

**TAKE
CONTROL
OF OFFICE
PRINTING
WITH DELL
COLORTRACK**



ABSTRACT

Color laser printers have been rapidly gaining acceptance in the marketplace as more organizations realize their benefits. Using color can enhance productivity by making documents easier to read and understand. Color also improves business communication by making materials more attention-getting and engaging, helping to build understanding and participation.

Even as organizations embrace the benefits of installing color laser printers in their office environments, they recognize the need to control printing costs—and so does Dell. Color laser printers from Dell not only deliver superb color printing performance at a low cost per page, but also ship with Dell ColorTrack technology. This technology helps to lower costs even further by giving administrators control of office printing.

TAKE CONTROL OF OFFICE PRINTING WITH DELL COLORTRACK

COLOR MANAGEMENT HELPS KEEP PRINTING COSTS LOW

Dell ColorTrack technology is designed to provide organizations with effective color management through access control and usage monitoring. These capabilities help businesses make the most effective use of color laser printers and keep total cost of ownership low.

Access control

Determining who should have access to color printing, and in what volume, is a key to managing print costs effectively. With Dell ColorTrack technology, administrators can assign levels of access that make sense for different individuals or groups. For example, graphic designers may require unlimited access to color printing to be productive, while finance departments may need only black and white (monochrome) printing. Other groups such as sales departments may require access to color printing, but within limits.

Usage monitoring

Usage monitoring means tracking of monochrome and color print volumes. Tracking enables decision makers to gain visibility into the usage patterns of individuals or groups and determine if changes are needed in color access assignments. Usage information also helps organizations ensure that color printers are located where they are most needed to get the most value from the color printing investment.

CHOICES TO MATCH A VARIETY OF OFFICE ENVIRONMENTS

Organizations can implement Dell ColorTrack technology in different ways to match the size and complexity of the office printing environment. For workgroup environments, the organization has two options for using Dell ColorTrack: installing drivers on the end-user computers or using firmware on the print server. For a network with a domain, the administrator can use Dell ColorTrack technology with Microsoft® Windows® groups to control color printing.

For small businesses and home offices—ColorTrack I

Dell ColorTrack I is a simple, easy way to control access in small businesses and home offices with workgroup networks. It is ideal for organizations with minimal IT resources, because it is based on the simple task of installing the print driver on a user's computer. The driver installation software provides three choices:

- Monochrome only driver—prints all documents in black and white only
- Monochrome and color driver—prints documents in either black and white or color
- Color - Password Enabled driver—requires a user password to turn on the color printing feature

The administrator can simply select the appropriate driver for each user, install it, and “forget” it. For usage monitoring, the administrator can print a report locally on the printer.

For workgroups up to 50 users—ColorTrack II

Dell ColorTrack II is designed for workgroup networks with up to 50 users. Instead of working via the driver on each user's computer, it works via firmware on the printer. That makes it easier for the administrator to manage groups—there is no need to go to each individual desktop or laptop computer to change color access assignments. The administrator can remotely control access and monitor usage for individuals or groups through a standard Web browser using the Dell Printer Configuration Web tool. Changes can be made on the fly.

ColorTrack II provides advanced capabilities such as setting maximum monochrome or color print volumes per group or individual. For example, the administrator might set up two groups as follows:

Group 1—Finance

Access: Monochrome only

Maximum print volume: 10,000

Password: Alpha

Group 2—Sales

Access: Monochrome and color

Maximum print volume: 5,000 monochrome, 1,000 color

Password: Bravo

In addition to enabling the administrator to set maximum print volumes, Color Track II keeps running totals of color and monochrome pages per individual or group for granular usage monitoring.

For larger groups—ColorTrack with Active Directory

For larger installations where there is a network with a domain, administrators can use the features of Microsoft Windows Active Directory® with Dell ColorTrack technology to manage color printing through a print server. This method provides a robust utility that makes it easier for the administrator to manage large numbers of user accounts. The administrator creates two queues for each color printer—one that is color and monochrome and another that is monochrome only. All users are granted access to the monochrome queues, but only users in the color users group can print to the color queues.

HOW TO DEPLOY DELL COLORTRACK TECHNOLOGY

This section provides step-by-step guidance for installing and configuring Dell ColorTrack technology.

ColorTrack I

This method enables control in the client computer for direct IP printing on workgroup networks.

1. Insert the driver installation CD-ROM for your Dell color laser printer into the local computer drive. Choose *Network Installation*; the *Select Printer* screen appears with a list of printers supported by the CD-ROM. Place a check box in front of the printer you are installing. If you are setting up a shared printer, check the *I am setting up this printer on a server* box at the bottom of the screen.

TAKE CONTROL OF OFFICE PRINTING WITH DELL COLORTRACK

2. The *Enter Printer Settings* screen (Figure 1) appears, showing a drop-down box with the following ColorTrack options: *Color and mono enabled*, *Color - Password Enabled*, and *Mono only*.

3. Select the type of queue that you want to use:

- *Color and mono enabled* lets you create a printer queue with no restrictions.
- *Color - Password Enabled* lets you specify a password for color printing by typing a password in the space provided and giving that password to the user. Note that the password cannot be changed without removing and reinstalling the queue.
- *Mono only* lets you create a queue with no color options. This choice limits users to black and white printing only.

ColorTrack II

This method enables control in the printer rather than the client computer (firmware resides on the printer) for direct IP printing on workgroup networks.

1. Install queues following the ColorTrack I instructions in the preceding section of this document. Choose *Color and mono enabled*.

2. Open the Embedded Web Server of the desired printer by placing the printer's IP address in a Web browser.

3. Click *Print Volume* on the left side of the Web browser, and then click the *Dell ColorTrack* link to bring up the *Dell Color Track* settings (Figure 2).

4. Select *Print User Limitation (Enable)* to enable ColorTrack. Select *Permit printing without specifying user (Enable)* to enable printing that allows anyone to print in monochrome but allows color printing for specified users only.

5. Click the *Apply New Settings* button and restart the computer. (Default Username = Admin, Default Password is left blank. After specifying your admin credentials, click the *Restart Printer to apply settings* button to restart the print server.)

6. After the printer restarts, return to *Print Volume* and then *Dell ColorTrack*. Click *Edit Print User Registration* (Figure 3). Add each User Name to the printer and set color printing quotas for each user by clicking the *Create* button. The printer can manage color use for up to 50 users.

7. Click *Create* to bring up the *Print User Settings* screen (Figure 4). Enter a number from 1 to 50 in the space provided to select a person that you want to add as a user for the printer.

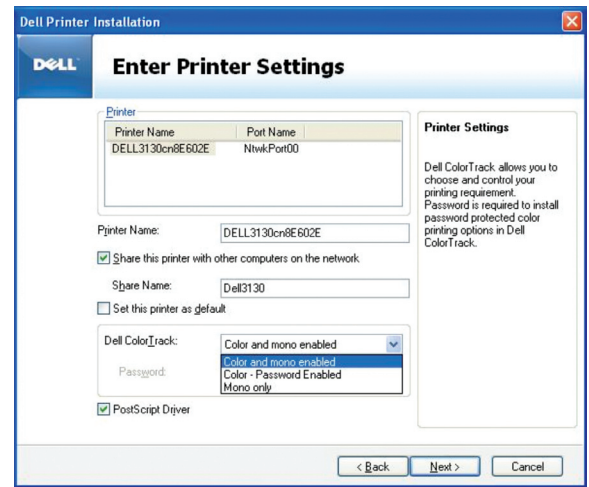


Figure 1. Enter Printer Settings screen

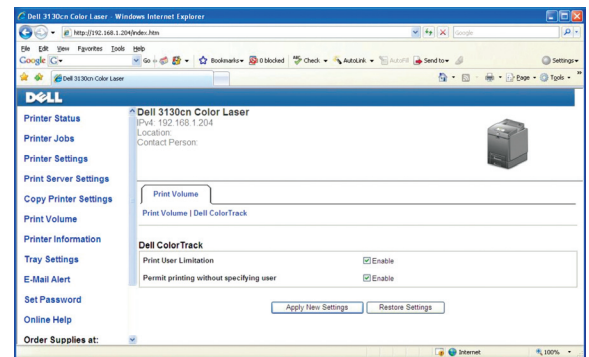


Figure 2. Dell Color Track settings screen

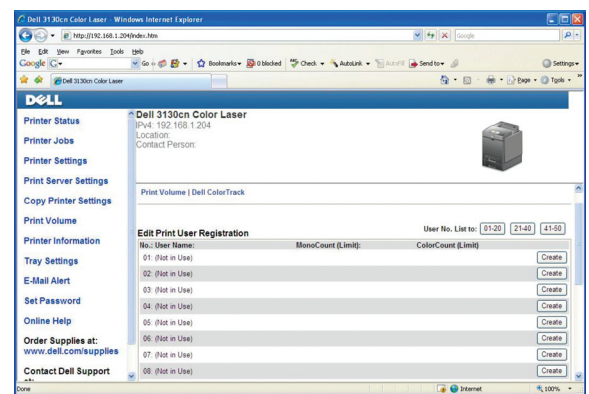


Figure 3. Edit Print User Registration screen

TAKE CONTROL OF OFFICE PRINTING WITH DELL COLORTRACK

8. Fill in or select additional information in the Print User Settings window:

- User Name: Windows login name
- Password: Specified when setting up a user account (can be left blank)
- Color Mode Limitation: Choose *Mono Only* or *No Limitation*
 - ▶ *Mono Only* lets users print monochrome with no restrictions. To add restrictions, select an *Upper Limit* for *Monochrome Print* (can be left blank).
 - ▶ *No Limitation* lets users print monochrome or color with no restrictions. To add restrictions, select an *Upper Limit* for *Color Print* (can be left blank).

9. Click *Apply New Settings*. You will get the message “Updating the Data, Operate Again Later.” Click *Back*; the user information now appears on the *Edit Print User Registration* screen (Figure 5).

10. Once the settings are in place, the user must use the assigned password to print, and the user’s Mono/Color counts will increase with each job. If users exceed the privileges or page counts assigned to them, they will get an “Access Denied” message from the printer.

USING DELL COLORTRACK FOR DOMAIN NETWORKS

If the organization has a network with a domain, the administrator can use the features of Microsoft Windows Active Directory to manage the color printing environment with Dell ColorTrack technology. The administrator must be a domain administrator or a print administrator with access to a server that has been set up with the role of print server. This access is required for the administrator to configure the domain print server.

COLORTRACK WITH ACTIVE DIRECTORY—STAND-ALONE PRINT SERVER

This feature uses Microsoft Windows Active Directory with Dell ColorTrack on domain networks.

1. For stand-alone print servers, use the Dell installation CD-ROM and create two queues: one that is *Color and mono enabled* and one that is *Mono only*. (See the ColorTrack I installation instructions in the preceding section of this document.)

2. By default, every user in the domain has access to both of these printer queues. Make the following adjustments:

- Leave everyone as a “Security Group” on the *Mono only* queue
- Remove everyone as a “Security Group” from the *Color and mono enabled* queue

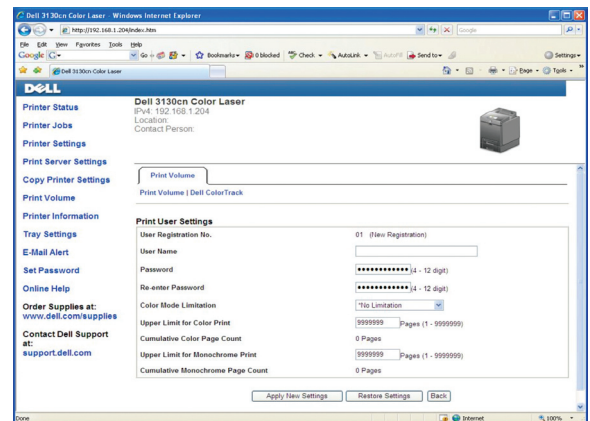


Figure 4. Print User Settings screen

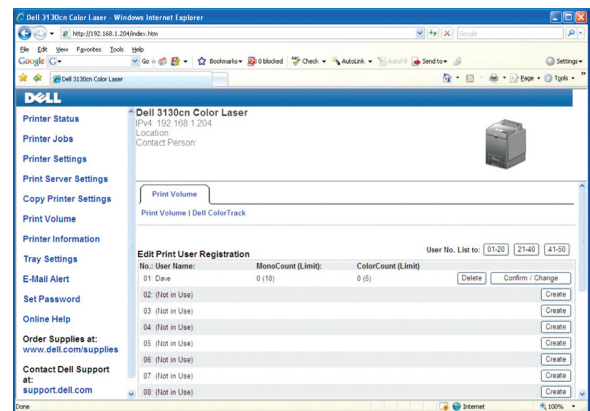


Figure 5. Edit Print User Registration screen

- Create a “Color Print Users Group”
- Add the “Color Print Users Group” to the *Color and mono enabled* queue

3. When this is done, everyone can print in black and white to the *Mono only* queue, while only users who are in the “Color Print Users Group” can print in color to the *Color and mono enabled* queue.

4. Use this method to create two queues for each color printer.

NOTE: If the administrator cannot use the Dell installation CD-ROM, follow the steps for cluster servers in the following section of this document.

COLORTRACK WITH ACTIVE DIRECTORY— CLUSTERED PRINT SERVER

This feature uses Microsoft Windows Active Directory with Dell ColorTrack on domain networks, for clustered print servers, or stand-alone servers using .inf-based installation.

1. Copy the driver files from the installation CD to a shared folder on your network that the print server can access, for example, \\server\DellPrintDrivers\5110cn.
2. From a management workstation, choose *Start, Run\ServerName*.
3. Click *Printers* and *Faxes*.
4. Click *Add a Printer*.
5. Create a standard TCP/IP port for the printer.
6. Select *Have Disk* and point to the location where you copied the driver files.
7. Select the proper .inf file and install the printer drivers. Select *Name this Queue* with COLOR in the name. Share the printer and print a test page.
8. Create a second queue to the same printer using the preceding Steps 4, 6, and 7. Choosing the port created in Step 5, select *Name this Queue* with MONO in the name.
9. Run the *Dell ColorControl Tool* (available from Support.Dell.com—see instructions in the following section of this document). This tool lets an administrator set any Dell color printer queue as a mono queue. Set all queues as mono queues by choosing *Mono* on the drop-down menu and applying the *Lock out color* option.
10. By default, every user in the domain has access to both the MONO and COLOR printer queues. Make the following adjustments:
 - Leave everyone as a “Security Group” on the MONO queue
 - Remove everyone as a “Security Group” from the COLOR queue
 - Create a “Color Print Users Group”
 - Add the “Color Print Users Group” to the COLOR queue

11. When this is done, everyone can print in black and white to the MONO queue, while only users who are in the “Color Print Users Group” can print in color to the COLOR queue.

DOWNLOADING THE DELL COLOR CONTROL TOOL

Download the Dell *Color Control Tool* from Support.Dell.com. It is located in the *Dell Enterprise Imaging* solutions group under *Printers*.

1. Install the package; a new link appears on the Start menu for “mono.exe” under *Dell, Color Printers, Color Control Tool*. To run this program, the administrator must choose the print server type—either *Cluster print server* or *Local system* depending on the environment (Figure 6). If there is no cluster server, choose *Local system*.

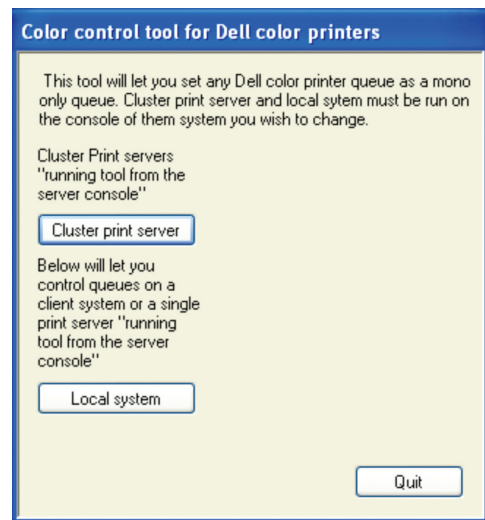


Figure 6. Color Control Tool screen

TAKE CONTROL OF OFFICE PRINTING WITH DELL COLORTRACK

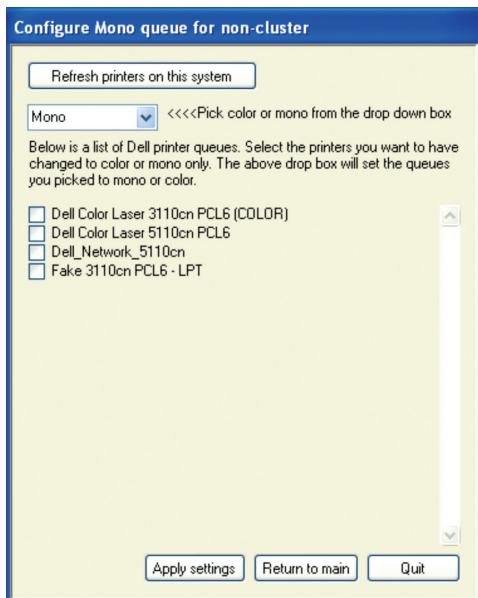


Figure 7. Configure Mono screen, non-cluster

2. After the print server type is chosen, a list appears showing all Dell color printer queues that have been installed on the server. To change privileges, click on the desired queue name. Select *Mono* or *Color* in the drop-down menu, and then click *Apply settings* (Figure 7).

3. In approximately one minute, all the queues will be updated and the new privileges will take effect. If the print server fails over to another server in the cluster, the Dell *Color Control Tool* settings will remain in effect.

AN EFFECTIVE COLOR MANAGEMENT SOLUTION

Dell's vision is to bring affordable color laser printing to businesses everywhere. An effective color management solution is integral to this vision. Dell ColorTrack technology is designed to help keep total cost of ownership low for businesses by enabling them to make informed decisions and take control of office printing. Dell printing consultants and technicians are ready to help organizations deploy and use Dell ColorTrack effectively.

FOR MORE INFORMATION

If you have questions or would like more information about Dell ColorTrack, contact your printer consultant or call the Dell advanced printer support queue (Imaging Life Support) at 1-888-603-4491. For general information, ask your Dell representative or visit **DELL.COM**.

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US Patent pending

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