BLI Solution Report



PaperCut NG 15

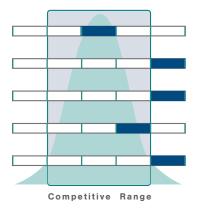
Features & Productivity

Usability

IT Admin & Security

Support & Training

Value



OVERVIEW

Understanding print output—and its associated costs—is critical for organizations of all sizes. PaperCut NG is a cross-platform output—management and cost-recovery platform that facilitates tracking, accounting and billing of print jobs. Its feature set lets it be used to quantify, recoup and reduce output costs across the organization, as well as to enable mobile printing from just about any device. Moreover, the solution is easy enough to install and configure that almost any savvy IT administrator should be able to get the system up and running without reseller support. The company also offers PaperCut MF, which performs the same tracking, accounting and billing functions but for an organization's print, copy, scan and fax output, while also delivering pull-printing functionality to increase document security and enhance convenience for end users.



Product Snapshot

Product: PaperCut NG

Version: 15.2

Software Developer:

PaperCut Software International Pty. Ltd.

Web: www.papercut.com

Phone: 1-800-819-5329 (U.S.)

For more information on PaperCut NG 15 and other PaperCut products, see BLI's comprehensive coverage at Buyerslab. com/Solutions.

About BLI: Since 1961, BLI has been a leading test laboratory in the world of digital imaging equipment. BLI is completely independent in all of its testing processes and subsequent reporting. All of BLI's product evaluations are conducted by highly experienced employees in its on-site testing facilities in the United Kingdom and United States where hundreds of new copiers, printers, wideformat devices, scanners, faxes and multi-function (MFP) products are evaluated and reported on each year.

Buyers**Lab**.com



Benefits



QUANTIFY PRINT COSTS—Accurate tracking of all printer activity allows organizations to see who is printing what, while customizable reports show how much it all costs.

RECOUP EXPENSES—Departmental, user and client usage-accounting features let organizations bill internally or externally for print output as appropriate.

REDUCE COSTS AND SATISFY GREEN INITIATIVES—Customizable print rules (such as the ability to enforce duplex printing and to convert color jobs to black-and-white) and end-user pop-up messages that encourage more cost-efficient printing quantifiably reduce an organization's hardcopy output costs, while usage quotas keep users from spending more than their allotment.



GET UP AND RUNNING QUICKLY—Unlike some print-management platforms, PaperCut NG can be downloaded, installed and configured by a customer's own IT personnel, which streamlines deployment and eliminates professional services engagement costs.



STREAMLINE MOBILE PRINTING—An iOS web application and support for Google Cloud Print, email-to-print and printing from any modern browser allows IT personnel to enable printing from just about any device.



EASE BURDEN ON IT PERSONNEL—An admin-friendly management console, complete with a handy Dashboard view and intuitive layout, makes administering the system a snap.

OUR TAKE

Show us a school or business that doesn't have a print management system in place, and we'll show you an organization that is wasting money on hardcopy output. Even companies that are under an MPS (managed print services) contract with a service provider need their own in-house print management system, since most MPS dealer tools are designed to track—but not limit nor reduce—usage of the devices. And while there's no shortage of feature-rich print management platforms to choose from, finding one that won't break the budget or the back of your IT personnel is more of a challenge. That's where PaperCut NG shines: It delivers all the functionality the majority of organizations are likely to need in order to track, recoup and reduce print expenditures, but in an affordable package that is easy to deploy and administer.

In addition to the core accounting, cost-recovery and cost-reduction features for print output, the solution delivers mobile-print support. Plus, PaperCut NG runs under a variety of network operating systems, making it a seamless fit with virtually all environments. Moreover, BLI analysts found that administering a PaperCut NG system is much easier than working in other leading print management offerings, and the platform does not require the installation of an end-user utility on each PC (although one is available if a customer prefers).

Compared to more complex and costly output management platforms, PaperCut NG does not deliver the breadth of features in any given functionality area. For example, it does not offer as granular per-page pricing schemes or as robust device-management tools as BLI has seen in other platforms, and the job-rules functions (for converting or re-routing jobs) require some scripting (although code recipe samples are included for common rules). And for secure pull printing support and the ability to track walk-up activity (copy, scan, fax) at MFPs, customers need to step up to the more full-featured PaperCut MF (which is easily accomplished, according to the company). But for organizations that need print management functionality in an easy-to-deploy, easy-to-use package that's also easy on the budget, PaperCut NG is hard to beat.



Strengths

- Very affordable
- Easy to deploy and administer
- Most user-friendly administration console BLI has seen in an output management platform
- Does not require installation of local utility on user PCs (though one is available for organizations that desire it
- Cross-platform network operating system support
- Support for printing from mobile devices is included
- Integrates with 19 online payment services, and open API allows the solution to integrate with a range of other backend systems

Weaknesses

- Job pricing features aren't as granular as other leading accounting/print management platforms
- Device management features are not as robust as other leading platforms
- Enacting job rerouting and user behavior modification features may require writing or tweaking scripts
- Does not offer scan capture/processing/routing features as found on a few leading output management platforms

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Product Profile

| Versions | PaperCut NG is the print-specific version of the company's output management platform. For organizations that wish to track print, copy, scan and fax activity, and have secure pull printing capabilities, the company offers the more full-featured PaperCut MF. |
|-------------------------|---|
| Pricing | The solution's price is based on user licenses. The Education license costs U.S. \$570 (and supports up to 500 users); the Business license costs \$480 (up to 25 users); and the Professional Client Billing license costs \$660 (up to 25 users). |
| Users | Maximum number of users supported: Unlimited |
| Server | 1-GHz CPU; 1-GB RAM; 300-MB hard drive space; Microsoft Windows Server 2003, Vista, Server 2008, 7, 8, Server 2012; Mac OS X 10.8 or later; Novell Open Enterprise Server 2 (SP1 or later); most modern Linux distributions including Red Hat, Novell SUSE, Debian; UNIX |
| Client | 500-MHz CPU; 256-MB RAM; no hard disk space required for zero install deployment (recommended), or 100-MB for local install; Microsoft Windows XP or later; Mac OS X 10.6 or later; most modern Linux distributions; other systems supporting Java 6.0 |
| Compatible Hardware | The solution can track print output sent to any networked output device and any local device connected to a networked PC. |
| Software Integration | In addition to LDAP and Active Directory integration, PaperCut NG integrates with 12 online payment services including PayPal, Authorize.Net, Blackboard, CBORD, Cardsmith, Cybersource, Heartland and Touchnet. An open API enables custom integration with other backend applications, and export and input options such as CSV are available to assist with input/export with third-party accounting applications. |
| Mobile Compatibility | The company offers an iOS mobile print web application for Apple iOS devices; printing from other mobile devices is supported through Google Cloud Print, email-to-print, and printing from any modern browser on the device. |
| Availahility | The solution is sold worldwide by authorized partner resellers. PaperCut NG can also be downloaded and |

Availability

The solution is sold worldwide by authorized partner resellers. PaperCut NG can also be downloaded and purchased directly from the company's website.

Languages

English, French, Italian, German, Spanish, Brazilian Portuguese, Catalan, Chinese (Simplified and Traditional), Croatian, Czech, Danish, Dutch, Finnish, Hebrew, Hungarian, Japanese, Korean, Lithuanian, Norwegian, Polish, Portuguese, Russian, Serbian, Slovak (note that some translations were performed by PaperCut resellers in a given region, not by PaperCut's own developers)



Features & Productivity

PaperCut NG has a robust feature set that delivers most of the functionality that the vast majority of customers will need.

PRINT TRACKING

PAGE-LEVEL COLOR DETECTION

USAGE BILLING (BY USER, DEPARTMENT AND CLIENT/PROJECT)

USAGE QUOTAS

ACCOUNT REPLENISHMENT

RULES-BASED PRINTING

MOBILE PRINTING

CUSTOMIZABLE REPORTING OF USAGE AND COSTS

USAGE/COST ACCOUNTING AND RECOVERY

PaperCut NG delivers the ability to track print pages executed at registered printers to give organizations a clear picture of usage and its associated costs—and to recover costs when appropriate.

- PaperCut will track whether jobs are simplex/duplex and color/black-and-white; unlike some systems, PaperCut supports "page-level" color detection, where color and monochrome pages mixed into a single job are counted accurately.
- All usage can be tracked by user, department, client or project. This gives
 organizations the opportunity to track (and report on) who is generating the
 most in terms of hardcopy output, with an eye towards reducing such usage or
 recouping costs where appropriate.
- For organizations that plan on charging user, department, client or project budgets/accounts for output, the program allows an administrator to set different prices for color and monochrome jobs. Large-format output can be charged by the square foot/meter.
- Unlike most other systems BLI has tested, PaperCut NG allows a blanket discount (or surcharge) for certain accounts or sub-accounts, such as a 10 percent discount or a 5-cent per-page surcharge.
- PaperCut NG also offers a Charge Rates feature that can be used to apply
 a percentage discount for a job (for example, a 50 percent discount for
 the second printout of a document) or a percentage upcharge (50 percent
 increase for special material, for example). This flexibility enables organizations
 to tailor charges to particular client accounts or situations.
- End users can be required to enter a billing code for all tracked usage, so accounts can be accurately charged.
- PaperCut NG offers a Shared Accounts feature, so multiple users can charge



Features/Productivity

Usability

IT Admin/Security

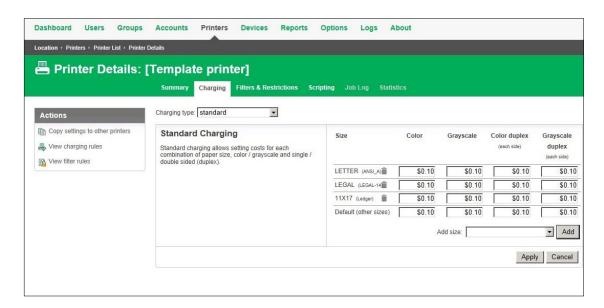
Support/Training





output to a given account (such as a particular client or project). The system also supports sub-accounts, so a particular client can have different projects being tracked and billed simultaneously.

- The accounting data collected and calculated by PaperCut NG can then be used to deduct funds from internal user/department accounts, or to generate bills for external clients. This enables organizations to accurately charge internal cost centers for device usage, or to recoup output costs from external clients.
- While PaperCut NG's job-accounting features cover what a typical organization might need and then some, BLI technicians found that pre-built pricing options are not as granular as found in some competing platforms. For example, some allow an administrator to apply several per-page price tiers as the size of a document hits various thresholds, and to charge for things like rush or weekend jobs. PaperCut allows for such advanced pricing schemes, but they require custom scripting to accomplish.



PaperCut allows administrators to set per-page pricing for jobs, which is then billed against a user or client account.



PaperCut NG empowers organizations not only to track and recoup output costs, but to avoid costs when possible in the first place.

 PaperCut NG helps reduce overall output expenditures through the enforcement of usage quotas. Administrators can set a total budget for a user



COST REDUCTION



or department, and disallow jobs once a quota is reached or perform other actions (such as allowing the job but alerting the user that the quota was reached). Before a quota is reached, the system can be set to send a message to the user that funds are low.

- The system can also be set to automatically add credit to an account when it
 hits a set threshold, or to add credit in a specified time increment (such as to
 add \$10 weekly). The administrator can set an account-accumulation limit, so
 an account balance does not go above a certain ceiling.
- The solution's Filters & Restrictions feature lets an administrator force actions such as converting color jobs to monochrome, switching simplex jobs to duplex, denying a job based on a set cost threshold, denying because it is a duplicate of a document recently printed, restrict printing by application type, discourage the printing of multi-page email messages and more possibilities with custom scripting. This feature can greatly reduce wasteful or unnecessary printing, which saves money and also helps an organization satisfy "green" initiatives.
- With scripting, PaperCut NG offers the ability to re-route jobs to more costeffective devices; for example to route a job from an office ink jet printer with a
 high cost per page to a shared laser MFP with a lower cost per page.
- Administrators can also enact "behavior modification" features, whereby an end user will receive a message prompting them to consider more cost-efficient or eco-friendly print settings.
- Unlike with some platforms, job-conversion functionality is tied to a particular device (the Filters & Restriction filter is accessible after selecting a device from the Printers tab), not globally for any print job.

| Groups With Color Access Specify which groups should have access to color printing. | ☐ Only allow the following groups to print in color: | |
|--|--|--|
| Maximum Cost Filter by document cost. This filter is used to prevent users from accidently using an excessive amount of their allowance in a single document. | Deny print jobs based on document's cost: Maximum: \$0.00 | |
| Page Count Filter by the number of pages within a document. This filter may help accomplish tasks such preventing large documents on slow printers or small documents on specialist high volume printers. | Deny print jobs based on number of pages: Minimum: 0 Maximum: 0 | |
| Maximum Copies Filter by document copy count. This filter is used to limit the maximum copy count for a single print job. (This option may not be available on all hardware) | Deny print jobs based on copy count: Maximum: 0 | |
| Duplex Mode Filter either duplex (double sided) or simplex (single sided) documents. This filter can be used to enforce duplex printing on selected printers. | ☐ Deny print jobs based on duplex mode: Allow duplex documents only | |

Rules-based printing enables administrators to disallow, convert or re-route jobs to reduce printing costs.

Features/Productivity Usability IT Admin/Security Support/Training Value



MOBILE AND GUEST PRINTING

In addition to usage accounting and cost reduction, PaperCut NG can be used as a company's mobile print platform

- The bundle includes a web application for Apple iOS devices (iPad, iPhone, iPod Touch) that enables the printing of documents from those mobile devices.
- PaperCut NG offers integration with Google Cloud Print, Google's web-based cloud service that manages the delivery of print jobs from an application to a printer. And since print traffic goes through the monitored print server, all Google Cloud Print printing is tracked and controlled, and users can leverage features such as secure pull printing.
- Web Print allows users to output files by uploading them from a browser with no client software or driver installation required.
- The solution also delivers Email to Print, which provides a simple, straightforward printing option for any mobile device with email. Email to Print allows users to print images, PDFs and Microsoft Office documents.
- PaperCut NG offers simplified guest printing in an organization, a feature that lets visitors print from their mobile device without setting up an account or accessing the organization's private Wi-Fi network. This adds convenience for visitors and clients while relieving IT staff of the chore of providing access for each guest.

REPORTS

PaperCut NG delivers a wide array of reporting features.

 PaperCut NG offers full reporting for devices and usage. There are 80+ standard one-click reports available, and more advanced reports can be generated through ad-hoc customization of filters and other report settings.

User: runs reports on document output activity by user

Printer: generates information on documented output activity by printer

Print Log: allows administrators to list all jobs over a given date range

Group: allows administrators to gauge output by group

Shared Accounts: shows shared account usage and prints account invoices

Transaction: shows a summary of transactions and balance adjustments

Environmental Impact: summarizes the environmental impact of print jobs

Ratio: summarizes relative printing costs between users, groups or devices

- The Central Reports feature is useful in environments where PaperCut is installed across multiple locations/servers, since it can be configured to generate aggregate data from multiple, application servers/sites.
- Administrators can choose to export reports in PDF, HTML or CSV (for use in Excel and other programs) format. Custom logos and text can also be added to the header of all standard reports.



<u>Features/Productivity</u>
Usability

IT Admin/Security

Support/Training



Usability

PaperCut NG can be set up to be essentially invisible to end users, or users can be prompted to enter billing codes for each print job.

- End users will typically interact with PaperCut NG through a browser. This
 means they can access their account from any computer, anytime.
- The interface is clean and intuitive, and with its simple tab organization is
 a breeze to navigate. Users have a set of web tools that are well organized
 and immediately familiar, similar in feel to an online banking site; therefore,
 no training is necessary. These tools enable users to track their own activity
 in real-time, check account balances, add credit, and even view their
 environmental impact.
- The administrator can prompt the user whether to charge to a personal account or a shared account (such as a particular department).
- When an account balance is low, users receive a pop-up when they send a
 print job, with the amount left in their account. To replenish, users need only to
 transfer funds, again, similar to online banking.
- The client applet offers users an Environmental Impact Dashboard to illustrate
 the impact a user's print usage is having on the environment and to compare
 that usage with the company average.

IT Administration & Security

Installation / Configuration

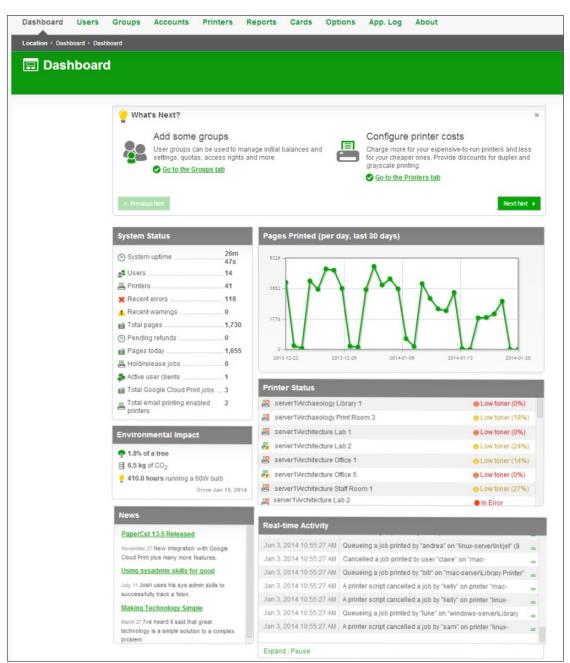
- Unlike most print management products BLI has evaluated, PaperCut NG can be installed and configured by a savvy IT administrator at a customer site, making it exceedingly easy and inexpensive to deploy. If the customer prefers, the platform can be installed by the reseller (often via a remote session).
- The solution is typically installed on a server and tracks local print queues and the network domain/directory environment for user authentication. All existing print queues on the network are automatically detected during installation At no additional cost, secondary servers can be installed on local PCs and/ or additional print servers to track local print queues and any direct IP/USB printing.
- PaperCut NG can be deployed on a server running any one of the supported network operating systems: Microsoft Windows Server 2003, Vista, Server 2008, 7, 8, Server 2012; Mac OS X 10.8 or later; Novell Open Enterprise Server 2 (SP1 or later); most modern Linux distributions including Red Hat, Novell SUSE, Debian; UNIX. This is the widest NOS support BLI has seen in any output management platform.

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Features/Productivity
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IT Admin/Security
Support/Training
Value



- Thanks to integration with Active Directory, LDAP and the directory services of a range of network operating systems, adding users to the system is practically automatic. PaperCut NG extracts user information out of the System or Domain, with the options presented varying depending on the operating system.
- Because PaperCut NG tracks printing on the server by interfacing with network queues, client-PC software isn't required for silent tracking and accounting in an authenticated network, so there's no need to push out packages or manage future updates.





The handy Dashboard home screen shows a range of pertinent usage and system information.



Should a customer decide to add copy/scan/fax tracking and secure pull
print to the platform's feature set, an existing PaperCut NG installation can be
upgraded in place to PaperCut MF with a simple license update, with no need
to reinstall the software.

Ongoing Administration

- One of PaperCut's greatest advantages is how easy it is for IT staff to administer. The logically arranged menu items and handy Dashboard make it approachable even for those who have never used a print management system.
- The home-page Dashboard provides an overview of all system activity and the current status of all network devices and users. For example, the System Status box provides statistics such as the number of users and printers, recent errors and warnings, total pages printed and more. There's also a chart showing the number of pages printed per day over the past 30 days, and a "What's Next?" box that suggests actions to be taken.
- The handy Environmental Impact box on the Dashboard shows the positive impact the organization has had on the environment since installing PaperCut, expressed in the number of trees saved and the amount of carbon emissions avoided.
- Navigating through the solution's features is intuitive and familiar thanks to
 its use of well-labeled tabs on the home page. Other UI conventions are also
 extremely helpful, such as a context-sensitive Actions box on each page
 that surfaces tasks and settings the administrator is likely to be looking for,
 and a hyperlinked "breadcrumb" trail at the top of the page that shows the
 administrator where he has drilled down into (for example, "Users > User List
 > Details") and lets him jump back to a higher-level page by clicking on the
 desired entry in the trail.
- The system supports a Global Print Driver for more easily implementing universal print queues into a mixed-fleet environment, since one driver can be used on a single global virtual queue to enable printing across multiple models and brands.
- PaperCut supports reporting on device error conditions—including paper jam, paper out, cover open, low toner, toner out, and others—so IT personnel can quickly resolve such problems and keep printers operational.
- Most of PaperCut NG's job-conversion and re-routing features rely on scripting; while code "recipes" (prebuilt code templates) are included for many such functions, some customization will be required. With some competing platforms, setting up rules-based print behaviors is wizard-driven rather than requiring scripting.

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Features/Productivity
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IT Admin/Security
Support/Training



| User Selection The operations defined below will be performed on the users selected here | Perform operations on users in this group [All Users] Enlarge and whose balance is Less than \$0.00 and whose restriction status is Restricted and with a department of and with an office of and whose last activity was |
|---|---|
| | Before this date C Adjust credit by \$0.00 Only allow accumulation up to \$0.00 Set credit to \$0.00 |

Administrators can make changes globally to selected groups, users or accounts to streamline chores such as adding credit to balances.

Security

PaperCut delivers a good set of security-oriented features.

- The solution uses SSL for communication (administrators can require SSL when accessing the system from mobile devices) and remote web-based administration, ensuring sensitive data like passwords and account information is locked down over the network
- In addition to integrating with leading directory services for user authentication (Active Directory, LDAP, Open Directory, eDirectory, NIS, PAM, Samba), the solution supports card authentication (Magnetic Stripe, HID, Mifare and others)
- For an added level of security, watermarking and digital signatures are included. Dynamically constructed text (such as a user's name and a date) can be added to the page as a watermark. This is a feature not seen in most competing platforms.
- Digital signatures can be used to verify the origin and author of any print job.





- Print Archiving, which allows administrators to view printed jobs via the interface, tightens security and audit policies.
- The platform's Audit Logging feature tracks changes to users and settings within PaperCut. Audit details include who made the change, what attribute was changed as well as the previous and updated values
- PaperCut offers username and document name hiding for jobs in the Windows print queue, and this feature can now be configured for specific queues via the admin Interface.

Support & Training

Technical support is provided from PaperCut's offices in Australia, the UK and North America.

- With every new license purchased, the developer includes all minor pointversion upgrades and email and phone support. Premium Upgrade Assurance is priced at 20 percent of total cost per year, with discounts available when multiple years are purchased.
- All upgrades, fixes, and 24/7 remote phone, live chat and email support are covered under the maintenance agreement.
- BLI called technical support at various times of the day over a week and received a representative in less than a minute in each instance.
- A wealth of information and documentation includes an in-depth, yet easily-digestible, 500+ page hyperlinked user guide that can be accessed online or downloaded along with embedded application videos on the PaperCut YouTube channel.
- The developer offers a searchable knowledge base with hundreds of articles, too. All manuals have numerous screenshots and easy to follow instructions and explanations. In addition, users can post questions and receive answers from a blog along with a discussion list that's linked to each page of the User's Guide and Knowledge Base.

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Features/Productivity
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Value

Compared with the competition, PaperCut NG is a feature-rich solution that's well priced. The solution is priced based on user licenses. The Education license costs U.S. \$570 (and supports up to 500 users); the Business license costs \$480 (up to 25 users); and the Professional Client Billing license costs \$660 (up to 25 users). A typical Professional billing deployment for 76 to 100 users, with support for unlimited servers and printers and 12 months of included support, is priced at \$1,305.

- In addition, because the platform iss easy to deploy and administer, it requires less of an investment in professional services and IT overhead.
- PaperCut offers two ROI calculators on its website, one for education customers and another for businesses (www.papercut.com/tools/roi/). Potential clients can plug in a few data points to quickly call up an estimate (more extensive calculators are available for resellers). According to the developer, many of its customers have reported that the software has paid for itself in less than 6 months.

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