounts are listed in the account selection pop up, invoices, and reports. [See the section on account setup in the manual for more detail.](#)

Group access and security

Both Groups and Users can be added to a shared account access list to limit access. This concept is similar to file permissions on a network shared drive. Smaller organizations can simply grant all users access to all shared accounts. Larger organizations may however wish to implement access.

Invoicing and comment options

Account invoicing options can be configured to allow the user to make a choice at print time to invoice for a particular job or not. The account can also be configured to 'always invoice' or 'never invoice'. Similar options are available around comments and administrators have the option of enforcing users to add a short comment about the nature of the job.

Synchronization and import tools

Larger organizations may wish to take some time to automate account creation and management. Options include:

- Automatically synchronizing with an account list from a text file
- Automatically synchronizing with a directory structure - e.g. some organizations have a shared folder on the server with sub-folders that represents clients/projects/etc/
- Manually import or update the shared accounts list from a text file

Most organizations will take automation in phases using the manual import from text file method first (e.g. re-import file as required), then moving to automated synchronization as a second phase when time and need permit.

You can learn more about shared account synchronization [in Chapter 8.](#)



TASK 4: Pre Installation Preparation

PaperCut ChargeBack requires a correctly configured network environment. Most organizations with a “Windows Domain” network set-up should be able to install and use PaperCut ChargeBack without any network reconfiguration. Smaller organizations running simple peer-to-peer networks or large organizations with a mixture of operating systems may need to plan some changes.

Checklist:

Users have logon accounts and passwords

PaperCut ChargeBack tracks user identity via their “logon” name. By default, PaperCut does not maintain its own users and passwords, and instead uses the in-built Operating System logon accounts. This means that logon accounts and passwords must be set up and computer / network access must be managed for the users. PaperCut can support “internal users” where the password can be maintained inside PaperCut, but the best-practice option is to always consider domain/system accounts where possible.

Printers are hosted on a server

PaperCut ChargeBack works by intercepting print jobs passing to the printer via a print queue. Typically the hosting of a print queue is called acting as a “print server”. PaperCut ChargeBack supports Windows, Linux, Novell (OES iPrint) and Mac OS X based print servers. In a typical network environment all printers are “captured” on a server and then shared to users as network resources. The print server can be an existing file server or a server running other software if there is sufficient capacity to meet PaperCut System Requirements. The “print server” model provides a single point of control for printer permissions and queue management, as well as other potential benefits such as automatic driver deployment and updates.

Although PaperCut can centrally track print queues hosted on multiple computers (e.g. locally attached desktop printers), it is best practice to centralize printers onto the minimum number of systems/servers. Typically this involves:

- Ensuring network printers (printers with a network interface) are centrally captured on the server(s) and shared using standard network operating system printer sharing.
- Network clients (workstations) map to the printers shared on the network.
- Consider networking existing directly attached printers and hosting server queues.

Additional information on shared printer queue setup for your network operating system is covered in the Installation section of the [PaperCut ChargeBack User Manual](#).

Printers use supported drivers

PaperCut will work with the majority of printer hardware without any additional configuration. Most printers use Postscript or PCL drivers (Postscript and PCL refer to the “printer language” used by the driver). Many high-end printers support multiple languages including possibly a proprietary language. You should check



which drivers are available. If a selection of drivers is available, select according to this order of preference:

1. Postscript (any level)
2. PCL 5
3. PCL 6 or other

PaperCut supports many proprietary GDI based drivers, but where possible we always recommend standard compliant drivers.

Schedule downtime and ensure required information is at hand

On fully patched servers, a restart should not be required during installation. It is however recommended that a 30-minute block of downtime be scheduled to “take the pressure off” during initial testing. Ensure that your staff is aware of the potential disruption of print services.

You should also ensure that you have technical information at hand including:

- Name of the domain server or an Active Directory node (or LDAP settings if using LDAP servers)
- User name and passwords for both a network and local Administrator level accounts

TASK 5: Testing

Testing is an important step with any software deployment project. Use the following test plan to verify that users and printers are configured in PaperCut correctly, charging rules work as expected, and the account popup displays as expected. The list of tests below is comprehensive. You may be able to skip some tests in areas that do not apply to your installation.

Progressive Testing

It is recommended that you test basic transactions and functions in the default configuration first before adapting PaperCut to your specific needs. This will assure that all devices and systems are working properly together prior to performing more time consuming and complex tests. The tests below are organized in progressive order. If a test does not perform as expected, drop back to an earlier test to isolate the specific problem area.

Printer and Related Tests

OBJECTIVE: To verify that printers are correctly configured and supported by PaperCut, and charging and tracking works as expected.

METHOD: Test printing from a standard workstation as a standard user as described.

Test	Test Criteria	Passed
Print a test document prior to installing PaperCut	Print a document from a network workstation using a standard user account to a printer that is hosted on the server where PaperCut will be installed. Ensure that the job prints and lists in the server's print queue associated with the correct user name.	



Install PaperCut on the server	Install PaperCut on the server following the installation guide in the manual. Select the "Minimal Impact" option and note the nominated "test user account". Verify that all user accounts were imported from your domain and are listed in the user list.	
Print a multi-page document	In the PaperCut admin console, select a test user that is NOT your nominated test user account. Verify that the account selection popup is NOT enabled by clicking on the user in the User list in the PaperCut Administration Console. The option should be "Automatically Charge to Personal Account". Log on to a workstation as this user account and print a multi-page document. Verify that the PaperCut Print Log (Printers -> Print Log) lists the job with the correct page count and the calculated cost is correct. No error messages are listed in the PaperCut App. Log	
Print a color document with images	Repeat the test with a color document on a color printer. The Print Log lists the job with the correct page count and the calculated cost is correct. No error messages are listed in the PaperCut App. Log	
Print documents on different paper sizes	Repeat the test with a printer that supports different paper sizes. The Print Log lists the job with the correct paper size and the calculated cost is correct. No error messages are listed in the PaperCut App. Log	
User Accounting	Verify that all printed test documents are listed under the correct user account and that the page count has changed accordingly	
Printer Accounting	Verify that all printed test documents have increased the printer's page count counter	

Shared Account Tests

OBJECTIVE: To verify shared accounts can be correctly configured and print jobs are charged to the correct account.

METHOD: Log on to the PaperCut admin interface to create and configure shared accounts. Log on to a network workstation under a standard user account and print documents for test cases that require account selection and printing.

Test	Test Criteria	Passed
Create a shared (parent) account	The shared accounts are created under the Accounts tab. Create a temporary account called "Testing" and ensure all users have access to the account.	
Create a shared sub account	Create an account called "Testing Sub Account" and set its parent account as "Testing". Ensure all users have access to the account.	



Enable the account selection popup on a test user.	Ensure that the account selection popup is enabled on “test user account” nominated when you selected “Minimal Impact”. Select this user in the PaperCut user list and ensure that the option “Show the Advanced Account Selection Popup” is enabled on this account.	
Verify Client Software	Log on to a workstation as the test user account. Start/install the client software. For testing, it may be convenient to simply start pc-client.exe directly off the “PCClient” share set up on the server. Refer to the manual for more information on client software deployment: http://www.papercut.com/products/chargeback/manual/ch-user-client.html Verify that the client starts without error.	
Print a document and allocate to the “Testing” account	Print a multi-page document. The client software should display Account Selection Popup screen. Select the “Testing” account and press Print. Verify that the PaperCut Print Log (Printers -> Print Log) lists the job with the correct page count, cost and is allocated to the “Testing” account.	
Print a document and allocate to the “Testing Sub Account” with a comment.	Print a multi-page document. The client software should display Account Selection Popup screen. Select the “Testing Sub Account” account, and add a comment in the Comment field, then press Print. Verify that the PaperCut Print Log (Printers -> Print Log) lists the job with the correct page count, cost and is allocated to the “Testing Sub Account” account. The comment should also display in the log.	

Operational Tests

OBJECTIVE: To verify that all necessary operational procedures can be performed by staff.

METHOD: Print to selected accounts and print invoices.

Test	Test Criteria	Passed
Advanced Pop up account and feature selection	Advanced pop up displays when a user sends a print job to the printer. Verify that the Preferred List, Recent Selections, Charge Rate, Invoice option and Comments perform as expected. The job is printed and is correctly charged to the account.	
Cancel a print job	Press the “Cancel” button in the popup and verify that the job is listed as cancelled in the print log.	
Print invoice reports	Run the print invoice report. Verify that all print jobs that were designated to be invoiced for the selected account are listed.	
Other reports - Test any other reports that you intend to use	Reports should contain appropriate data for the period selected and sorted and displayed in the correct order.	



Scheduled reports	Scheduled reports should be generated according to the schedule and emailed to the correct recipient if email reports are selected. The “Run Now” option can be used to test scheduled reports. Verify that emails arrive in the target user’s inbox as expected.	
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Regularly inspect the PaperCut App. Log as well as the Transaction lists and Print Histories to confirm that no errors occurred during testing and that jobs are recorded properly for the printer, user, and account. This testing phase can be undertaken in parallel with many of the following tasks.

TASK 6: Invoicing and Reports

PaperCut’s account transaction data and associated reports are available in real-time. The Shared Account reports, in particular the Invoice Reports will be of interest to most. Some planning may be required to integrate the report data into you existing client billing procedures. Most organizations will simply schedule the Invoice Report to be automatically emailed to the “accounts person” at the end of each month. The email can contain a report in either PDF or Excel/CSV format. The “accounts person” then enters the cost and/or issues the invoices as required.

Take some time to familiarize yourself with the report formats and work out a sustainable process for processing the data (e.g. monthly). It would be a good idea to set up and schedule the important reports so they are automatically sent via email. This will save time and serve as a way of “prompting” the selected individual(s) to process the report data.

Larger organizations may wish as a “Phase II” to look at implementing an automated or semi-automated process to import the account cost data into their accounting system for automatic billing.

TASK 7: Issue Resolution

If you experience any problems, need advice with set-up or configuration, or have any general questions that cannot be resolved internally, please contact the PaperCut support team at support@papercut.com. The support team is always happy to assist. PaperCut support is done directly by the development team, meaning no question is too hard. The team is technically focused (no marketing fluff) and one of our goals is technical transparency. We provide source code level access, acknowledge bugs, and always provide technically correct answers. If you have a complex question please arrange a time to call the PaperCut Software office.

The PaperCut Chargeback online knowledge base and user manual are also excellent resources for issue resolution.



TASK 8: Preparation for Rollout

PaperCut is now installed and tested and much of the technical work is complete. You should now address policy related issues, user training and end-user experience.

Policy Change

Most organizations have a procedure that is used for accounting and billing. Billing /accounting for printing may however be a new concept. Take some time to talk to interested parties and consider any policy change and its affects. Make sure your policy changes are positive. For example, “Our old policy was to estimate the cost of project printing. A newly implemented software application will now allow us to accurately track printing. Our new policy is to provide an accurate list of all printing and associated costs.”

If costs are passed on to customer, clients, or 3rd parties, we recommend that you communicated formally with clients in the same manner that you would communicate changes to an hourly billing rate or any other fee structure change.

Staff Training

The size and complexity of your account list and the rules in on how and when they are used will have an influence on the amount of training required.

The following areas should be covered for staff training:

- Shared account creation and management – This training should probably be limited to the staff members that will be responsible for the integrity of the shared accounts list. It should focus on account editing using the defined process (e.g. manual editing or maybe batch importing from a file). This person will be responsible for retiring old accounts, and add new accounts according to naming convention and policies. They may also be responsible for refunding jobs and/or updating incorrect jobs.
- Using the account selection popup - This is a core area for training because it usually impacts the largest number of staff and it is that tool that is used for every print job. Training should include:
 - What the popup is and what it looks like
 - which accounts to select and why
 - policy on when to apply special charge rates and ‘don’t invoice’
 - using and maintaining the user’s ‘preferred accounts’ list
 - guidelines for adding comments to print jobs
 - who to contact if an account is not listed or if a job needs to be refunded/updated.
- Generating invoices and data processing – The data and reports procedure by the system will need to be processed (normally monthly or quarterly). Ensure



a person is responsible for this task and the procedure is documented.

Be prepared to offer additional training when procedures change and when new features are added to PaperCut.

TASK 9: Deploying the Client Software

The *PaperCut User Client* is used to display the *account selection popup* for shared accounts when a job is sent to the printer. The client software must run on all workstations and can be loaded from the server or it can be installed directly on each user's PC.

Client Deployment Options

Zero-install Deployment: Run the client (pc-client-local-cache.exe) directly off the server share.

Local Install: Installing the client software using the provided installer. A good option for non-domain laptops.

Additional information on deploying the client software, including automated deployment methods are detailed in the PaperCut ChargeBack User Manual.

TASK 10: Go-live

Installation and testing is complete. The initial shared accounts have been created. The staff has been trained in shared account selection, management, and invoicing; and all staff have been informed of the procedural changes. You are now ready to “go-live”!

Initially it will be important to monitor the shared account selection process closely during daily operations to assure that the proper accounts are being selected. It may take a few days for users to “learn” the new system. It is easy to edit a single print job transaction to charge it to a different account; however; if the mistake is repeated over a long period the job of editing each print job transaction to change the account that is charged could be substantial.

Invoice reports should be run far enough in advance of the normal billing cycle to allow time for adjustments to be made if necessary.

TASK 11: Maintenance

PaperCut is now tracking printing and creating print job invoices for your client accounts. Like other important applications and network infrastructure, you should allocate time to maintain the shared accounts list, check system health, perform maintenance, and undertake regular backups. PaperCut ChargeBack is designed as a



“self managing” system; however; shared account maintenance, regular backup and inspection of logs, print history, and transactions are recommended to maintain an effective and reliable system.

Shared Account Maintenance:

The Shared accounts list will change as clients/projects are added or deleted or when client account information changes. Small shared account lists that do not change often may only require a few minutes per month to maintain manually. Firms with large complex account lists that use account import or synchronization should designate adequate resources familiar with these functions to maintain the external lists required for these tools. A well maintained shared accounts list will assure that the daily print charging workflow will proceed efficiently and invoices will be accurate.

Suggested Daily Tasks:

Undertake a full backup of all files located under:

Windows: C:\Program Files\PaperCut ChargeBack\

Mac: /Applications/PaperCut ChargeBack/

Linux/Novell: ~papercut/

Use automated backup software. This will ensure all PaperCut data files can be restored in the event of system failure or other unforeseen problems. **Important:** PaperCut ChargeBack includes its own point-in-time backup option; however this is designed to compliment rather than replace a good off-disk package strategy.

Suggested Weekly Tasks:

- Inspect the PaperCut App. Log for any important messages or error events. The system can also be configured to automatically email you on error level events.
- Review Shared Account Print History for new accounts or when new staff members are added to assure that the proper accounts are being selected.

Suggested Monthly Tasks:

- Check the PaperCut website for updates.
- Review your backup procedure – make sure you stick to it!
- Review print costs assigned in PaperCut against any changes in the cost of equipment, toner / ink, or paper. Ensure that clients are informed if prices are to change.



Acknowledgements

This is an evolving document. PaperCut Software would like to thank the organizations that have shared their experiences and contributed to this document.

Feedback

If you have any suggestions, or would like to share your experiences, please contact us at support@papercut.com. We would love to hear from you.