Esko Proof Server 23

User Guide

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Contents

1. Fiery Command WorkStation overview

Fiery Command WorkStation is the print job management user interface for the Esko Proof Server.

Fiery Command WorkStation, the Esko Proof Server and Fiery Verify are powered by EFI, but part of the Esko proofing workflow.

With Command WorkStation, you can connect to multiple Esko Proof Servers and manage jobs from a single location.

You can use Command WorkStation to do tasks associated with production and proofing, such as:

- Scale, rotate, flip jobs
- Print multiple jobs collectively as a nesting
- Print oversize jobs as tiles for piecing together
- Verify the color accuracy of your printouts

Now watch the video *here*.

1.1. Learning materials

- You can find information about Fiery Command WorkStation, the Esko Proof Server and Fiery Verify in this manual.

  If you are migrating from an older version of the Esko Proof Server, please read the *Quick Start Guide* first.

  There are also additional EFI documents and videos, linked from relevant pages of this manual (see below).

- For more information about the **Esko proofing workflow**, please see the *Pack Proof documentation*.

- For more information about **color management**, please see the *Color Pilot documentation*.

  Additional EFI learning materials

- Videos

  EFI provides an extensive set of instructional and how-to videos designed to equip you with all the information that you will need to successfully operate your system. The courses start with the fundamentals and progress all the way through to expert topics.

  You will find direct links to many videos throughout this online help. Furthermore, a full list of all the available videos can be found at *learning.efi.com*. You can use the Search feature to find videos on any chosen topic.

- Documentation

  The following types of documents are available for download from the *EFI website*:

  - User documents (for example how-to articles on specific software features)
  - Knowledge base (general how-to articles on color management, software options, workflows)
  - Printer driver descriptions

1.2. Getting started with Fiery Command WorkStation

To create your first Esko Proof Server proofing workflow in Fiery Command WorkStation, follow the steps below.

1. Make sure that the Esko Proof Server is running. You can see this in *Esko Server Control*.

    By default, the Esko Proof Server is started automatically. If it is stopped, click the green play button in Esko Server Control, and wait a moment.

2. Launch Fiery Command WorkStation.

3. Connect Fiery Command WorkStation to your Esko Proof Server:

    a) Under **Welcome to Fiery Command WorkStation**, click **Add your first Fiery server**.

    b) In the **Add Fiery Server** pop-up, select an Esko Proof Server from the list, or type a server name or IP address. Then, click **Add**.

    The **Model** column indicates "Fiery XF", which means that you are connecting to an Esko Proof Server.

    Alternatively, click **Advanced Search** to search for an Esko Proof Server within a specific IP address range, within a specific subnet range, or to search for a keyword. Limit the search range of IP addresses as far as possible to avoid unnecessary network traffic.

    c) In the **Login** pop-up, select the user name given to you by your Esko representative, and type the corresponding password. Then, click **Login**.
    You should now be able to see the name of your Esko Proof Server in *Job Center*.

4. Add the proofing device connected to your Esko Proof Server:

    a) Click **Server > Server Manager** to open *Server Manager*.

    b) On the sidebar, click **Printers**, then click the **Add** (+) button.

    c) In the **New printer** pop-up, select your proofer's **Manufacturer** and **Type**. Enter a **Name** and (optionally) a **Description**.
    Click **Next.**

    d) Select how your Esko Proof Server is connected to your proofer in **Connection Type**.

    > **Note:** Make sure your proofer is switched on, otherwise it cannot be detected.

    • If the Esko Proof Server is connecting to the proofer through its IP address: select **Print via IP network**, enter the proofer's **IP Address** and select the type of **TCP/IP protocol** that it uses for data transfer.

    Most proofers support the RAW protocol and print to port 9100. Refer to your proofer manual or ask your system administrator if you are unsure.

    • If the Esko Proof Server is connecting to a local proofer through USB: select **Print via port** and select the **Port**.

    Click **Finish** when you are done.

5. Configure the media characteristics of your proofer:

> 📄 **Note:** By default, a **Generic** media is already defined, but we recommend you create your own.

a) Click the **+** button next to your proofer name to expand the proofer's **Media** and **Workflow** sections.

b) Click the **+** button next to **Media**. Then, type a unique name, and click **Save**.

c) Adjust the default settings as needed to reflect your proofer's characteristics, and click **Save**.

6. Configure a workflow for your Esko Proof Server.

> 📄 **Note:** By default, a **Generic** workflow is already defined, but we recommend you create your own.

a) Click the **+** button next to **Workflow**.

b) In the **Workflow templates** pop-up, select **Custom**, and either:

- **Esko Proofing workflow** (the default workflow for proofing)

- **High resolution Esko Proofing (screened)** (for proofing/printing high lpi screened files)

depending on the type of proofing you want to do.

c) Click **Load**.

d) Enter a **Name** and (optionally) a **Description** for your workflow, adjust the default settings as needed, and click **Save**.

7. You can now process jobs with your Esko Proof Server workflow.

To know how to send jobs to your Esko Proof Server workflow from Pack Proof's **Proof for Contract Approval** task in Automation Engine, please see the *Pack Proof documentation*.

To know how to send jobs to your Esko Proof Server workflow from Imaging Engine's **Proof for Content Approval** task in Automation Engine, please see the *Imaging Engine documentation*.

1.3. Job Center

Launching your Fiery Command WorkStation application opens Job Center. Job Center displays all connected Esko Proof Servers and print jobs in one single location. It allows you to prepare jobs for print, displays a job preview and a summary of job settings, and also includes a search tool.

> 📄 **Note:** If you have just connected to your first Esko Proof Server, you must start by configuring your printer. For more information, see *Getting started with Fiery Command WorkStation* on page 7.

Job Center includes the following areas:

- Sidebar: displays button navigation for the following screens (from the top, below the Fiery logo): Home, Job Center (this window), and Apps and Resources.

- Servers: displays a list of connected servers, printers, and job queues. Click the **Add** (+) button to connect to additional Esko Proof Servers. Click **Server > Server Manager** to configure printers, workflow and media.

- Job status: gives an overview of jobs that are currently being processed or printed.

- Search, Views and Filters: quickly locates jobs by any criteria displayed in the job columns. The advanced search finds jobs based on multiple criteria. You can save custom search filters, and change the window view to display thumbnail images of your jobs.
- Job list: displays all jobs for the selected queue, custom view, or filter. Right-click a column heading to customize the displayed job information. Right-click a job to access commands for job printing, or management, or to view details of ink and media consumption. Double-click a job to open Job Editor and make job settings.
- Job Preview: displays the job content (thumbnail) of a selected job. The preview shows the input content only and is not updated if you make layout changes in Job Editor.
- Job Summary: provides details of a selected job. Click the pencil icon to edit the number of copies.
- Media Configuration: displays the settings of the selected media. You can apply a different media to a selected job by clicking **Edit**. This setting can be very useful—for example, if you want to switch to a different output resolution at the last minute.
- Fiery Smart Search: provides a direct link to all content available on EFI Communities and in the online help. Fiery Smart Search is a convenient tool to help you find information related to any part of Command WorkStation. Click the magnifying glass located in the lower-left corner of the window to start your search.

1.3.1. Expand or collapse panes

You can expand or collapse the **Job Preview**, **Job Summary**, and **Servers** panes. You can also collapse the individual servers in the **Servers** pane.

Do one of the following:

- Click the arrow icon in the title bar of the **Job Preview** pane to expand or collapse the window.
- Click the plus sign or minus sign next to a server in the **Servers** list.
- To collapse the entire **Servers** pane to the left, click the arrow icon in the bottom-left bar.
- To collapse the entire **Job Summary** pane to the right, click the arrow icon in the bottom-right bar.

1.3.2. Commands for managing jobs in a queue

You can access commands for a job that is displayed in the Held, Processing, or Printed queues in Job Center.

You can display the following commands by right-clicking on a job in a queue or by clicking the **Actions** menu.

Print

Prints a selected job.

Print and Cut

Outputs a selected job to a print-and-cut device or to a cutter. This is not supported in an Esko Proof Server context.

Delete

Deletes a selected job.

Process and Hold

Processes a selected job from the Held or Printed lists and places them in the Held queue.

Preview

Updates the preview after you have made job changes in Job Editor

Edit

Opens Job Editor to allow you to make job settings before printing.

New Nesting

Creates a nesting from one or more selected jobs.

Copy to Printer

Copies a job to the queue of another printer of the same model. The destination printer must be pre-configured in Command WorkStation, otherwise it is not displayed in the **Copy to Printer** list.

Move to Printer

Moves a job to the queue of another printer of the same model. The destination printer must be pre-configured in Command WorkStation, otherwise it is not displayed in the **Move to Printer** list.

Job Details

Opens the **Job Details** window, which displays ink details, media details and printing time of jobs. Only applicable if your printer supports bidirectional communication.

Cancel

Cancels the selected jobs. Only applicable to jobs that are still showing in the Processing, or Printing queues.

1.3.3. Toolbar icons

The Job Center toolbar contains icons for importing, printing and deleting jobs, and for starting additionally available options.

Import

Opens the **Select Files to Import** window.

New Nesting

Creates a nesting of one or more selected jobs.

Print

Prints a selected job.

Print and Cut

Outputs a selected job to a print-and-cut device or to a cutter. This is not supported in an Esko Proof Server context.

Delete

Deletes a selected job.

Verifier

Starts Fiery Verify, a tool for verifying your measurements' color accuracy.

1.3.4. Job search

You can search for and locate jobs on a connected Esko Proof Server using such parameters as file name or date.

The Search function allows you to quickly locate jobs on the currently selected Esko Proof Server. It is part of the Job Center toolbar and applies to the jobs in the current view. You can search for jobs in the Held, Processing, Printing, Printed, or Finished queues.

You can search for jobs by doing one of the following:

- **Simple job search**—To search all the columns in the current view, even those that are not visible on the screen (because of the scroll bar), use the **Search** field. For example, if you type "Photo", you can find jobs that have "Photo" in their name, and also jobs that are printed on photo media.

- **Advanced job search**—To search by multiple criteria simultaneously, click the arrow next to the magnifying glass icon and click **Advanced Search**. The **Advanced Search** window displays the current set of columns and allows you to search for different words in different columns.

Do a simple job search

You can use the **Search** field in any view to find jobs. When you switch from one view to another, the previous search criteria are cleared.

1. Type your search criteria in the **Search** field.
2. Press ENTER, or click the magnifying glass icon.

   The search word is not case-sensitive.

   The search is conducted across all the columns in the current view, even if the columns are not visible on screen (because of the scroll bar).

When you have executed a search, you can clear the current search criteria by clicking **Clear**, or by switching to another view.

Do an advanced job search

You can use the **Advanced Search** function to search by multiple criteria simultaneously in the current view.

1. Click the arrow next to the magnifying glass icon and click **Advanced Search**.
2. Type your search criteria for specific columns, and click **OK**.

   You can save a view that displays all the jobs in all queues on the selected Esko Proof Server. In this case, click **OK** without typing any search criteria.

3. Save the search results as a filter (optional).
   a) Click **Save Search**.
   b) Type a descriptive name.
   c) Click **OK**.

   You can create up to ten custom views. To display a list of filtered search results, click the filter icon, and then click the name of a filter.

1.4. Job Editor

In Job Editor, you can override any default setting from the workflow, including scaling, cropping, print settings, job rotation, and job realignment.

You can open Job Editor by double-clicking a job in Job Center.

- Sidebar: displays button navigation for the following tabs: **File**, **Layout**, **Finishing**, **Printer**, **Verify**. Each tab is divided into panels, which you can expand to show the content, or collapse to hide the content.

- Panels: display job settings. Some panels have a check box in the panel header bar, which you must select to make the settings available.

- Preview window: Displays the work area for job editing.
- Toolbar: contains tools and settings for editing a selected job, nesting, step and repeat, or tiling.
- Scrollbar: allows you to scroll a page at a time through multipage jobs.
- Zoom: scales the job preview in relation to the preview window.

Now watch the video *here*.

1.5. Server Manager

Server Manager is where you perform system maintenance, configure printers. Click **Server > Server Manager** to open it.

- Sidebar: displays button navigation for the following screens: **Server**, **Printers**.

- **Server**: provides system maintenance settings.

- **Printers**: adds and configures printers, creates workflows, and selects media. The workflow settings you configure in Server Manager are saved as server workflows. You can apply a server workflow when you import a job.

Now watch the video *here*.

1.5.1. System maintenance

The **Server** tab contains settings to help you organize your Esko Proof Server system.

Server Info & Configuration

Provides general settings for Adobe print engines. Also allows you to select a preview resolution, and shows the number of processing threads, and the amount of free hard disk space.

Backup & Restore

Creates a system backup of the selected items.

Maintenance

Deletes output, preview, and temporary files created during job processing.

Server File Paths

Moves profiles and program files from their default installation location to a different partition.

File Uploader

Uploads color files and media profiles from an external data storage medium or from the desktop directly into the correct program folder.

2. Configuring Command WorkStation

You can tailor your Command WorkStation system to your work processes, by connecting to additional Esko Proof Servers, as well as adding and customizing workflows and media.

For more information on logging on and configuring Command WorkStation immediately after installation, see *Getting started with Fiery Command WorkStation* on page 7.

2.1. Log on to multiple Esko Proof Servers

After you have logged on to your first Esko Proof Server, you can manage jobs anywhere in your network, by connecting to other Esko Proof Servers.

All Esko Proof Servers to which you are connected are listed in Job Center. You can switch easily between them to manage your jobs and printers.

> **Note:** If the connection to the Esko Proof Server is disconnected, Command WorkStation attempts to reconnect automatically. To use the auto-reconnect feature, open the Command WorkStation **Preferences** window, and on the **General** tab under **Auto reconnect**, select **Enable Auto reconnect** to automatically reconnect to disconnected servers with saved passwords.

1. In Job Center: Next to **Servers**, click the **Add** (+) button.
2. Select any Esko Proof Server from the list, or type a server name or IP address. Then, click **Add**.

   The **Model** column indicates "Fiery XF", which means that you are connecting to an Esko Proof Server.

   Alternatively, click **Advanced Search** to search for an Esko Proof Server within a specific IP address range, within a specific subnet range, or to search for a keyword. Limit the search range of IP addresses as far as possible to avoid unnecessary network traffic.
3. Select your user name, and type your password. Then, click **Login**.

2.1.1. Remove an Esko Proof Server

You can disconnect from an Esko Proof Server.

   In Job Center: Right-click the Esko Proof Server, and then click **Remove Fiery server**.

You can reconnect at any time.

2.2. Add more printers

Before you begin: Download media profiles for the printers you want to add. See *Download and install media profiles* on page 84.

Each printer must have its own unique connection information. For example, two printers of the same model must have their own IP address, or save print files to a separate export folder.

1. In Server Manager: On the sidebar, click **Printers**, and click the **Add** (+) button.

   The **New Printer** dialog box opens.

2. Select a printer manufacturer.

3. Select a printer type.

4. Type a name for your printer (optional).

   This is the name that is displayed in the software. By default, Command WorkStation displays the printer type. You can overwrite the default name.

5. Add a description (optional).

   For example, you can enter the printer location, or the type of media inserted in the printer.

6. Click **Next**.

7. Configure the printer connection. Do one of the following:

   - *Configure a network printer* on page 15
   - *Configure a printer connected through USB* on page 15

   The printer must be switched on. Otherwise it cannot be detected.

8. Click **Finish**.

Now watch the video *here*.

2.2.1. Configure a network printer

You can connect to a printer through its IP address.

1. Under **Connection type**, select **Print via IP network**, and type the printer's **IP Address**.

2. Select the type of **TCP/IP protocol** that your printer uses for data transfer.

   Most printers support the RAW protocol and print to port 9100. The LPR protocol is normally reserved for Unix systems or print servers with multiple interfaces. In most cases, you can leave the box blank. Refer to your printer manual or ask your system administrator if you are unsure.

   📄 **Note:** EFI VUTEk printers communicate through port 8013.

2.2.2. Configure a printer connected through USB

You can print to a local printer that is connected to the server computer through USB.

1. Under **Connection type**, select **Print via port**.

2. Under **Port**, select the port.

2.3. Media and workflows

You can automate your work processes by configuring a media set for each of your media, and by configuring a workflow for each of your job processes.

- The media defines ink type, media (type, source, size), plus any printer-specific settings, such as white ink printing.

- The workflow defines basic job settings.

2.3.1. Configure media

You can create a new media, by creating a copy of an existing media, such as the generic media. You can also edit and rename media.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a media.
2. Do one of the following:
   - To create a new media: Click the **Add** (+) button next to **Media**. Then, type a unique name, and click **Save**.
   - To edit an existing media: Click the media.
   - To copy a media to a different printer of the same type: Right-click the media, click **Copy to Printer**, and then click a printer.

     > 📄 **Note:** You can copy media to a different printer model. However, make sure that you select a media configuration that is compatible.

   - To duplicate a media for use on the same printer: Right-click the media, and then click **Duplicate**.
   - To rename a media: Right-click the media, and click **Rename**. Then, type a unique name, and click **Save**.
3. Adjust the settings (optional).
4. Right-click the media, and click **Set as Default** (optional).

   The default media is pre-selected for all jobs that you import.

2.3.2. Configure workflows

You can create new workflows by selecting a template, or by creating a copy of an existing workflow, such as the generic workflow. You can also edit and rename workflows.

Command WorkStation provides the following default templates:

- **Esko Proofing Workflow**, which is the default workflow for proofing,

- **High resolution Esko Proofing (screened)**, for proofing/printing high lpi screened files (this gives a higher quality result but can be slower).

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow.

2. Do one of the following:

   - To create a new workflow: Click the **Add** (+) button next to **Workflow**. Then, select the type of workflow and the template that best matches your needs, and click **Load**.
   - To edit an existing workflow: Click the workflow.
   - To copy a workflow to a different printer: Right-click the workflow, click **Copy to Printer**, and then select a printer.
   - To move a workflow to a different printer: Right-click the workflow, click **Move to Printer**, and then select a printer.
   - To duplicate a workflow: Right-click the workflow, and then click **Duplicate**.
   - To rename a workflow: Right-click the workflow, and click **Rename**. Then, type a unique name, and click **Save**.

3. Adjust the settings (optional).

   You can customize the available settings of any workflow template.

4. Right-click the workflow, and click **Set as Default** (optional).

   The default workflow is pre-selected for all jobs that you import.

You can customize your workflows using the settings on the **File**, **Layout**, **Finishing**, and **Printer** tabs.

Save a custom workflow as a template
You can save a workflow as a template and select it for the next job.

1. Right-click the workflow, and click **Save as Template**.

2. Type a unique name.

3. Add a description (optional).

4. Click **Save**.

2.4. Set Command WorkStation preferences

You can set preferences globally for Command WorkStation—for example, to reset the application settings to their original defaults.

1. To open the **Preferences** window:

   - On a Windows computer, click **Edit** > **Preferences**.
   - On a Mac OS computer, click **Command WorkStation** > **Preferences**.

2. Under **General**, specify any of these general setting preferences:

   - **Auto reconnect** - Select **Enable Auto reconnect** to automatically reconnect to disconnected servers with saved passwords.
   - **Updates** - This is not applicable when working with an Esko Proof Server. New versions are released following the Esko release schedule.
   - **Reset settings** - Click **Reset** to restore application settings to their original defaults.

> **Note:** Esko Proof Servers that have been added will be retained in the Servers list, along with their passwords.

- **Clear data** - Click **Clear data** to clear saved passwords, for all users and all servers that Command WorkStation has saved passwords.
- **Improvement program** - To help EFI improve the quality, reliability, and performance of the software by sending anonymous usage data but not your name, address, or any other personally identifiable information, click the relevant check box.

3. Under **Region**, specify any of these regional setting preferences:

- **Language** - Select the language you want to display Command WorkStation. By default, Command WorkStation uses the local operating system language, if the language is supported. If the language is not supported, Command WorkStation defaults to English.

> **Note:** Changing the language of Command WorkStation will also apply to hot folders, and vice versa, if installed on the same client.

- **Measurement units** - Specify the units of measurement used to display attributes, such as page sizes and custom sizes. This setting does not affect predefined page-size values.

4. Under **Export**, you can share settings with another Command WorkStation client.

- **Import** - Click **Import** to import Command WorkStation settings from another computer.
- **Export** - Click **Export** to export Command WorkStation settings to a zip file, which can be used to set up other Command WorkStation clients.

5. Click **OK** to save and close the **Preferences** window.

3. Job import

Command WorkStation supports many different file formats which you can import in a variety of ways.

Command WorkStation supports the following file formats:

- PostScript, EPS
- PDF
- TIFF
- JPEG, JPEG2000
- RAW
- RTL

Files in all other formats may be imported, but cannot be processed.

You can import jobs as follows:

- Directly in the Job Center window
- Through a hot folder
- By configuring a virtual printer
- By sending them through Automation Engine (using *Pack Proof*'s **Proof for Contract Approval** task or *Imaging Engine*'s **Proof for Content Approval** task)

If your job input file...	then you can send it...
only contains inks present in your printer's *EPL file* (typically your printer's inks, except special inks like white)	using any of the methods mentioned above
contains spot colors	only through Pack Proof's **Proof for Contract Approval** task (as the color management happens in Pack Proof, using a color strategy created in Color Pilot)

Now watch the video *here*.

3.1. Import jobs directly into Job Center

You can import individual jobs, or you can select multiple jobs and import them as a nesting.

1. In Job Center, in the toolbar, click **Import**.
2. Browse to your job, and click **Open**.

   The **Import Files** dialog box opens.
3. Click the **Add** (+) button to import more than one job (optional).

   If you import multiple jobs, you can sort the order in which they are listed, by selecting a job and then clicking the up/down arrows.
4. Select a printer.
5. Select a workflow.

- **Apply default workflow**—Processes jobs using the settings of the workflow and media that are set to be used by default.
- **Apply server workflow**—Allows you to select any of the printer's available workflows or media.

6. Select **Nest all jobs** (optional).

   This setting imports all the listed jobs as a nesting. Alternatively, you can create a nesting later in Job Center from individually imported jobs.

7. Select an import method.

   - **Hold**—Allows you to edit held jobs before printing. Imported jobs receive the status "Spooled".
   - **Process and Hold**—Processes jobs on import, but does not print them. Imported jobs receive the status "Processed". You can start printing manually.
   - **Print**—Imports, processes, and prints jobs automatically. Imported jobs receive the status "Printed". If you need to edit jobs, you must cancel job processing first.

Jobs are imported into Command WorkStation and listed in Job Center.

3.1.1. Process jobs automatically on import

By default, jobs are imported as "hold" jobs to allow you to edit them before printing. You can configure the workflow to process jobs automatically on import.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **Job Detection** panel.

2. Clear **Put all incoming jobs on hold**.

3. Click **Save**.

> **Note:**
>
> If you are sending jobs from Automation Engine (from Pack Proof's **Proof for Contract Approval** task, or Imaging Engine's **Proof for Content Approval** task), you can override this setting when submitting the job.
>
> In your task's **Proofer** tab, select what to do in the **Submit Method** option. You can:
>
> - keep the setting as it is in Fiery Command WorkStation (select **Default from Proof Workflow**),
>
> - put the job on hold regardless of the Command WorkStation setting (select **Hold in Proof queue**),
>
> - print the job regardless of the Command WorkStation setting (select **Print**).
>
> See the *Pack Proof* or *Imaging Engine* documentation for more information.

3.2. Hot folders and virtual printers

Hot folders and virtual printers enable multiple users to print to Command WorkStation, even if they do not have Command WorkStation installed on their computer.

You can print jobs through a hot folder as follows:

- You can copy jobs manually into a hot folder.
- You can configure a virtual printer to make the Esko Proof Server selectable in the print menu of the graphics program. Jobs sent through a virtual printer are imported into Command WorkStation through a hot folder.

Normally, each hot folder is configured to be monitored by just one workflow. Command WorkStation imports jobs from the hot folder and processes them according to the workflow settings. However, you can also configure a hot folder to be monitored by multiple workflows or printers, by applying load balancing. In this case, jobs in the hot folder are diverted automatically to the first idle workflow or printer that becomes available.

Now watch the video *here*.

3.2.1. Configure hot folders

A hot folder enables users to copy print jobs to a centrally available folder for printing. Network access rights are required to print through a hot folder.

A hot folder can be located on the same computer as the Esko Proof Server or acessed through the network. On a local hard disk, it is recommended that you make your hot folder a subfolder of a folder at root level—for example, `C:\folder\hotfolder`.

Note the following:

- To avoid unnecessary read/write access problems, do not create a hot folder on the desktop.
- Do not select a folder that has been mapped as an internal link.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **Job Detection** panel.
2. Under **Hot folder**, click **Choose** and browse to the folder that you want to use as a hot folder.
3. Clear **Put all incoming jobs on hold** (optional).

   By default, imported jobs are imported as "hold" jobs to allow you to edit them before printing. Clear this check box if you want to print jobs automatically on import.
4. Click **Save**.

You must now do the following:

- Make sure the hot folder is configured for printer sharing in the operating system. Otherwise, the hot folder cannot be detected in the network.

- If the hot folder and the Esko Proof Server are installed on different computers, make sure that all Windows computers are configured with the same login credentials, and that all users have administrator rights. You may need to create a new user on both computers.

For more information, see the operating system's online help, or ask your system administrator.

3.2.2. Configure virtual printers

A virtual printer enables you to print to Command WorkStation through the print command of the graphics program.

Before you begin:

- Make sure that you have already configured a hot folder.

- Make sure that Command WorkStation is started. Otherwise, the printer is not listed in the print dialog box of the graphics program.

Settings you make in the print dialog box, such as the number of printed copies, overwrite the equivalent setting in Command WorkStation.

1. In Server Manager: On the sidebar, click **Printers**, and select the printer. In the printer's tree view, select the workflow for which you previously configured a hot folder. On the **File** tab, expand the **Job Detection** panel.

2. Select **Create virtual printer**.

3. Type a printer name.

   This is the name that appears in the print dialog box of the graphics program. You can use the default printer name, or you can type a custom printer name. If you type a custom printer name, it is recommended that you do not use a name that contains special characters.

You must now do the following:

- Make sure the virtual printer is configured for printer sharing in the operating system. Otherwise, the virtual printer cannot be detected in the network.

- If the Esko Proof Server and the graphics program are installed on different computers, add the virtual printer as a new printer.

For more information, see the operating system's online help, or ask your system administrator.

4. Configure print settings

You can select the number of copies and the order in which they are printed. You can also define a criterion for processing jobs that are too big to fit on the media.

In the **Job Summary** area of Job Center you can edit the number of copies and make media settings. Server Manager and Job Editor provide additional settings for sorting the print order.

You can also output job separations. For more information, see *Print separated jobs* on page 24.

1. Do one of the following:
   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Printer** tab, expand the **Print Settings** panel.
   - In Job Editor: On the **Printer** tab, expand the **Print Settings** panel.

2. Select a number of copies between 1 and 9999.

   One copy means one copy of the whole job (single-page, multi-page or nesting). If you print more than one copy, you can select a sort order.

   > 📄 **Note:**
   >
   > You can also specify the number of print copies in the **Job Summary** area of Job Center.

3. Under **Pages**, select whether you want to print all the pages of the job, or even or odd pages only.

4. Select **Print jobs that exceed the printable area** (optional).

   By default, Command WorkStation prints jobs in their original size, and cancels job processing if the job is too big to fit fully on the media. If you select this check box, oversized jobs are printed, but the image is clipped in the output. To print without clipping, scale the job, or select a larger media size for the printer.

5. Select **Sort copies** (optional).

   The default order for printing three copies of a three-page job is 1, 1, 1, 2, 2, 2, 3, 3, 3. Sorted copies are printed in the order 1, 2, 3, 1, 2, 3, 1, 2, 3.

6. Select **Reverse order** (optional).

   The default order for printing three copies of non-sorted three-page job in reverse order is 3, 3, 3, 2, 2, 2, 1, 1, 1. Sorted copies are printed in the order 3, 2, 1, 3, 2, 1, 3, 2, 1.

7. Click **Save**.

4.1. Start printing

You must start the print process manually for jobs imported as "Hold" jobs, or those imported through a hot folder or virtual printer.

Before you begin, make sure that media is loaded in the printer and the printer is switched on.

Do one of the following:

- In Job Center: Select the job. Then, in the toolbar, click **Print**.

- In Job Editor: Click **File > Print**.

4.2. Cancel job processing

You can cancel job processing—for example, if you need to make job edits before printing. Afterwards, you must start the print process manually.

In Job Center: Right-click the job, and click **Cancel**.

4.3. Print separated jobs

You can print each ink color as a separate job. For example, a job composed of CMYK inks will print four pages. Each separation will print only those areas that contain the particular ink color.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Printer** tab, expand the **Print Settings** panel.
2. Click **Advanced Settings**.
3. Under **Separations**, select an item:
   - **Merge separations**—Prints jobs as traditional full-color output. This is the default setting.
   - **Color separations**—Forces jobs to be printed one color at a time. When printed on transparent media, the individual sheets can placed one on top of the other to create a traditional proof.
   - **Grayed separations**—Prints each ink channel separately, but as grayscale output.
4. Click **OK**.

5. PostScript and PDF jobs

Command WorkStation uses the Adobe PostScript Engine (also known as Configurable PostScript Interpreter or CPSI) and the Adobe PDF Print Engine to process PostScript and PDF jobs.

CPSI does the following:

- It processes PostScript level jobs and PDF jobs with up to 127 separations. During job processing, PDF jobs are converted to PostScript format.

- It does not support native ICC profiles and ICC profile tagging in PDF objects.

Adobe PDF Print Engine does the following:

- Windows 64 bit computers: It processes PDF jobs with up to 127 separations.

- It supports native ICC profiles and ICC profile tagging in PDF objects.

- It processes composite jobs quicker than CPSI.

You can speed up job processing by increasing the number of Adobe print engines that are used.

Now watch the video *here*.

5.1. Switch to a different print engine

You can switch to a different PDF or image EPS/PDF print engine. The image EPS/PDF print engine determines whether jobs are output with the internal EFI module or with CPSI.

1. Do one of the following:
    - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **PS/EPS/PDF** panel.
    - In Job Editor: On the **File** tab, expand the **PS/EPS/PDF** panel.
2. Under **PDF print engine**, select **Adobe PostScript 3 Engine** or **Adobe PDF Print Engine**.
3. Under **Image EPS/PDF print engine**, select an item.
    - **Native**—Outputs a single EPS image, but not the surrounding PDF frame. This provides quicker processing and better output quality since, if the image is an RGB image, Command WorkStation applies the selected source profile. This feature is mainly for users who print directly from Photoshop.
    - **Adobe PostScript 3 Engine**—Outputs a job with the surrounding PDF frame. Command WorkStation applies this setting automatically if the job contains more than one EPS image.
4. Click **Save**.

5.2. EPS job detection

Special settings are available to ensure that your EPS jobs are output correctly.

You can change the following:

- The length of time that Command WorkStation waits to receive all job separations

  By default, when you load a separated job, Command WorkStation waits five seconds before assuming that the job is complete. However, large-volume, separated EPS jobs may require more time to process all color separations as one job. Conversely, composite jobs require less time.

- The default input resolution

  Occasionally, Command WorkStation has difficulty correctly extracting and interpreting the resolution of incoming PS and PDF files. Rounding down errors may cause a white edge along the right and bottom edges of images because of missing pixels. The problem occurs only in step-and-repeats, where a thin white line may be visible between images, even though no spacing is defined. Changing the default input resolution corrects the problem.

5.2.1. Set a time lapse for EPS job detection or change the input resolution

You can specify how long Command WorkStation waits to receive all job separations. You can also change the default input resolution to correct a rendering error that may cause a thin white line to appear between step-and-repeat images.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **PS/EPS/PDF** panel.
   - In Job Editor: On the **File** tab, expand the **PS/EPS/PDF** panel.

2. Do one of the following:

   - Under **Waiting time for job completion**, type the number of seconds that Command WorkStation waits to receive color separations for each job.
   - Under **Default resolution**, type an input resolution value of between 1 dpi and 720 dpi.

3. Click **Save**.

5.3. In–RIP separation

In–RIP separations are spot colors that have been defined in an external RIP or in a graphics program and saved as a single job.

PostScript files with in-RIP separations normally require a special PostScript command to interpret the in-RIP information correctly. PostScript Level 3 printers support in-RIP separations, but PostScript level 2 printers do not.

By default, jobs with in-RIP separations are output as follows:

- PostScript jobs created for a PostScript level 3 printer are output separated if the printer support in-RIP separation. If the printer does not support in-RIP separation, the job is output composite.

- PostScript jobs created for a PostScript level 2 printer are always output composite, because spot color separations cannot be correctly interpreted.

Forcing in-RIP separation makes sure that the in-RIP information from the graphics program is processed, even if the special PostScript command is missing, and regardless of the type of PostScript printer that created the file.

5.3.1. Set how Command WorkStation processes in-RIP information

You can output in-RIP information as separated files, or convert in-RIP information to the color space of the output device and print it as a composite job.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **PS/EPS/PDF** panel.
   - In Job Editor: On the **File** tab, expand the **PS/EPS/PDF** panel.

2. Under **In-RIP separation**, select an item.

   - **Enable**—Prints PDF jobs with in-RIP separations as separated files (C, M, Y, K, plus spot colors). Jobs with no in-RIP information are printed composite (CMYK).
   - **Disable**—Ignores in-RIP information. PDF jobs are printed composite (CMYK). Pre-separated files are always printed separated, even though they do not contain in-RIP information.
   - **Force**—Applies in-RIP information to PostScript level 3 and PostScript level 2 jobs, as well as to PDFs created with older versions of Adobe Acrobat.

3. Click **Save**.

5.4. Page box definitions

Command WorkStation defines PDF page size by the media box, bleed box, trim box, crop box, and art box. For PostScript jobs, Command WorkStation can retrieve and process bounding box information.

A PDF can have up to five different descriptions relating to page size:

- **Media box**—Prints PDF jobs with in-RIP separations as separated files (CMYK, plus spot colors). Jobs with no in-RIP information are simply printed composite (CMYK).
- **Bleed box**—Defines the area to which the contents of the page must be clipped when output in a production environment.
- **Trim box**—Defines the intended dimensions of the finished page after trimming. Imposition applications use this type of box for arranging the order of pages.
- **Crop box**—Defines the area to which page contents must be clipped when displayed or printed.
- **Art box**—Defines an area on a page that is of special interest.

For PostScript jobs, the bounding box information is not always exact, due to rounding up or down errors that can occur when printing from some graphics programs. Such inaccuracies can result in image distortion in the printout. Command WorkStation can ignore the page size information of such jobs and calculate the page size internally.

5.4.1. Specify a page box

You can specify which page size information Command WorkStation reads out of PDF jobs. You can also instruct Command WorkStation to override the bounding box information of PostScript jobs, which can be inaccurate.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **PS/EPS/PDF** panel.
   - In Job Editor: On the **File** tab, expand the **PS/EPS/PDF** panel.

2. Under **Size definition**, select an item:

   - For PDF jobs: Select an appropriate page size definition.
   - For PostScript jobs: Select **Calculate page size**.

     This process is slower than extracting the bounding box information from the job, but the result is more accurate.

3. Click **Save**.

5.5. Working color space

The working color space determines which source profile is applied to a PDF job.

For PDF jobs that contain mainly RGB images, applying the RGB color space ensures that you achieve the best possible color quality. You must use CMYK as the working color space in proofing workflows.

5.5.1. Apply a working color space

You can improve color quality by applying a working color space that is appropriate for the image content of your PDF jobs.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **PS/EPS/PDF** panel.
   - In Job Editor: On the **File** tab, expand the **PS/EPS/PDF** panel.

2. Under **Working color space**, select **CMYK**.

3. Click **Save**.

5.6. Overprinting in composite jobs

Intentionally printing one layer of ink on top of another is known as overprinting. Overprinting is sometimes used to avoid the need for trapping and to prevent gaps from appearing between colors.

A printing press prints each ink color one at a time—each printing plate is made up of components of one color only. Color-separated files are created in Cyan, Magenta, Yellow, Black, plus any spot colors.

It is not possible to print overlapping colors from a composite job because overlapping colors will not print on top of each other. However, Command WorkStation can simulate the effect of overprinting.

5.6.1. Simulate overprinting in composite jobs

You can simulate overprinting in composite jobs. Command WorkStation cannot simulate overprinting in separated jobs.

1. Do one of the following:
   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **PS/EPS/PDF** panel.
   - In Job Editor: On the **File** tab, expand the **PS/EPS/PDF** panel.
2. Select **Simulate overprinting in composite jobs**.
3. Click **Save**.

5.7. Manage non-embedded fonts in PDF jobs

You can force Command WorkStation to stop job processing when it detects non-embedded fonts to allow you to embed missing fonts.

By default, Command WorkStation prints jobs that contain non-embedded fonts, but replaces the missing fonts with Courier. Non-embedded fonts are listed on the **Warning/Error** panel of the **File** tab.

1. Do one of the following:
   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **PS/EPS/PDF** panel.
   - In Job Editor: On the **File** tab, expand the **PS/EPS/PDF** panel.
2. Select **Stop job processing if font is missing**.
3. Click **Save**.

After embedding missing fonts, you must reload the job before printing.

5.8. Ignore the transparency blending color space in PDF jobs

The transparency blending color space is used to display flattened artwork. If your transparency jobs display artifacts in the printout, this may be caused by an unsuitable transparency blending color space selected in the graphics program. You can often resolve the problem by forcing Command WorkStation to ignore the transparency blending color space.

1. Do one of the following:
   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **PS/EPS/PDF** panel.
   - In Job Editor: On the **File** tab, expand the **PS/EPS/PDF** panel.

2. Select **Ignore transparency blending color space from file**.

3. Click **Save**.

4. Reprint the job.

When **Ignore transparency blending color space from file** is selected, Adobe PostScript Print Engine uses its own transparency blending color space, based on the source profile.

5.9. Load multi-page PDF jobs as single-pages

You can load a multi-page PDF job as single pages and make individual job settings to each page. If you do not load multi-page PDF jobs as single pages, job settings are applied uniformly to all pages.

1. Do one of the following:

   • In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **PS/EPS/PDF** panel.

   • In Job Editor: On the **File** tab, expand the **PS/EPS/PDF** panel.

2. Select **Divide multi-page PDF files into single page jobs**.

3. Click **Save**.

6. Editing jobs

In Job Editor, you can scale, crop, rotate, flip, and realign jobs. You can save your job edits as a new workflow.

Visual aids are available in the preview window to help you position jobs exactly.

You can also raise the priority of a job to print it sooner.

> **Note:** All job edits, including print settings, override the default settings from the workflow.

6.1. Rotate a job

You can rotate jobs by 90, 180, or 270 degrees.

1. On the toolbar, select the **Transform Job** tool.
2. Do one of the following:
   - On the toolbar, under **Rotate & Flip**, select an angle of rotation.
   - Rest the pointer near, but not directly on, a page corner until the pointer changes into an arrowed circle. Then, drag in the direction you want to rotate. The job snaps to the nearest angle of rotation that is a multiple of 90.

6.1.1. Rotate jobs to reduce media consumption

Command WorkStation can rotate single jobs automatically if doing so will reduce media wastage.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Layout** tab, expand the **Layout Options** panel.
2. Under **Rotate job**, select **Minimal media consumption**.

6.2. Flip a job

You can flip a job along its horizontal or vertical axis.

1. On the Job Editor toolbar, select the **Transform Job** tool.
2. On the toolbar, under **Rotate & Flip**, click **Flip Horizontally** or **Flip Vertically**.

6.3. Scale a job

You can scale jobs by a percentage, by typing new dimensions, or by dragging. You can also scale jobs to the media width or height.

Jobs that do not fit on the media are indicated by a red border. To print oversize jobs, you must either scale them down, or print them as tilings.

By default, scaled jobs retain their original proportions. You can deactivate proportional scaling by clicking the **Scale Proportionally** button in the toolbar.

1. On the Job Editor toolbar, select the **Transform Job** tool.

2. Do one of the following:

- Scale freely: Rest the pointer on a corner of the job. The pointer changes into a double-headed arrow. Drag the job to the required size.
- Scale by entering dimensions: In the toolbar, under **Scale**, type a width and height.
- Scale by a percentage: In the toolbar, under **Scale**, select %, and type a percentage in the width or height box.
- Scale nested jobs uniformly: On the sidebar, click **Layout**, and open the **Nesting** panel. Then, select **Uniform scaling**, type a width and height, and click **Apply**.
- Scale to media size: Right-click the job, click **Scale**, click **Fit to**, and click an item. You can scale a job to the sheet width, the sheet height (not available for roll media), or to the page size. When you scale to page size, the job is scaled to the printable width or height of the media, whichever is reached first.

You can return a job to its original size by right-clicking the job, and then clicking **Reset Page**.

6.4. Align a job on the sheet

You can align a job to the sheet edge, or you can reposition a job by adding margins, by typing x/y coordinates, or by dragging.

By default, the job is positioned in the top, left-hand corner of the sheet, while taking the printer margins into account.

1. On the toolbar, select the **Transform Job** tool.

2. Do one of the following:

- On the toolbar, under **Position**, type x/y coordinates for the top, left-hand corner of the page.

  By default, Job Editor displays the x/y coordinates of the printer's non-printable left and top margins. You can make Job Editor ignore the printer margins by typing x/y values of "0".
- On the toolbar, under **Align**, click a horizontal and vertical alignment type.

  Bottom alignment is not available for roll media.
- On the toolbar, under **Margin**, type a top, bottom, left, or right margin width.

  You can apply identical margins to all four sides by clicking the appropriate button, and defining a top margin only.

6.5. Crop a job

You can enhance the focal point of an image, by removing distracting background elements around it.

If the job has crop marks, Command WorkStation reapplies them to the smaller, newly cropped area.

1. On the toolbar, select the **Crop Job** tool.
2. In the preview, drag the pointer to select the section that you want to crop.

    You can cancel the selected cropped area by pressing ESC.
3. Fine-tune the selected section (optional), by doing any of the following:

    -   Reposition the crop box: Hold down ALT, and drag the pointer from the center of the crop box.
    -   Resize the crop box: Drag the edge of the crop box.
    -   Adjust the size of the cropped area: In the toolbar, type new values in the **Scale** boxes.
    -   Adjust the margin widths between the edge of the job and the crop box: In the toolbar, type new values in the **Margin (offset)** boxes.
4. Press ENTER.

    You can return a cropped job to its original state by clicking the **Reset Crop** button in the toolbar.

6.6. Undo job edits

You can discard all the job edits that you have made since the last time you saved your work.

Do one of the following:

-   Click **Edit > Discard**.
-   Right-click the job, and then click **Reset Page**.

6.7. Save job settings as a workflow

Saving your current job settings as a workflow can save you considerable time if you need to apply the same group of settings to multiple jobs.

For example, if you have received a customer order consisting of multiple jobs that all require the same extensive editing, you can save the final settings of the first job as a new workflow. Then, when you import subsequent jobs into Command WorkStation, you can quickly and easily apply the same settings by selecting that workflow.

1. In Job Editor: Click **Save**.

    > **Note:**
    >
    > Unsaved job settings are discarded when you create a workflow.

2. Click **File > Save as Workflow**.

3. Type a workflow name, and click **Save**.

   The saved workflow is automatically associated with the currently selected media. It is available for selection when you load a new job.

6.8. Visual aids

Visual aids are available in Job Editor to help with job alignment on the sheet.

Visual aids are visible only in the preview window. They are not printed with the job. The following visual aids are available:

- Rulers—Displays rulers along the top and left edges of the preview.
- Guides—Are non-printable lines. You can activate snapping for guides and lock them at their current position.
- Grid—Displays horizontal and vertical lines that do not print. The grid spacing is fixed, but adapts automatically according to the selected zoom factor. Activating snapping causes nearby jobs to snap to the grid.
- Marks—Hides crop marks or cut marks. The job's position on the sheet does not change.
- Page frame—Displays a black border around each job. This helps you to see whether a job has white space around it that is overlapping other jobs in a nesting.
- Overlaps—Display jobs that are overlapping the sheet border or overlapping other jobs. Overlapping jobs appear with a red border.
- Sheet margins—Displays the non-printable margins as defined by the printer's firmware. By ensuring that jobs are within the non-printable margins, you can avoid unwanted cropping in the printout.

6.8.1. Show visual aids

You can show or hide visual aids in the preview window.

   Click **View** > **Visual Aids**, and then click an item.

6.8.2. Change the unit of measurement

You can temporarily change the unit of measurement displayed in Job Editor. When you close the window, Job Editor goes back to the unit of measurement that is selected for Command WorkStation.

   Do one of the following:

- Click **Edit > Measurement Unit**, and click an item.
- Right-click anywhere on the ruler, and click an item.

6.8.3. Zoom in

Increasing the size of a previewed job can help you make more accurate changes.

Each time you zoom in, the size of the preview increases by 100%.

Do one of the following:

- On the toolbar, select the **Zoom Job** tool, and click the area of the job that you want to enlarge.
- Click **View > Zoom in**.
- On the lower toolbar, type a zoom factor in the edit box, or move the slide bar. These zoom settings scale the job preview in relation to the preview window.

6.8.4. Turn on snapping

You can give some visual aids a magnetic property, which causes jobs in their proximity to snap to them. You can turn snapping on or off for grids or guides. In nestings, you can also make objects snap to each other.

Click **View** > **Snap to**, and then click an item.

6.8.5. Set ruler coordinates

By default, the ruler's 0, 0 coordinates are located at the upper left corner of the sheet. You can move the 0, 0 coordinates—for example, to the corner of a job.

Drag the pointer from the top left corner of the ruler area to the required position.

You can reset the 0, 0 coordinates by double-clicking the ruler intersection area.

6.8.6. Work with guides

Guides are non-printable lines that help you to position jobs at exact coordinates on the sheet. You can lock guides at their current position.

Do any of the following:

- Create a guide: Drag the pointer from the horizontal or vertical ruler.
- Move a guide: Drag the guide to a new position.
- Remove a guide: Drag horizontal guides to the horizontal ruler and vertical guides to the vertical ruler.

6.9. Raise a job's priority

You can raise the priority of a job to send it to the front of its workflow's print queue.

- In Job Editor, go to **File** > **Print Next** raise the priority of the current job.

This sends it to the front of the print queue, so if more than one job is printing to the same workflow, a high-priority job will be output before jobs with a lower priority.

However, jobs already being processed will be completed first.

7. Job labels

You can use a job label to verify color accuracy between two printouts, or to record job-specific information.

A job label contains selectable information about the job, such as document name, printer name, and used profiles.

Now watch the video *here*.

7.1. Create or edit job labels

A job label can include an image and up to six lines of job-specific information. You can select what information to display in the job label. You can also replace the default Esko logo with any JPEG or TIFF image.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Layout** tab, expand the **Job Label** panel. In the panel header bar, select the check box to activate the settings.
   - In Job Editor: On the **Layout** tab, expand the **Job Label** panel. In the panel header bar, select the check box to activate the settings.

2. Do one of the following:

   - Single jobs: Select **Page**.
   - Jobs with multiple pages (nesting, step & repeat): Select **Collection** to create one job label for the whole job, or select **Page** to create a job label for each page. Jobs consisting of multiple pages can have both types of job label.

3. Click **Edit** (optional).

   Job Label Editor allows you to review or edit the default job label settings (see the following steps).

4. Click **Upload** and browse to an image file. If you do not want to include an image, select **None**.

   The maximum image size is 5 x 5 cm (2.54 x 2.54 inches). If the image exceeds these dimensions, Command WorkStation scales it proportionally so that either the width or the height is reduced to 5 cm. Images smaller than 5 x 5 cm appear in their original size.

5. Select the required check boxes to specify the content of lines 1 to 6.

   Line 6 has room for custom text.

6. Click **OK**.

7.2. Realign the job label

You can change the vertical distance between job label and the bottom edge of the job or nesting.

1. Do one of the following:

- In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Layout** tab, expand the **Job Label** panel. In the panel header bar, select the check box to activate the settings.
- In Job Editor: On the **Layout** tab, expand the **Job Label** panel. In the panel header bar, select the check box to activate the settings.

2. On the **Page** or **Collection** tab, type a **Vertical distance**.

7.3. Adjust the size of the job label

You can change the dimensions and font size of the job-specific information displayed in the job label.

The job label has the following default properties:

- Width—Page width

- Height—Max. 5 cm (2.54 inches). If job-specific information can be displayed in less than 5 cm, you can reduce the height to prevent unwanted white space.

- Font size—6 pt. You can select any font size between 6 pt and 72 pt.

1. Do one of the following:
   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Layout** tab, expand the **Job Label** panel. In the panel header bar, select the check box to activate the settings.
   - In Job Editor: On the **Layout** tab, expand the **Job Label** panel. In the panel header bar, select the check box to activate the settings.

2. Type a maximum width and height for the job label.

3. Type a font size.

8. Nesting

The nesting feature outputs multiple jobs collectively as a single job. Command WorkStation arranges nested pages in a space-saving manner to reduce media waste.

You can:

- Configure Command WorkStation so that all jobs are automatically imported into a nesting. Command WorkStation applies uniform orientation and scaling settings to all nested pages, and prints the nesting when a defined criterion has been met.

- Create a nesting from selected jobs that are already loaded in Job Center. Manual nestings allow you to make job settings to each nested job, such as scaling, and cropping, or to apply color adjustments before printing.

Nestings can be difficult to manage if the printer is configured for oversize media or roll media. If this is the case, consider defining a custom media format for nestings.

> **Note:**
>
> You cannot *verify* nested jobs as it is not possible to use different verification strips for different jobs in your nesting.
>
> If you try to submit a job with verification to a proof-workflow with nesting activated, the task will end in error.

8.1. Nest all jobs

You can configure a workflow to create a nesting automatically when a specified criterion has been met. When one nesting has been created, all subsequent jobs become part of the next nesting.

Command WorkStation can create a nesting:

- When sufficient jobs have been loaded to fill a certain percentage of the sheet or line.

> **Note:** You can define a custom media format that is smaller than the media format inserted in the printer. This can be useful if you are printing on roll media and want to create a nesting when a certain percentage of the sheet is full.

- When a specified period of time has elapsed since the last job was loaded.

> **Note:** Workflow settings override job settings. For example, if you configure the workflow for uniform page scaling, you cannot apply a different scaling factor to an individual nested job.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Layout** tab, expand the **Nesting** panel. In the panel header bar, select the check box to activate the settings.
2. Define the criterion for creating a nesting.

   Command WorkStation always creates and processes the nesting after a specified time period has elapsed, even if the minimum percentage of sheet or line cannot be filled.

3. Under **Optimization** and **Orientation**, define how jobs are arranged on the sheet.

    You can arrange nested jobs to take up as little space as possible on the sheet, or you can arrange them so that, after printing, they can be cut out using as few straight horizontal or vertical cuts as possible.

    You can further reduce media wastage by allowing jobs to be rotated to make better use of the available space on the sheet. Alternatively, you can nest all jobs in their original orientation, or apply portrait or landscape format to all.

4. Under **Uniform scaling**, select the check box, and then type a width and height to scale all pages to the same size (optional).

5. Under **Spacing**, type a horizontal and vertical distance between pages (optional).

    This setting takes job labels into account.

6. Under **Space around jobs (picture mount)**, type a border width for each edge (optional).

    This setting takes non-printable margins into account.

8.1.1. Force nestings to print

Command WorkStation places nesting jobs in the state **Waiting to Nest** until a specified time period has elapsed, or until the minimum percentage of sheet or line can been filled. You can force jobs in this state to be printed before the specified criterion has been reached.

In Job Center: Right-click a job that is in the state **Waiting to Nest**, and click **Force Nesting**. The nesting is created.

8.2. Nest selected jobs

You can create a nesting from jobs that are already loaded in Job Center.

You can nest multiple copies of a job (clones) by selecting the number of print copies in the job summary area before you create the nesting.

1. In Job Center: Select one or more jobs. In the toolbar, click **New Nesting**.

2. Double-click the nesting to make job-specific settings to a nested job (optional).

    In Job Editor, you can scale, rotate, flip or crop nested jobs using the toolbar buttons. You can also align jobs in relation to each other, define margins, or lock a job in an exact position on the sheet by entering coordinates.

    > **Note:**
    >
    > Command WorkStation cannot process nestings that contain jobs that cause an error message—for example, jobs with unknown spot colors. You must resolve the problem, or remove the jobs from the nesting.

Now watch the video *here*.

8.3. Add, remove or delete nested jobs

When you have created a nesting, you can modify the content by adding, removing, or deleting jobs.

In Job Center, do one of the following:

- Add a job: Right-click the nesting, click **Add Job to nesting**, and browse to the job. Alternatively, drag a job from the job list onto the nesting.
- Remove a job: Right-click the nested job, and click **Remove Job from nesting**.

  The job remains in the job list, but is no longer part of the nesting.
- Delete a job: Right-click the nested job, and click **Delete**.

8.4. Clone nested jobs

You can create multiple copies (clones) of a nested job.

You can apply individual job settings to each clone. However, if you remove the original job from the nesting, the clones are removed also.

> 📑 **Note:**
>
> If you only want to create one clone, you can use copy and paste.

1. In Job Editor: Right-click the job, and click **Clone**.

   You can display a list of all nested jobs to help you locate a job more easily. On the **Nesting** panel, click **Child Jobs**.
2. Type the number of clones you want to create, and click **Clone**.
3. On the **Nesting** panel, click **Apply** to arrange the cloned jobs in the preview.

Now watch the video *here*.

8.5. Rename nestings

New nestings are created with the default name "Nesting". You can change the default name.

1. In Job Center: Right-click the nesting, and click **Rename**.
2. Overwrite the default name with a new name, and then click **OK**.

8.6. Arrange nested jobs

By default, jobs are arranged in the most space-saving manner. By overriding the default setting, you can prevent job rotation, and arrange jobs to facilitate cutting out after printing.

1. In Job Editor: On the **Layout** tab, expand the **Nesting** panel.

2. Under **Optimization** and **Orientation**, select how jobs are arranged on the sheet.

    You can arrange jobs so that, after printing, they can be cut out using as few straight horizontal or vertical cuts as possible. You can also keep the jobs' original orientation, or apply portrait or landscape format to all.

3. Under **Spacing**, define a horizontal and vertical distance between jobs.

    This setting takes job labels into account.

8.7. Align nested jobs on the sheet

You can align all nested jobs horizontally and vertically on the sheet, or you can center all jobs on the sheet. You can also align selected jobs relative to each other.

1. Open the nesting job in Job Editor.

2. Do one of the following:

    *   Align all jobs on the sheet: Make sure no job is selected. On the toolbar, click a horizontal and vertical alignment type. Then, on the **Nesting** panel, click **Apply** to rearrange the jobs.

        > 📄 **Note:** Bottom alignment is not available for roll media.

    *   Align selected jobs in relation to each other: Select two or more jobs. Click the right mouse button, point to **Align**, and then click a horizontal and vertical alignment type. Afterwards, lock the jobs in their current position on the sheet.

        > 📄 **Note:** If you do not lock the jobs in their current position, the alignment will be undone when you click **Apply** on the **Nesting** panel.

8.8. Edit nested jobs

If your nesting consists of many different jobs, you can display a list of all nested jobs to make it easier to select the job you want to edit. You can edit nesting children just like any single job.

For example, you can apply different scaling, or rotation settings to each job. Furthermore, you can lock each nested job at set coordinates, and define job-specific margins.

1. In Job Center: Double-click the nesting.

2. In Job Editor: Select the job you want to edit.

    If your nesting contains multiple nested jobs, click **Child Jobs** to display a full list.

3. Edit the job, as required.

4. Click **Apply**.
    The nested jobs are rearranged, and the preview is updated.

8.8.1. Scale nested jobs

You can scale each job individually, or you can scale all jobs to the same size.

You cannot rescale jobs that are imported into a workflow configured for uniform scaling.

To scale individual jobs, see *Scale a job* on page 32.

1. In Job Editor: On the **Layout** tab, expand the **Nesting** panel.

2. Select **Uniform scaling**, and type the required job dimensions.

3. Click **Apply**.
    The nested jobs are rearranged, and the preview is updated.

8.8.2. Lock nested jobs in a fixed position on the sheet

You can drag a job to a required position, or you can enter x/y coordinates. If you position jobs manually, you must lock them in place to ensure that Command WorkStation does not rearrange them when you update the preview.

Visual aids are available to help you with job alignment.

1. In Job Editor: Select a nested job, and then do one of the following:

    *   In the toolbar, enter x/y coordinates for the top left corner of the job.
    *   Drag the job to the required position

2. Do one of the following:

    *   Right-click the job, and then click **Locked**.
    *   Select the job. In the toolbar, and click the padlock button.

3. Click **Apply**.

The nested jobs are rearranged, and the preview is updated. Non-locked pages are rearranged around locked pages.

8.8.3. Add margins around nested jobs

You can use margins to increase the space between nested pages. You can add different margin widths around each job.

1. In Job Editor: Select one or more nested jobs.

2. On the toolbar, under **Margin**, type a top, bottom, left, or right margin width.

    You can apply identical margins to all four sides by clicking the appropriate button, and defining a top margin only.

3. Click **Apply**.
    The nested jobs are rearranged, and the preview is updated.

8.9. Print selected pages of a multi-page PDF

You can print selected pages of a multi-page PDF by removing those pages that you do not need from the nesting preview. As an example, if you have a 100-page document, you can choose to print only pages 17, 77, and 98.

1. In Job Editor: On the **Layout** tab, expand the **Nesting** panel.

2. Click **Child Jobs**.

3. In the list of jobs, double-click the multi-page PDF.

   The **Job Details** window opens.

4. In the **Placed** column, select the pages you require, and click **OK**.

5. Close the **Child Jobs** window.

6. On the Nesting panel, click **Apply** to update the preview.

9. Tilings

A tiling is a job printed out as a collection of smaller jobs (tiles), which you join together afterwards to produce a building wrap, a huge banner, or other over-dimensional print.

You can create a tiling to:

- Print large images that exceed your printer's maximum print size
- Print out custom-sized areas of an image as separate jobs—for example, to create a wall covering that includes a door-sized tile.

Now watch the video *here*.

9.1. Create tilings

You can define the number of tiles or specify a tile size. You can also print tile-specific information with each tile.

Most tilings are job-specific. For this reason, you will usually create your tilings in Job Editor. However, you can also configure a tiling workflow in Server Manager and apply it to all imported jobs.

1. Do one of the following:

    - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Layout** tab, expand the **Tiling** panel. In the panel header bar, select the check box to activate the settings.
    - In Job Editor: On the **Layout** tab, expand the **Tiling** panel. In the panel header bar, select the check box to activate the settings.

2. Select a tiling type.

    The standard tile size is equal to the media size that is selected for the printer. Alternatively, you can set up a custom tile size by typing in tile dimensions, or by defining the number of vertical and horizontal tiles to place on the page.

    > **Note:** You can resize individual tiles later.

3. Set up a tile label (optional).

    You can print tiles with an extra margin that contains tile-specific information, such as the tile number, or custom text. Tile numbers help you to join the tiles together in the right order. The tile label is not visible in the preview.

4. Click **Save**.

Multiple settings are available for customizing tiles:

- You can resize tiles (see *Resize tiles* on page 46).
- You can lock tile edges in a fixed position (see *Lock tile edges in a fixed position* on page 46).
- You can merge or split tiles (see *Merge or split tiles* on page 47).
- You can rotate tiles (see *Rotate tiles in a tiling job* on page 46 and *Make last-minute edits to individual tiles* on page 48).

Additional settings are also available to help you join tiles together after printing:

- You can print tiles with an overlap, by repeating a strip of the image along two edges of adjacent tiles (see *Create tiles with an overlap* on page 45).

- You can print tiles with a glue area (see *Print tiles with a glue area* on page 45).

9.1.1. Create tiles with an overlap

An overlap margin repeats a strip of the image along two edges of adjacent tiles. It helps you piece tiles together more accurately and also ensures that no white gaps appear at the join if there is a slight misalignment.

Before you begin: Create a basic tiling.

1. Do one of the following:
    - In Server Manager: On the **Tiling** panel, click **Overlap/Glue**.
    - In Job Editor: On the toolbar, click **Overlap/Glue**.

2. Under **Overlapping**, type a top, bottom, left, or right margin width.

    You can apply identical margins to all four sides by clicking the appropriate button, and defining a top margin only.

3. Set up overlapping marks (optional).

    Overlapping marks provide an additional alignment aid. They are activated automatically when you define an overlapping margin. You can specify the length, the thickness, and the color.

    Standard marks are printed at each end of the overlap area, whereas the dashed line is printed along the length of the overlap area. The dashed line is recommended for large overlap areas, which would otherwise be difficult to align using standard marks that are too far apart.

    If you do not want to print overlapping marks, you can omit them from the printout by setting the line thickness and length to 0.

4. Click **OK**.

Now watch the video *here*.

9.1.2. Print tiles with a glue area

The glue area is an unprinted strip that provides room for gluing. It is not visible in the preview. By default, the glue area is added on to the overlap margin, but overlaps the tile label.

Before you begin: Create a basic tiling.

1. Do one of the following:
    - In Server Manager: On the **Tiling** panel, click **Overlap/Glue**.
    - In Job Editor: On the toolbar, click **Overlap/Glue**.

2. Under **Glue area**, type a top, bottom, left, or right margin.

    You can apply identical margins to all four sides by clicking the appropriate button, and defining a top margin only.

3. Clear **Apply glue area to overlapping only** (optional).

By clearing the check box, you can apply a glue area to tiles that do not have an overlap margin. In this case, the glue area provides an additional non-printed border. The border can help protect the edges of tiles that are printed on delicate media from damage.

4. Click **OK**.

Now watch the video *here*.

9.1.3. Resize tiles

You can resize rows of tiles, columns of tiles, or single tiles. By resizing tiles, you can avoid awkward joins in your job, such as down the middle of a face. You can also adjust tile sizes to fit the background on which the image will be mounted, such as around a window.

Before you begin: Create a basic tiling.

Changing the size of one row or column causes the adjacent row or column to stretch or shrink accordingly. You cannot create tiles that exceed the size of the selected media.

In Job Editor: Do one of the following:

- Resize a row or column: Click a tile edge and type in x/y coordinates on the toolbar. Alternatively, drag a tile edge to a new position.
- Resize an individual tile: Hold down <Alt>, and click a tile edge. Then, release <Alt>, and type in x/y coordinates on the toolbar. Alternatively, hold down <Alt>, and drag a tile edge to a new position.

9.1.4. Rotate tiles in a tiling job

You can rotate selected tiles by 180 degrees.

Before you begin: Create a basic tiling.

Inconsistencies in color density can occur when using large-format printers with UV ink. Rotating tiles by 180 degrees can help lessen the effect of color deviations in large areas of single color (for example, blue sky), by creating an invisible seam when you join the tiles together.

To rotate tiles by 90, 180, or 270 degrees, see *Make last-minute edits to individual tiles* on page 48.

In Job Editor: Open the tiling job, right-click a tile, and then click **Rotate tile by 180°**.

Right-clicking a rotated tile displays the menu item **Do not rotate**, with which you can undo the action, if required.

9.1.5. Lock tile edges in a fixed position

By locking tile edges, you can avoid joins in awkward places, such as down the middle of a face.

Before you begin: Create a basic tiling.

In Job Editor: Do one of the following:

- Click a tile edge. On the toolbar, click the padlock button.
- Right-click a tile edge, and click **Lock Tile Edge**.

Right-clicking a locked tile edge displays the menu item **Unlock Tile Edge**, with which you can undo the action, if required.

9.1.6. Merge or split tiles

You can merge selected tiles, or you can split a selected tile into multiple smaller tiles.

Before you begin: Create a basic tiling.

In Job Editor: do one of the following:

- Merge tiles: Select adjacent tiles. Then, click the right mouse button, and click **Merge Tiles**.

  Be aware that you cannot merge tiles whose combined size would exceed that of the selected media.
- Split tiles: Right-click a tile, and click **Split Tile**. Then, type the number of horizontal and vertical tiles you want to create.

  The smallest possible tile size is 1x1inches (2.54 x 2.54 centimeters).

9.2. Display and save a tiling preview

You can display a WYSIWYG preview of a tiling or of a single tile and save it as a PDF file. The preview displays the tile numbers which help you to join the tiles together in the right order after printing.

Before you begin: Create a basic tiling.

The **Tiling Preview** window is divided into two tabs. You can preview all tiles simultaneously, or you can preview a single tile.

In the **Tiling Preview** window, you can:

- Scroll through tiles to preview each tile one at a time

- Scroll through the pages of a multi-page job

- Zoom in or out of a previewed area

> **Note:**
>
> You cannot edit tiles in the **Tiling Preview** window.

1. In Job Editor: On the toolbar, click **Tiling Preview**.
2. Do one of the following:
   - Select **Save Selected Tile**.
   - Select **Save All Tiles**.
3. Click **Save** to create a PDF.

Now watch the video *here*.

9.3. Split tiles for printing

You must transfer tiling jobs from Job Editor to Job Center to start printing. You can print all tiles or select individual tiles to print. Printing only the tiles you require not only saves media, but also reduces processing time.

1. In Job Editor: On the **Layout** tab, expand the **Tiling** panel. In the panel header bar, select the check box to activate the settings.

2. Create a tiling, and click **Save**.

3. Click **Split**.

   The tiling and each tile are transferred as separate jobs to Job Center. You can make further changes to the tiling job or to individual tiles before printing, if required.

4. In Job Center: Select one or more tiles. Then, in the toolbar, click **Print**.

   You cannot print the tiling job itself.

9.3.1. Make last-minute edits to tiling jobs

You can reopen a tiling job in Job Editor and make further changes before printing.

When you split the job for printing, a new set of print jobs (tiles) is added. For identification purposes, the new tiles have a consecutive number in their name.

1. In Job Center: Double-click the tiling job.

2. Make your required settings.

3. Click **Save**, and then click **Split**.

9.3.2. Make last-minute edits to individual tiles

You can open an individual tile in Job Editor and make changes before printing.

You can change the tile's position or alignment on the media, rotate the tile, or apply color adjustments. When you save your edits, the original tile is overwritten.

1. In Job Center: Double-click an individual tile.

2. Make your required settings.

3. Click **Save**.

   You can print a tile directly from Job Editor by clicking `File > Print`.

4. Close Job Editor.

10. Step and repeat

A step and repeat consists of an original job and multiple copies (clones) arranged on one sheet to create repetitive and interesting designs.

You can create a step and repeat from single or multi-page jobs. If the job has multiple pages, each page forms one page of the step and repeat. Command WorkStation applies the same settings to all pages. Thus, you can print a double-sided step and repeat on a duplex printer.

When you create a step and repeat, a padlock icon appears in the top right-hand corner of the original job. It indicates that you cannot modify the job.

You can save a preset of your step and repeat settings. Presets provide a quick and easy way to apply step and repeat designs to other jobs.

Now watch the video *here*.

10.1. Create a step and repeat

You can create multiple copies (clones) of a job and use the flip, offset, and rotate settings to create interesting patterns. You can also design seamless rapports that have an offset/drop, such as is required in the textile and wallpaper industries.

Before you begin: Make all job settings and color adjustments before you create a step and repeat. You cannot modify the original job after you have created a step and repeat without deleting all the copies first.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Layout** tab, expand the **Step and Repeat** panel. In the panel header bar, select the check box to activate the settings.
   - In Job Editor: On the **Layout** tab, expand the **Step and Repeat** panel. In the panel header bar, select the check box to activate the settings.

2. Do one of the following:

   - Select **Copies**, and type the required number of copies. The original job is included in the total number.

     Select **Fill last row** (optional) to ensure that the last row is completed. This may mean that more than the defined number of copies is printed.
   - Select **Fill media** to create as many copies as will fit on the media.
   - Select **Pattern** to print seamless repeats of a design. Your pattern can consist of a required number of horizontal and vertical copies, or you can fill the whole media, or a user-defined area of the media.

     Select **Offset/Drop** (optional) to define the amount of horizontal or vertical shift. You can type any percentage, or select the amount of drop as a fraction of the image width or height—1/1 equals no shift, 1/2 equals a 50% shift, and 1/4 equals a 25% shift. You can also define a custom shift in either direction.

3. Under **Space around jobs (picture mount)**, type a border width to simulate a picture mount (optional) (Server Manager only).

   This setting takes into account the printer's non-printable margins.

4. Under **Flip/Rotate**, flip or rotate by 180° alternate rows or columns (optional).

5. Under **Space between jobs**, type a horizontal and vertical distance between copies (optional).

6. Do one of the following:

   • In Server Manager: Click **Save**.
   • In Job Editor: Click **Apply**.

Now watch the video *here*.

10.2. Modify a step and repeat

To modify a step and repeat, you must first delete all the copies (clones).

Save your current settings as a preset to avoid having to set up the step and repeat again later.

1. In Job Editor: On the **Layout** tab, expand the **Step and Repeat** panel. In the panel header bar, clear the check box to deactivate the settings.

2. Make your required changes to the original image.

3. In the panel header bar, reselect the check box to activate the settings.

4. Click **Apply** to update the step and repeat.

11. Job merge

The job merge feature superimposes one job on top of another. One master job provides the background image for multiple content jobs.

The page size, background color, and file extension of master and content jobs must meet the following requirements:

- Master and content jobs must have the same page size within 0.1 inches (2.54 mm).

- The background color of the content job must be 100% transparent.

- Master and content jobs must have the same file extension.

> **Note:**
>
> - If the content job is a multi-page document, Command WorkStation applies the master job to all the document's pages.
>
> - If the content job has layout settings (rotation, scaling, etc.) or crop marks, Command WorkStation transfers them to the merged job.

Now watch the video *here*.

11.1. Create a workflow for automatic job merge

You can configure a workflow to automatically superimpose multiple content jobs on one master job.

The following requirements must be met:

- You must load master and content jobs together.
- The job names must contain a keyword that is common to both master and content jobs.

The following table gives some examples of job names:

File names for master and content jobs	Common keywords	Master file identified by:	Content file identified by:
Master_Customer.pdf Content_Customer.pdf Esko_Master.pdf Esko_Content.pdf	Customer Esko	Master	Content
2021_Esko.pdf 2021_Exhibition.pdf Esko_January_2021.pdf Exhibition_January_2021.pdf	2021 January_2021	Esko	Exhibition

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **Job Merge** panel. In the panel header bar, select the check box to activate the settings.

2. Type the file names of your master (background) job and content jobs.

3. Click **Save**.

In Job Center, the jobs are merged, and the master job is removed from the job list.

11.2. Merge jobs manually

You can apply one master job to multiple content jobs. Master and content jobs do not have to follow a specific naming convention.

1. In Job Center: Double-click the master (background) job.

2. In Job Editor: On the **File** tab, expand the **Job Merge** panel. In the panel header bar, select the check box to activate the settings.

3. Select **Master job**, and save your changes.

4. In Job Center: Double-click the job you want to superimpose on the master job.

5. In Job Editor: On the **File** tab, expand the **Job Merge** panel. In the panel header bar, select the check box to activate the settings.

6. Select **Content job**.

7. From the drop-down list box, select the master job you want to use as the background, and save your changes.

In Job Center, the jobs are merged. The master job remains in the job list.

12. Calibration tools

You can use Color Tools to create calibration files.

12.1. Start Color Tools' calibration tool

The calibration tool requires you to print out and measure color charts, so make sure that you have a measuring device (spectrophotometer) available. The measuring devices of many different manufacturers, including embedded measuring devices, are supported.

By default, charts are imported into Job Center as "hold" jobs, which means you must start the print process manually. To print charts automatically on import, clear the workflow setting **Put all incoming jobs on hold** on the **Job Detection** panel.

In Server Manager: On the **Printer** tab, select the printer's media profile. On the **Media** tab, expand the **Media Configuration** pane, and click **New Calibration**

There is a context-sensitive help system to guide you through the necessary steps. Click the **Help** button in the bottom left-hand corner of the calibration tool's window.

12.2. Printer calibration

Esko EPL files

A calibration file, or EPL linearization file, adjusts how your proofer prints to get best results on a certain substrate (it adapts the quantities of inks used so that your proofer can achieve maximum color density without hue shifts).

Esko provides you with a number of EPL files made in controlled conditions for different proofer models and substrate types. We strongly recommend you use the one made for your proofer and substrate combination (before profiling your proofer in Color Pilot), especially for contract proofing. This will improve the color accuracy of your proofs.

Esko EPL files are installed automatically when you install the Esko Proof Server. Please see *this knowledge base article* to know how to use and evaluate the EPL file(s) made for your proofer series.

Custom EPL files

In some specific cases (for example if you want to use a very low resolution for content proofing), there is no EPL made for your proofer and substrate combination. You can then make a custom one using Command WorkStation, as explained in this chapter. Depending on your printer model, Command WorkStation will use either the *Standard calibration procedure* on page 54 or the *Advanced calibration procedure* on page 60.

Afterwards, you need to set it on your proofer (see *Assign a calibration file to your proofer* on page 67).

12.2.1. Standard calibration procedure

Command WorkStation automatically selects the correct calibration procedure for your printer model. The standard calibration procedure consists of six steps.

The standard printer calibration consists of the following steps:

- Selecting the printer, media, ink, and output settings
- Limiting the ink for each channel
- Creating a calibration, based on the reduced ink limits per channel
- Reducing the total ink limit
- Performing a quality check by comparing printed L*a*b* data for solid colors
- Completing the calibration

Now watch the video *here*.

Define the basis for your calibration file

The first step towards calibrating your printer is to make printer, media, ink and output settings. You can calibrate many different ink channels.

Before you begin, connect your measuring device to the computer.

It is not possible to calibrate the Clear ink channel, but you can control the amount of clear ink by setting an ink limit in a later step.

> **Note:**
>
> EFI provides a separate document that explains how to create and implement G7 calibration files. For more information, visit the *EFI knowledge base*.

> **Note:**
>
> You can save any step of the calibration procedure, by selecting **File** > **Save Calibration**. The calibration file is saved to the Working folder. You can load the calibration file from this folder later to continue with your calibration. The printer calibration tool opens at the step that was last edited.
>
> You can also load a finished calibration file. In this case, the printer calibration tool opens at the **Summary** window to enable you to view the print conditions under which the calibration file was created.

1. Select your printer, printer type and ink type.

   By default, Color Tools creates a generic white calibration for printers that support white ink. It is applied automatically when you select the printer's white ink settings in Server Manager. The generic white calibration usually makes it unnecessary to calibrate the white channel. To create a calibration with a generic white calibration, select a printer type that does not contain white ink in the name. However, if you notice too much dot gain when printing white gradations, you can create a custom white calibration, by selecting a printer with "White" in its name.

It is not possible to calibrate the white channel of all printers. In this case, you can improve the output quality by applying a visual correction file.

Some printer models support more than one ink type. Make sure that you select the correct ink type.

2. Select your measuring device.

Device-specific settings are available for some measuring devices.

If your printer has an embedded measuring device, select the appropriate check box if you want Color Tools to create a calibration file. Creating a media profile is not supported in an Esko Proof Server context.

3. Select a calibration intent (standard calibration only).

- **Proof**—Automatically calculates the ink limitation, based on the offset color gamut (coated paper).
- **Photo or production**—Automatically calculates the best saturation value for the largest possible color gamut by adding light ink earlier and in greater amounts in the full-tone areas.

4. Type a name for the calibration file (optional).

The default name is generated from the printer model, the resolution, the date, and the time. You can type a custom name by clearing the check box **Generate name from settings**.

5. Under **Media Settings**, do the following:

a) Select the media type that best matches the media in the printer.

b) Select a media name or type in a custom name. This is the name that you select later in Server Manager.

c) Type the actual values to adjust the media feed to the target (optional).

Command WorkStation helps you resolve horizontal banding, by adjusting the output size of your printouts. If you have previously printed and measured the Lineal_01.ps file provided with the software, you can incorporate the result into the calibration file.

6. Under **Output Settings**, do the following:

a) **Resolution**—Select the targeted resolution. Higher resolutions lead to improved output quality, but affect processing and printing performance.

If you want to incorporate a screening file, make sure that you select the same resolution here.

b) **Print mode**—The print mode defines the quality of the output. Print modes are printer-specific and are also dependent on the selected resolution.

c) **Print direction**—Bidirectional printing is faster than uni-directional printing, as the print head prints in both directions. However, uni-directional printing achieves more accurate results. Not all printers support bi-directional printing.

d) **Halftoning**—For contone printers, the halftoning method of the printer manufacturer is selected by default.

For non-contone printers, select **Error diffusion (SE1)** for maximum quality, or select **Stochastic halftoning (SE2)** for a faster processing speed, or for a variable dot size.

e) **Color mode**—Make sure that the number of inks and the ink colors are correct for your printer.

f) **Dot size**—Some printers support two dot sizes: **Fixed** means that each dot is one ink droplet in size. **Grayscale** means the ink droplets have variable sizes.

g) **Screening**—This is not used in the Esko Proof Server.

7. Select **Include 'Gray Balance' step for neutral grays even without color management** (optional) (advanced calibration only).

    This setting balances the C, M and Y curves to produce neutral grays.

8. Select **Include 'Quality Control' step for gamut comparisons** (optional)(advanced calibration only).

    This setting creates L*a*b* data for solid colors, and allows you to evaluate the gamut of the calibration file and compare it to a reference profile, such as GRACoL or ISOcoated_v2.

9. Click **Advanced** (optional)(standard calibration only).

    In the **Advanced** window, you can define the percentage of light inks in the solid colors. See *Add/ substract light ink* on page 57.

10. Click **Next**.

Now watch the videos:

For advanced calibrations, click *here*.

For CT printer driver calibrations, click *here*.

For HT printer driver calibrations, click *here*.

For RGB printer driver calibrations, click *here*.

For more information, see the *Advanced Calibration & Profiling Guide* at *http://help.efi.com/fieryxf*.

Measuring device settings

Device-specific settings are available for some measuring devices. Selecting the right setting ensures that you achieve reliable color measurements.

In Command WorkStation, you need a measuring device for the following purposes:

*   In Color Tools - To define ink limits

*   In Fiery Verify - To measure color consistency

The measurement condition defines the UV content of the incident illumination. Some measuring devices support M0, M1, and M2 measurement conditions, as defined by ISO 13655. In Europe, non-UV color values are usually used for proofing purposes.

*   M0 — The UV content of the incident illumination is not defined. Supports single-pass measurements, and any media without optical brighteners.
*   M1 — The UV content of the incident illumination is defined as D50. Support dual-pass measurements, and any media. For ISO verification, use the M1 measurement condition.
*   M2 — The UV content is ignored. M2 requires the spectral power distribution of the incident illumination to be in the wavelength range of 420 nm to 700 nm, with no substantial radiation power in wavelengths below 400 nm. Supports dual-pass measurements, and any media.

Measuring device	Comments
- ES-2000 - ES-3000 - X-Rite i1Pro 2 - X-Rite i1Pro3 - X-Rite i1Pro3 Plus - X-Rite i1iO3 - X-Rite i1iO3+	In Color Tools: If your printer produces large picoliter ink droplets, generate calibration charts with lower-resolution wider patches. Wider patches ensure more measurements per patch, thus increasing measurement accuracy.

Measuring device	Comments
• Konica Minolta MYIRO-1 • Konica Minolta FD-9	
• ES-6000 • X-Rite iSis	• Automated measurement • Cannot be used to measure thick materials or textiles
• Barbieri Spectro LFP • Barbieri Swing RT • X-Rite SpectroScan T	In Color Tools: • For dark, opaque substrates, set the measuring device to reflection measurement mode. • For transparent/translucent substrates, set the measuring device to transmission measurement mode. • It is recommended that you create a generic white linearization for transparent/translucent substrates. If a generic white linearization is not adequate for your needs, contact Support for assistance.

Add/substract light ink

In the advanced settings, you can increase the gamut and create a more uniform output by adding light ink to 100% solid colors. You can subtract light ink from 100% solid colors to resolve over-inking.

Your printer must support light inks.

If you are using a special print media which does not absorb ink well, such as newsprint, it can be beneficial to reduce the amount of light ink. However, it is normally not necessary to change the default values.

1. Select a radio button, and type a percentage value.

   It is recommended that you use the same percentage value for all light inks.

2. Click **OK**.

Reduce the ink limit per channel

In this step, you limit the ink at the point the printer achieves its maximum color density. The amount of ink affects not only the gamut size of the calibration, but also ink consumption.

In many cases, the maximum color density is achieved at approximately 50%. Limiting the ink for each channel provides a better basis for the calibration.

1. Click **Print**.

2. Wait for the ink to dry. Then, follow the on-screen instructions to measure the chart.

3. Click **Show patches** (optional).

   By moving the pointer over a patch, you can view its L*a*b* value. Each patch is divided along the diagonal. The top left area shows the expected color, the bottom right area shows the measured color.

   You can view the color patches for all steps of the calibration procedure that require you to measure printed charts.

4. Click **Advanced** (optional).

   In the **Advanced** window, you can select a simulation (reference) profile, and adjust the ink limits.

5. Click **Next**.

Now watch the video *here*.

Select a reference profile

In the advanced settings, you select a reference profile, and ensure that the recommended ink limits are within the optimum range.

1. Select a reference profile (optional).

   Selecting a reference profile limits the available color gamut because the L*a*b* target values are extracted from the profile.

   If you do not select a reference profile, an appropriate industry standard is applied instead.

2. Ensure that the displayed ink limits are within the optimum range.

   The optimum range is represented by the blue area. Move the slide bars, as required.

3. Click **OK**.

Create a calibration file

In this step, you create a calibration file that is based on the calculated ink limits per channel.

1. Click **Print**.

2. Wait for the ink to dry. Then, follow the on-screen instructions to measure the chart.

3. Click **Advanced** (optional).

   In the **Advanced** window, you can check the starting point for normal ink, the tonal value increase, and the dot gain.

4. Click **Next**.

Now watch the video *here*.

Check the start point for normal inks and select a TVI setting

In the advanced settings, you can adjust the relationship of light to normal inks, and select a tone value increase (TVI).

Normally, the default values achieve good results, as Color Tools applies a special algorithm. Change the default values only if absolutely necessary.

1. Check the start point for normal inks.

   The best start point for normal inks depends on the combination of media, ink, and resolution.

   For newsprint, keep the percentage of light ink to a minimum to prevent too much ink from being applied to the media. However, be aware that using too little light ink can lead to a grainy effect in the printout, as the printer prints heavy dots in highlight areas.

   When printing on photographic or proofing media, apply a higher proportion of light ink in order to create a smooth impression.

2. Check the TVI.

The TVI represents the difference between the tonal value (input data) and the corresponding tonal value on the printed page.

In Europe the TVI is defined as being 40% input along the gradation curve. In the United States and the Pacific region, the TVI is defined at 50%.

3. Click **OK**.

Reduce the total ink limit (TIL)

In this step, you can reduce ink consumption, which also helps to prevent cockling and bleed.

> 📄 **Note:**
>
> If you know the exact TIL definition to use, you do not have to print and measure the chart in this step. Enter the required percentage in the **Numerical TIL definition** edit box at the bottom of this window.

1. Click **Print**.

The chart is printed with the initial TIL applied. The initial TIL equals the sum of the values that you defined for the ink limits per channel. It is the maximum permitted value. Normally, the glossier the media, the higher the TIL.

2. Wait for the ink to dry. Then, follow the on-screen instructions to measure the chart.

3. Visually assess the printed chart, and check for undesirable cockling or bleed. Then, select one of the following:

- **Automatic TIL definition by measurement**—Applies the TIL calculated by Color Tools. Select this setting if you are satisfied with the amount of ink on the printout.
- **Visual TIL definition**—Select the number of the column with the best TIL. The automatic TIL may not always be the best choice, as measuring devices cannot take cockling or bleed into account.

Now watch the video *here*.

Perform a quality check

In this step, you capture the color foundation of your calibration by creating L*a*b* data for solid colors. You can use this data to evaluate the gamut of your calibration against a standard reference before creating the calibration file.

This is the final step before you create your calibration file. You can go back and repeat any of the previous steps of the calibration procedure if you are not satisfied with the results of your quality check.

1. Click **Print**.

2. Do the following:

a) Check the gray balance: Ideally, the black stripe and the CMY stripe should be identical. However, be aware that it is not possible to achieve pure black from mixing CMY inks.

b) Check the TIL: The edges of the individual color patches must be clearly defined, the ink must be evenly distributed on the media and show no signs of bleed, and the media must display no signs of cockling.

c) Check the transition of light to normal inks: Examine the stripes of the primary colors and make sure that there is a smooth transition of light to normal inks. Smooth transitions are important when printing skin tones. If normal inks are added too soon, it can create a peppering effect.

3. Follow the on-screen instructions to measure the chart.

4. Click **Next**.

Now watch the video *here*.

Complete the printer calibration

In this step, you can create a report of the calibration settings.

1. Type a new media name (optional).

    By defining a new media name, you ensure that each calibration file is associated with only one media.

2. Under **Finalize or continue profiling**, select **Save calibration (EPL) without ICC profile**.

3. Click **Create Report** (optional).
    The HTML report provides an easy way to archive or print details of the calibration. The report contains details of the calibration settings, ink limits, and color gamut.

4. Click **Finish**.

Now watch the video on inspecting a calibration file *here*, and on saving your calibration file *here*.

You can use the calibration file for the following purposes:

- You can connect it to an existing media profile.

- You can use it to print jobs without color management.

12.2.2. Advanced calibration procedure

Command WorkStation automatically selects the correct calibration procedure for your printer model. The advanced calibration procedure consists of four steps, plus two optional steps for a more precise calibration.

The advanced printer calibration consists of the following steps:

- Selecting the printer, media, ink, and output settings
- Limiting the ink for each channel
- Reducing the total ink limit, plus calibration
- Optimizing the gray balance (optional)
- Performing a quality check by comparing printed L*a*b* data for solid colors (optional)
- Completing the calibration

Define the basis for your calibration file

The first step towards calibrating your printer is to make printer, media, ink and output settings. You can calibrate many different ink channels.

Before you begin, connect your measuring device to the computer.

It is not possible to calibrate the Clear ink channel, but you can control the amount of clear ink by setting an ink limit in a later step.

> **Note:**
>
> EFI provides a separate document that explains how to create and implement G7 calibration files. For more information, visit the *EFI knowledge base*.

> **Note:**
>
> You can save any step of the calibration procedure, by selecting **File** > **Save Calibration**. The calibration file is saved to the Working folder. You can load the calibration file from this folder later to continue with your calibration. The printer calibration tool opens at the step that was last edited.
>
> You can also load a finished calibration file. In this case, the printer calibration tool opens at the **Summary** window to enable you to view the print conditions under which the calibration file was created.

1. Select your printer, printer type and ink type.

   By default, Color Tools creates a generic white calibration for printers that support white ink. It is applied automatically when you select the printer's white ink settings in Server Manager. The generic white calibration usually makes it unnecessary to calibrate the white channel. To create a calibration with a generic white calibration, select a printer type that does not contain white ink in the name. However, if you notice too much dot gain when printing white gradations, you can create a custom white calibration, by selecting a printer with "White" in its name.

   It is not possible to calibrate the white channel of all printers. In this case, you can improve the output quality by applying a visual correction file.

   Some printer models support more than one ink type. Make sure that you select the correct ink type.

2. Select your measuring device.

   Device-specific settings are available for some measuring devices.

   If your printer has an embedded measuring device, select the appropriate check box if you want Color Tools to create a calibration file. Creating a media profile is not supported in an Esko Proof Server context.

3. Select a calibration intent (standard calibration only).

   - **Proof**—Automatically calculates the ink limitation, based on the offset color gamut (coated paper).
   - **Photo or production**—Automatically calculates the best saturation value for the largest possible color gamut by adding light ink earlier and in greater amounts in the full-tone areas.

4. Type a name for the calibration file (optional).

   The default name is generated from the printer model, the resolution, the date, and the time. You can type a custom name by clearing the check box **Generate name from settings**.

5. Under **Media Settings**, do the following:
   a) Select the media type that best matches the media in the printer.
   b) Select a media name or type in a custom name. This is the name that you select later in Server Manager.
   c) Type the actual values to adjust the media feed to the target (optional).

Command WorkStation helps you resolve horizontal banding, by adjusting the output size of your printouts. If you have previously printed and measured the Lineal_01.ps file provided with the software, you can incorporate the result into the calibration file.

6. Under **Output Settings**, do the following:

   a) **Resolution**—Select the targeted resolution. Higher resolutions lead to improved output quality, but affect processing and printing performance.

   If you want to incorporate a screening file, make sure that you select the same resolution here.

   b) **Print mode**—The print mode defines the quality of the output. Print modes are printer-specific and are also dependent on the selected resolution.

   c) **Print direction**—Bidirectional printing is faster than uni-directional printing, as the print head prints in both directions. However, uni-directional printing achieves more accurate results. Not all printers support bi-directional printing.

   d) **Halftoning**—For contone printers, the halftoning method of the printer manufacturer is selected by default.

   For non-contone printers, select **Error diffusion (SE1)** for maximum quality, or select **Stochastic halftoning (SE2)** for a faster processing speed, or for a variable dot size.

   e) **Color mode**—Make sure that the number of inks and the ink colors are correct for your printer.

   f) **Dot size**—Some printers support two dot sizes: **Fixed** means that each dot is one ink droplet in size. **Grayscale** means the ink droplets have variable sizes.

   g) **Screening**—This is not used in the Esko Proof Server.

7. Select **Include 'Gray Balance' step for neutral grays even without color management** (optional) (advanced calibration only).

   This setting balances the C, M and Y curves to produce neutral grays.

8. Select **Include 'Quality Control' step for gamut comparisons** (optional) (advanced calibration only).

   This setting creates L*a*b* data for solid colors, and allows you to evaluate the gamut of the calibration file and compare it to a reference profile, such as GRACoL or ISOcoated_v2.

9. Click **Advanced** (optional) (standard calibration only).

   In the **Advanced** window, you can define the percentage of light inks in the solid colors. See *Add/ substract light ink* on page 57.

10. Click **Next**.

Now watch the videos:

For advanced calibrations, click *here*.

For CT printer driver calibrations, click *here*.

For HT printer driver calibrations, click *here*.

For RGB printer driver calibrations, click *here*.

For more information, see the *Advanced Calibration & Profiling Guide* at *http://help.efi.com/fieryxf*.

Reduce the ink limit per channel, and create a calibration file

In this step, you can limit the ink at the point the printer achieves its maximum color density, and create a calibration file. The amount of ink affects the gamut size of the calibration.

If you know that over-inking is a problem, you can manually reduce the ink limits before printing the chart to prevent potential bleed issues, and cockling, and to ensure that the chart can be successfully

measured. Select **Print with pre-ink limits per channel**, and click **Pre-ink Limits**. However, if in doubt, it is recommended that you do not apply pre-ink limits before printing, as it can noticeably reduce the achievable gamut.

> **Note:** For certain printers and resolution, pre-ink limits have been applied to all 1000 dpi resolutions so that the default gamut at 1000 dpi is almost the same as the gamut at 600 dpi. This allows you to align easily the color of both resolutions. However, if you want to use the full gamut capabilities of the 1000 dpi mode (e.g. for backlit media), reset all pre-ink limits for the 1000 dpi resolution to 100%.

1. Click **Print**.

   Color Tools creates print files in the specified export folder.

2. Load the print files on the printer.

   To calibrate the white channel for printing on black or transparent media, you must set up layered printing for each job at the print station before printing the charts.

   See the operations guide for your printer for details on how to print multilayer jobs. For EFI VUTEk D3R/D5R, refer to the *Profiling Multi-layers with Fiery XF* document, available at *https://inkjet.support.efi.com*.

3. Print the charts.

   VUTEk printers only: Use the print options of each multi-layer job to set the smoothing level, and margins, etc.

   Use the double strike setting to increase the ink density, if required. As this setting has a high impact on the color output, it is recommended that you include "double strike" in the name of the calibration file.

4. Follow the on-screen instructions to measure the chart.

5. Click **Show patches** (optional).

   By moving the pointer over a patch, you can view its L*a*b* value. Each patch is divided along the diagonal. The top left area shows the expected color, the bottom right area shows the measured color.

   You can view the color patches for all steps of the calibration procedure that require you to measure printed charts.

6. Review the light/normal ink setup.

   Based on the values for **Norm ink**, **Norm ink start**, **Light ink in full tone**, and **Dot gain at 50%**, Color Tools calculates the maximum achievable chroma (*C) for the CMY inks and the minimum possible L* value (0) for Black.

   By clearing the **Auto** check boxes, you can experiment with the light/normal settings to find the combination that achieves the best balance between chroma and ink consumption, while still maintaining smooth gradations. The chroma and ink consumption values are updated automatically when you press <Enter>.

7. Click **Print Visual Reference** (optional), and check the primary color gradations.

   - Make sure that there is a smooth transition at the normal ink start point.
   - Check the total ink coverage in the full tone areas.

8. Click **Next**.

Now watch the video *here*.

Set up layered printing at the VUTEk print station

To calibrate the white channel for printing on black or transparent media, you must set up layered printing at the VUTEk print station before printing the charts.

1. Right-click each job and create a multi-layer job.

2. For all charts except the one with "Ink Limit and Linearization_W" in its name, do the following:

   a) For the top layer, clear **White**.

   b) For the bottom layer, select **White Flood**.

   You can improve the ink coverage, by selecting three layers on the Multilayer panel and adding a second white layer. Select **White Flood** for the middle and bottom layers.

3. For the white calibration chart (Ink Limit and Linearization_W), do the following:

   a) For the bottom layer, select **White From Image**.

   b) For the top layer, clear **White**.

   You can improve the ink coverage, by selecting three layers on the Multilayer panel. Then, for the middle layer, click **Select Image**, and browse to the job that was used to create the multi-layer job. When the file has been loaded, clear all the colors for the middle layer, except White.

Balancing chroma and ink consumption

You can experiment with the light/normal settings to find the best compromise between chroma and ink consumption.

After measuring the ink limit per channel chart, Color Tools displays the following values for each ink channel:

- **Norm ink**—The normal ink limit in the full tone. Color Tools tries to achieve the best possible chroma (C*) for the CMY inks, and the minimum possible L* value (0) for Black.

- **Norm ink start**—The absolute starting point of the normal ink curve, which also adjusts the use of the light inks. This setting influences the transition of light ink to normal ink.

- **Light ink in full tone**—The absolute percentage of light ink in the full tone.

- **Dot gain at 50%**—The dot gain relative to 50%. A value of -5% transforms 50% input values into 45% output values.

Color Tools evaluates the maximum possible color gamut, and the ink consumption required to reproduce a gradient from 0% to 100% of the selected ink channel, taking the light and normal inks, and the pre-ink limits into account.

The following tips will help you to find the best combination:

- Do not reduce the percentage of normal and light ink too much. A slight reduction often has little effect on the overall chroma. However, if you use too little ink, spots of uncovered media can appear in the printout. You can check the total ink coverage and print quality by printing the visual reference chart.

- Use a similar percentage of light ink across all channels that support light ink. It is not recommended to mix light ink end point and light ink in full tone in the same calibration.

- You can reduce ink consumption by introducing normal ink earlier. However, be careful that you do not set the normal ink to start too soon, as it can cause graininess. The recommended normal ink

start is between 20% and 40%. Make sure also that the ink curves do not flatten off towards the top end of the scale.

- The dot gain affects both normal and light inks. Be aware that this setting affects the printer's native gray balance. Therefore, change it only in special circumstances.
- The light ink end point always keeps a distance to the normal ink start point of 35% to ensure a smooth transition.

Set the total ink limit (TIL)

In this step, you can set the total ink limit. The TIL prevents over-inking and optimizes the dynamic range of the printer.

It is recommended that you start by printing the chart with the predefined total ink limit. The predefined total ink limit is based on the sum of the full-tone ink limits, and also takes the pre-ink limits for each ink channel into account. The predefined value is the maximum possible percentage of ink. Be aware that for a printer with eight ink channels, the maximum TIL value is 800%.

Change the predefined value only if you are sure of the TIL for the specific combination of printer, media, ink type, resolution, and color mode. For example, you can load an existing calibration file to adjust the normal ink start, or to set a different target dot gain. As long as you do not change the normal ink or light in full tone limits, you can modify an existing calibration file, without having to create a new media profile.

1. Click **Configuration**.

   The **Chart configuration** window is concerned with TIL chart layout and patch size. Make settings that are appropriate for your printer, media size, and measuring device.

   > **Note:** It is recommended that you use the predefined values to start with.

2. Click **Print**.
   The default printed chart consists of rectangular patches with a hexagon in the middle and a bleed mark in the top right-hand corner.

3. Review the printed chart to determine the best TIL value.

   Choose viewing conditions that ensure a minimum of surface reflection. For example, hang the chart at eye height inside a light booth or on a wall, and view the chart straight on.

   a) Identify the row in which the most hexagons are visible. In most cases, this will be the CMYK row or the CMY row.

   b) Scan the row from left to right, and identify the first patch in which the color of the hexagon is the same as the background color. For printing systems that are likely to cause printing artifacts due to over-inking, such as textile printers or printers with solvent inks, check the column of patches at each TIL to find the optimal value. Identify the first column of patches that is free of artifacts.

   The optimal TIL is approximately that of the selected patch, or column of patches.

   For patches printed in larger step sizes (increments of between 15% and 20%), the optimal TIL lies somewhere between the TIL of the selected patch and the TIL of the previous patch.

4. Review the printed chart for sharp bleed marks.

   The bleed marks should not show fuzziness or flooding.

5. Review the printed chart for even background color of patches.

   The background color should not show intercolor bleed, mottling, fringing, or speckling.

Now watch the video for EFI VUTEk, EFI superwide roll-to-roll, and EFI Matan printers *here*.

TIL chart configuration

The **Chart configuration** window is concerned with chart layout and patch size. You can make settings that are appropriate for your printer, media size, and measuring device.

- **Range start**—Sets the TIL percentage for the first patch.

- **Range end**—Sets the TIL percentage for the last patch.

- **Step size**—Sets the incremental percentage of ink between patches.

- **Patch size**—Provides multiple patch sizes for selection.

- **Spacing between rows**—Defines the gap between two adjacent rows.

- **All black combinations**—Prints all overprint combinations with black ink. By default, only the upper section of the TIL chart prints overprints with black ink.

- **CMYK only**—Ignores gamut-extending inks, such as Orange and Violet. Charts printed with gamut-extending inks contain more rows.

- **Bleeding mark**—Defines the size of the bleed marks. Select **None** to print patches without bleed marks.

- **Hexagon**—Defines the size of the hexagon within each patch. Select **None** to print uni-color patches.

> **Note:**
>
> If you know the approximate optimal TIL, you can achieve a more exact result by narrowing the range (240% to 340%) and setting smaller step sizes of 5%.

Align the CMY gradation curves to a neutral gray

In this step, you can perform multiple iterations to reduce a high chroma value and achieve a stable gray balance.

This step is available only if you selected it in the **Settings** window.

1. Click **Print**.

2. Wait for the ink to dry. Then, follow the on-screen instructions to measure the chart.
   Color Tools displays an average delta C value. This value stands for the average difference in chroma for the entire gray balance. The higher the value, the stronger the color shifts within the gray balance. An arrow indicates whether further optimization is possible. An average delta C of 2 or less is good.

3. Repeat the printing and measuring process until no further optimization is possible.

4. Select the delta C iteration that yields the lowest result.

5. Click **Next**.

Now watch the video *here*.

Perform a quality check

In this step, you capture the color foundation of your calibration by creating L*a*b* data for solid colors. You can use this data to evaluate the gamut of your calibration against a standard reference before creating the calibration file.

This is the final step before you create your calibration file. You can go back and repeat any of the previous steps of the calibration procedure if you are not satisfied with the results of your quality check.

1. Click **Print**.

2. Do the following:

   a) Check the gray balance: Ideally, the black stripe and the CMY stripe should be identical. However, be aware that it is not possible to achieve pure black from mixing CMY inks.

   b) Check the TIL: The edges of the individual color patches must be clearly defined, the ink must be evenly distributed on the media and show no signs of bleed, and the media must display no signs of cockling.

   c) Check the transition of light to normal inks: Examine the stripes of the primary colors and make sure that there is a smooth transition of light to normal inks. Smooth transitions are important when printing skin tones. If normal inks are added too soon, it can create a peppering effect.

3. Follow the on-screen instructions to measure the chart.

4. Click **Next**.

Now watch the video *here*.

Complete the printer calibration

In this step, you can create a report of the calibration settings.

1. Type a new media name (optional).

   By defining a new media name, you ensure that each calibration file is associated with only one media.

2. Under **Finalize or continue profiling**, select **Save calibration (EPL) without ICC profile**.

3. Click **Create Report** (optional).
   The HTML report provides an easy way to archive or print details of the calibration. The report contains details of the calibration settings, ink limits, and color gamut.

4. Click **Finish**.

Now watch the video on inspecting a calibration file *here*, and on saving your calibration file *here*.

You can use the calibration file for the following purposes:

- You can connect it to an existing media profile.

- You can use it to print jobs without color management.

12.2.3. Assign a calibration file to your proofer

Before you begin: Make sure that the EPL calibration file you want to use is located at `C: \ProgramData\EFI\EFI Media Profiles\My Profiles`.

> **Note:**
>
> We recommend you use the Esko EPL file corresponding to your proofer and substrate combination. Esko EPL files are made in controlled conditions by Esko R&D (please see *this knowledge base article* to know how to use and evaluate the EPL file(s) made for your proofer series).
>
> In some specific cases (for example if you want to use a very low resolution for content proofing), there is no EPL made for your proofer and substrate combination. You can then make a custom one using Command WorkStation as explained in *Printer calibration* on page 53.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select the printer. In the printer's tree view, select the media, On the **Media** tab, expand the **Media Configuration** panel.
   - In Job Editor: On the **Printer** tab, expand the **Media Configuration** panel.
   - In Job Center: Under **Media Configuration**, click **Edit**.

2. Select an ink type, a media name, and other media settings.

3. Under **Resulting calibration(s)**, select a calibration file.

   Command WorkStation displays only those calibration files that are compatible with the selected combination of media settings.

4. Click **Save**.

13. Color verification

You can verify color consistency by defining an acceptable dE tolerance margin and comparing measured color values with a reference. The reference defines the standard that you want to achieve.

> **Note:** A certain amount of color deviation is almost unavoidable. Due to differing printing conditions (printer, ink, media, etc.), it is generally impossible to obtain identical prints on two different printers.

13.1. Verification tools

Fiery Verify is the new verification tool used to measure color accuracy.

Fiery Verify runs on Windows and macOS including macOS Catalina 10.15 computers. The newer measurement devices, for example ES-3000, X-Rite i1Pro3, X-Rite i1Pro3 Plus, X-Rite i1iO3, KM MYIRO-1, are all supported in Fiery Verify.

Now watch the video *here*.

13.2. Fiery Verify standalone

You can use Fiery Verify as a standalone verification tool. To open it, click Verifier in the Job Center toolbar.

You can use the standalone verification tool for the following purposes:

- To verify a proof against a reference. See *Verify a job* on page 69.

- To verify color consistency between two prints (print-to-print comparison). See *Compare reference and sample colors in Fiery Verify* on page 71.

- To verify color consistency between two profiles (profile-to-profile comparison). See *Compare reference and sample colors in Fiery Verify* on page 71.

- To measure single color patches. See *Measure single color patches* on page 72.

13.2.1. Verify a job

To verify a proof against a reference, you can use either an inline spectrophotometer (embedded in your proofer), or an offline one (a separate device).

Verify a job offline

Follow the steps below to verify your proof using an offline spectrophotometer (a separate device, not embedded in your proofer).

1. Select the job you want to verify in Job Center. It should have the **To Verify** status.

2. Open the **Job Summary** panel and click the **Verify** link to open Fiery Verify.

3. Measure your proof's verification strip, following the instructions on screen.

4. When you are done, you will see the verification results, and whether your proof **Passed** or **Failed** verification.

   The results include the Lab values of your measured sample versus your reference, and your color deviation tolerance metrics.

   If you have sent this job from the Pack Proof task (**Proof for Contract Approval**), the reference and color deviation tolerance metrics are the ones you entered in the task. Please see the *Pack Proof documentation* for more details.

5. If desired, you can print a label and/or a report (on your default printer).

   • The label includes general information like the job name, tolerance set and measurement condition used, as well as a summary of your color deviation tolerance metrics (it includes all the criteria required to verify ISO 12647-7,12647-8, G7, or Fogra PSD Print Check compliance).

   • The report includes the same information, plus more detailed measurement data (the Lab values of your measured sample versus your reference).

6. After closing Fiery Verify, your job's status is updated in Job Center.

   If you have sent this job from the Pack Proof task, your job's status is also updated in the Automation Engine **Tasks** view. You can also see a summary of your verification results in Automation Engine (in the log file of the **Send to Proof Server** sub-task).

   > **Note:**
   >
   > If you want to verify *nested jobs*, you cannot use different verification strips for different jobs in your nesting. All nested jobs are printed with the verification strip of the first job.
   >
   > Verify each job using the steps above.

Verify a job inline

If you have chosen to verify your proof using your proofer's inline (embedded) spectrophotometer, the verification happens automatically on your proofer.

• You can see your print job's status change from **To Verify** to **Verified** in Job Center.

• If you have sent this job from the Pack Proof task (**Proof for Contract Approval**), you can see a summary of your verification results in Automation Engine (in the log file of the **Send to Proof Server** sub-task).

• If you chose to print an inline report, it will be printed automatically on your proofer.

   > **Note:** Verification with an inline spectrophotometer is not supported for *nestings*. If you want to verify nested jobs, you need to use an *offline spectrophotometer*.

13.2.2. Create or edit a tolerance set

You can create a tolerance set to specify the highest acceptable error margin when verifying the color accuracy of the printout against a reference.

> **Note:**
>
> You can only use these tolerance sets in Fiery Verify, you cannot use then when verifying your proof using Pack Proof's **Proof for Contract Approval** task in Automation Engine.
>
> When using this task, you set verification tolerances directly in the task. Please see the *Pack Proof documentation* for details.

You can define acceptable limits in different dE formula (dE 2000, dE 76, dE CMC 1:1, dE 94, CMC 2:1) for the following:

- General dE limits
- Primary color dE limits
- Hue difference dH limits
- Tone value difference tolerance limits
- Chromaticness difference dCh limits
- Spot color dE limits

1. Select **Edit** > **Tolerance Set Editor**.

   The **Tolerance Set Editor** window opens.

2. Next to **Tolerance set**, click the **Duplicate** button.

   A copy of the selected tolerance set is created.

3. Select a dE formula.

4. Define custom tolerance limits by editing the default values.

   To edit a value, select the check box next to the tolerance criterion you want to edit.

5. Select either **Warn** or **Fail** to specify how Fiery Verify will indicate when a measurement exceeds the limit.

   Warn is informative only and will still allow the comparison to pass. **Fail** will cause the entire comparison to fail.

6. Click **Save**.

13.2.3. Compare reference and sample colors in Fiery Verify

You can use the standalone verification tool for print-to-print comparison, and profile-to-profile comparison.

Before you begin, connect your measuring device to the computer if you want to verify the color accuracy of a printout.

Fiery Verify supports .txt and .it8 file formats. The sample and reference files must contain valid CGATS data.

1. In Job Center, in the toolbar, click Verifier.

   Fiery Verify starts.

2. Select **File** > **New comparison**.

3. Do one of the following:

   - Select **Comparison** > **Load reference**. Select a file, such as a reference profile, and then click **Open**.

- Select **Comparison** > **Measure reference**, and measure the control bar on your first printout.

4. Do one of the following:

   - Select **Comparison** > **Load sample**. Select a file, such as a Fogra reference, and then click **Open**.
   - Select **Comparison** > **Measure sample**, and measure the control bar on your second printout.

5. Select the appropriate tolerance set for your workflow.

   For more information on tolerance sets, see *Create or edit a tolerance set* on page 70.

6. Do one of the following to save the results of the verification comparison as a PDF file (optional):

   - Click **Report**.
   - Select **File** > **Export to PDF** > **Report**.

7. Click **Label** to display the verification results in your browser (optional).

   The label includes all the criteria that are required to verify ISO 12647-7,12647-8, G7, or Fogra PSD Print Check compliance. You can print out the label on your default printer.

Save measurement samples

You can save a measurement sample for use as a reference, or for comparison purposes. Measurement samples are saved as an .it8 file.

Do one of the following:

- Select **Comparison** > **Save sample**, browse to the destination where you want to save the file, and click **Save**.
- Select **Comparison** > **Save sample as reference**, type a name, and click **Save**.

13.2.4. Measure single color patches

You can measure the L*a*b* color values of multiple single color patches.

Before you begin, connect your measuring device to the computer.

1. Select **Comparison** > **Start patch measurement**.

2. Measure the first color patch.

   Fiery Verify populates the left-hand table with the L*a*b* color values of the color patch.

3. Measure further color patches, if required.

4. Click **Stop patch measurement** to finish.

14. Finishing options

Command WorkStation can help you trim your media accurately by printing crop marks, Fotoba marks, or grommet marks.

You require the following options to process certain types of crop marks and cut marks:

- Production option—Required for Fotoba and grommet marks.
- Cut Marks option—Required for i-cut marks (levels 1 to 5), and EuroSystems OptiSCOUT Design 7 (for SUMMA F series).

Now watch the video *here*.

14.1. Configure crop marks and Fotoba marks

You can print guidelines at job corners to indicate where to trim the media after printing. You can also print Fotoba marks, which enable the precise positioning of the blade on a cutting device.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Finishing** tab, expand the **Marks** panel. In the panel header bar, select the check box to activate the settings.
   - In Job Editor: On the **Finishing** tab, expand the **Marks** panel. In the panel header bar, select the check box to activate the settings.

2. Select **Crop Marks**.

3. Select **Limit to collection** (optional).

   When selected, this setting creates marks for a whole nesting, a whole step and repeat, or a whole tiling. When not selected, this setting creates marks around single jobs, including child jobs in nestings, and individual jobs in step and repeats.

4. Select a crop marks type.

5. Select a line color.

   Select a color that is easily visible on your media. To print white marks, you require a printer with white ink.

6. Do one of the following:

   - Crop marks—Type a line thickness, line length, and distance to job. Some settings are not available for some types of crop marks.
   - Fotoba marks—Type a horizontal and single vertical line thickness. The vertical single line is not available for some types of Fotoba marks.

7. Define bleed (optional).

   The bleed setting repositions the crop marks in relation to the job. Type positive bleed values to insert white space between job and crop marks.

   For crop marks, you can also enter negative bleed values to eliminate any unwanted white space that is visible around the job after trimming.

> **Note:**
>
> Negative bleed causes the knife to cut into the job, which reduces the job dimensions. You can counteract this effect by scaling the job so that the original dimensions are preserved after cutting.

8. Under **Presets**, click **Save** to create a preset of the current settings (optional).

Now watch the video *here*.

14.2. Configure grommet marks

You can print circular marks to indicate where to cut holes after printing. Grommet marks are used to hang banners, or flags on a pole.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Finishing** tab, expand the **Grommet** panel. In the panel header bar, select the check box to activate the settings.
   - In Job Editor: On the **Finishing** tab, expand the **Grommet** panel. In the panel header bar, select the check box to activate the settings.

2. Select **Limit to collection** (optional).

   When selected, this setting creates marks for a whole nesting, a whole step and repeat, or a whole tiling. When not selected, this setting creates marks around single jobs, including child jobs in nestings, and individual jobs in step and repeats.

3. Select a grommet marks type.

4. Type a line thickness, and a diameter.

   Some settings are not available for some types of grommet marks.

5. Select a color.

   Select a color that is easily visible on your media. To print white marks, you require a printer with white ink.

6. Define a margin (optional).

   The margin setting repositions grommet marks relative to the edge of the job. Type a positive margin value to print grommet marks outside the job area. Type a negative margin value to print grommet marks inside the job area.

7. Click **Adjust Grommets** (optional).

   The **Adjust Grommets** dialog box allows more precise alignment of grommet marks (see the following steps).

8. Type the distance from each job corner to the first grommet mark.

   This setting fixes the exact horizontal and vertical positions of end grommet marks. The values you enter are the distance measured from the job corner to the center of the grommet mark. Additional grommet marks are positioned between the two end points in accordance with the settings described below.

9. Do one of the following:

- Type the number of grommet marks. Each edge can have a different number of grommet marks. If no grommet marks are required along one edge, type "0" in the appropriate box.
- Type the targeted distance between grommet marks. The total available distance is equal to the width or height of the image. If the edge of the image is not exactly divisible by the targeted distance, the distance between grommet marks is rounded up or down to ensure that the grommet marks are distributed evenly apart. The actual calculated distance between grommet marks is displayed under the value you entered. If no grommet marks are required along one edge, type "0" in the appropriate edit box.

10. Click **OK**.

11. Under **Presets**, click **Save** to create a preset of the current settings (optional).

Now watch the video *here*.

15. Improving output quality

You can improve output quality by changing or turning off some program features that are not essential for your workflow.

You can try any of the following:

- Turn off **RIP and print on the fly**, so that job processing and printing do not occur simultaneously.

- Increase the RIP resolution.

- Correct the length of printed jobs.

- Simulate gravure printing, flexo printing, or offset printing.

- Smooth out gradations.

- Properly calibrate the printer. Some printers have an internal calibration feature that you can activate from the **Printer & Workflow Settings** tab.

- Use a high-quality media that is suitable for the job. For example, use photo paper for vivid output of photographic images, and use a proofing media for CMYK proofing jobs.

- Make sure that profiles and rendering intents (in Color Pilot) are suitable for your job.

- Recalibrate the printer (in Color Pilot). Recalibration adjusts the ink densities to those of the reference printer on which the media profile was created. A recalibration helps to ensure that the printer's color reproduction properties remain constant.

15.1. Turn off **RIP and print on the fly**

You can improve output quality by preventing Command WorkStation from processing and printing chunks of data simultaneously, which can lead to undesirable lines in the printout.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. On the **Printer** tab, expand the **Connection** panel.
2. Under **Speed**, clear **RIP and print on the fly**.

15.2. Increase the RIP resolution

You can improve output quality by increasing the RIP resolution. However, a higher RIP resolution reduces the output speed.

You cannot process a job at a higher RIP resolution than the print resolution.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **RIP Resolution** panel.

2. Move the slide bar to **High quality**.

Now watch the video *here*.

15.3. Turn off bidirectional printing

You can improve output quality by turning off bidirectional printing, which causes the print head to print in one direction only.

The print direction is saved to the calibration file. You can check whether unidirectional or bidirectional printing is selected on the **Media Configuration** panel in either Job Editor or Server Manager.

> **Note:** Not all printers support bidirectional printing.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a media. On the **Media** tab, expand the **Media Configuration** panel.
2. Under **Print direction**, deselect **Switch to bidirectional**.

15.4. Adjust the length of printed jobs

You can compensate for any inconsistency in the length of a printed image by adjusting the output dimensions. Such inconsistencies can occur as a result of a particular combination of printer and media.

The `C:\Program Files\Fiery\Components\Fiery XF\Samples` folder contains the file Lineal_01.ps. It consists of a set of ruler markings for a length and width of 0.5 m x 0.5 m.

1. Print out the file Lineal_01.ps and measure the length of the ruler markings.
2. Do one of the following:

- In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a media. On the **Media** tab, expand the **Media Correction** panel.
- In Job Editor: On the **Media** tab, expand the **Media Correction** panel.

3. Under **Media feed adjustment**, type the target length and the actual length.

You can also integrate a media length correction into the calibration file.

15.5. Simulate print characteristics

You can simulate distinctive print characteristics associated with gravure, flexo, and offset printing.

You can do the following:

- Simulate the effect that occurs in gravure printing when ink is not evenly transferred from the cylinder.

- Define the smallest dot size to be printed. In flexo printing, the smallest dot that can be etched onto a flexographic printing plate may be as small as 2%, but may gain to as much as 12% on the press due to the nature of the photopolymer plate material and the printing process.

- Simulate offset printing to reproduce an image that more closely resembles output on a printing press. It creates a less smooth effect than an inkjet printout.

1. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Printer** tab, expand the **Print Settings** panel.
   - In Job Editor: On the **Printer** tab, expand the **Print Settings** panel.

2. Click **Advanced Settings**.

3. Under **Simulate final run characteristics**, do one of the following:

   - Gravure printing: in **Show missing dots up to**, define the area coverage of missing dots as a percentage.
   - Flexo printing: in **Define first printable dot up to**, define where the first printable dot will start. This setting can be applied to contone data, but not to halftone data. Command WorkStation ignores dots that are smaller than the first printable dot.
   - Offset printing: in **Add noise up to**, define the percentage up to which Command WorkStation adds graininess to fine contours and fonts.

     If you are printing a job with a verification strip, the noise is applied to both the job and the verification strip.

15.6. Set up dynamic smoothing

You can smooth the gradations of low-contrast areas and light areas.

Dynamic smoothing achieves the best results in the following situations:

- Low-contrast areas of raster image files that are printed with visible artifacts due to image compression and bit-depth limitations of the RIPing process.

- Light areas that show a pronounced visual effect between 0% (media white) and 1% of ink coverage.

You can apply dynamic smoothing to:

- All PDF and PS files

- All supported color modes

- All process colors, and all named spot colors

- All jobs processed with the Adobe PDF print engine

Be aware that dynamic smoothing requires additional processing time.

1. Set the RIP resolution to **High quality** (see *Increase the RIP resolution* on page 76).

2. Do one of the following:

   - In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **Printer** tab, expand the **Print Settings** panel. Click **Advanced Settings**.
   - In Job Editor: On the **Printer** tab, expand the **Print Settings** panel. Click **Advanced Settings**.

3. Under **Simulate final run characteristics**, reduce the amount of noise to 0%.

   This setting removes graininess from fine contours and fonts.

4. Under **Dynamic smoothing**, select **Smooth out gradations and compression artifacts**.

5. Click **OK**.
6. Click **Save**.

16. Increasing output speed

You can speed up job processing and output by changing or turning off some program features that are not essential for your workflow.

You can try any of the following:

- Turn on **RIP and print on the fly**, so that job processing and printing occur simultaneously.

- Reduce the RIP resolution.

- Activate bidirectional printing.

- Increase the number of Adobe print engines to process multiple PostScript/PDF jobs simultaneously.

- Set up load balancing to share jobs out amongst the available resources.

- Move jobs to the top of the print queue.

- Make sure that the computer is not running multiple tasks concurrently.

- Convert complex PostScript jobs to PDF/X-1a format.

- Select a calibration set with a lower print resolution, which has less data to process.

- In the graphics program, convert jobs to a lower input resolution before loading in Command WorkStation.

- In a production workflow, select a template that has been especially designed for fast job output.

- Turn off in-RIP separation which prints separated files as a composite job using the printer's CMYK inks. If necessary, you can select **Simulate overprinting in composite jobs** instead, which is faster to process.

- If you do apply in-RIP separation, do not set the search priority to look for spot colors in the source files. Scanning for spot color definitions adds to the overall processing time.

- Do not rotate jobs or select minimal media consumption.

- Avoid simulating final run characteristics.

- Install the profile folders and system folders on a separate hard drive.

16.1. Turn on RIP and print on the fly

You can increase output speed by making Command WorkStation process and print chunks of data simultaneously. By default, Command WorkStation processes the whole job first and then starts printing.

> **Note:** The printer may pause sometimes when you select **RIP and print on the fly**, which can lead to undesirable lines in the printout.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. On the **Printer** tab, expand the **Connection** panel.

2. Under **Speed**, select **RIP and print on the fly**.

16.2. Reduce the RIP resolution

You can increase output speed by reducing the RIP resolution. However, a lower RIP resolution results in a draft-like print quality.

You cannot process a job at a higher RIP resolution than the print resolution.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **RIP Resolution** panel.
2. Move the slide bar to **Fast**.

16.3. Turn on bidirectional printing

You can increase output speed by turning on bidirectional printing, which causes the print head to print in both directions. However, the result may be less accurate.

The print direction is saved to the calibration file. You can check whether unidirectional or bidirectional printing is selected on the **Media Configuration** panel in either Job Editor or Server Manager.

> 📄 **Note:** Not all printers support bidirectional printing.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a media. On the **Media** tab, expand the **Media Configuration** panel.
2. Under **Print direction**, select **Switch to bidirectional**.

16.4. Increase the number of Adobe print engines

You can increase output speed by increasing the number of Adobe PostScript 3 engines and Adobe PDF print engines, which enables Command WorkStation to process multiple PostScript and PDF jobs simultaneously.

Normally, jobs are processed one after another by one single CPU core. The default number of print engines for CPSI and for Adobe PDF print engine is equal to the maximum number of CPU cores that are available for the operating system.

1. In Server Manager: On the sidebar, click **Server**, and then click **Server Info & Configuration**.
2. Under **General settings**, increase the number of Adobe PostScript 3 and Adobe PDF print engines.
3. Restart the Esko Proof Server.

16.5. Set up load balancing

You can increase output speed by setting up a hot folder that is monitored by multiple workflows or multiple printers.

Load balancing ensures that Command WorkStation uses the available system resources as efficiently as possible, by automatically diverting jobs in the hot folder to the first idle printer that becomes available. For example, if one printer is processing a large-volume job, or if one Esko Proof Server encounters a problem, job processing can continue via a different printer. When job processing starts, the job is automatically moved to the `C:\ProgramData\Esko\Proof\Server\JobFolder` to ensure that it is not processed multiple times or by two printers simultaneously.

> **Note:**
>
> Be aware of the following:
>
> - Printers that monitor the same hot folder may not be configured identically. Different presets or using a different printer can result in unsatisfactory color.
>
> - Load balancing cannot be applied to jobs in a multi-file format (for example, DCS, Scitex, TIFF/IT or delta lists).

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **Job Detection** panel.
2. Configure a hot folder.
3. Select **Enable load balancing**.
4. Repeat the procedure for a second workflow.

   Make sure that you select the same hot folder.

17. Managing Command WorkStation

Command WorkStation provides tools and features with which you can download media profiles for your printers, move program folders, and organize job files.

You must be logged on as an administrator on the computer running the Esko Proof Server.

- Esko Server Control—Controls the Esko Proof Server status, downloads and installs media profiles.

- Server Manager—Creates and restores backups, tidies up job files, uploads job-related files from an external source.

17.1. Esko Server Control

You can use Esko Server Control to control the Esko Proof Server status, and download and install media profiles.

Esko Server Control is pinned to the taskbar of the computer that is running the Esko Proof Server. The icon displays a white arrow on a green background when the server is running, or a white box on a red background when it is not running.

When you right-click **Esko Server Control**, the shortcut menu provides the following items:

- **Stop Esko Server**—Stops the Esko Proof Server.

- **Restart Esko Server**—Restarts the Esko Proof Server, which can accelerate some processes such as detecting new profiles.

- **Start Esko Command WorkStation**—Opens Command WorkStation at the Job Center program window.

- **Esko EPL Updater**—Downloads and installs new or updated media profiles.

- **Start Esko Server Control with Windows**—Starts Esko Server Control on system start and displays it as an icon in the Windows taskbar.

- **Esko Server Control**—Opens the **Esko Server Control** window, which provides direct access to all the shortcut menu items. Also provides quick access to Windows Services, and enables you to move profile and system folders from their default installation location.

Now watch the video *here*.

17.1.1. Display the Esko Server Control icon

The Esko Server Control icon is normally pinned to the taskbar of the Windows computer that is running the Esko Proof Server. If you cannot see the Esko Server Control icon, you can display it manually.

In the Windows **Start** menu, click **Esko** > **Esko Server Control**.

17.1.2. Download and install media profiles

You can download new and updated media profiles for your printer. Media profiles are available for many different printer models, media types, and resolutions.

1. In the taskbar: Right-click **Esko Server Control**, and click **Esko EPL Updater**.

    The **Profile Update Service** window opens.

2. Click **Next**.

3. Under **Manufacturer/Model**, click your printer manufacturer.

4. Under **Media Profiles**, select the media profiles that you want to install.

    You can select media profiles for different printer manufacturers in one download.

5. Click **Download List** (optional).

    You can view the listed of selected media profiles. To add or remove media profiles from the list, click **Add More Profiles**.

6. Click **Download**.

7. Click **Finish**.

The media profiles are downloaded and installed on your computer. Command WorkStation takes approximately thirty seconds to detect the media profiles.

17.1.3. Configure Windows services

You can check the status of the Windows services used by Command WorkStation. You can also assign network access rights to the Esko Proof Server service. Network access rights are required to print through a hot folder.

Command WorkStation uses the following Windows services:

*   Esko Proof Debug Log
*   Esko Proof Server

1. In the taskbar: Click **Esko Server Control**, and then click **Configure Services**.

2. Do one of the following:

    *   Make sure that the Windows services used by Command WorkStation are running. Start, stop, or restart a Windows service, if required.
    *   Right-click Esko Proof Server, and then click **Properties** to configure network access rights to the Esko Proof Server.

        For more information, see the operating system's online help, or ask your system administrator.

Now watch the video *here*.

17.1.4. Set profile folders and system folder paths

You can free up disk space on the C: drive by moving media profiles, JobFolder, output files, and temporary files, including CPSI and Adobe PDF Print Engine files from their default install location to a

different partition. The reference profile folder and the JDF folder are not used when working with the Esko Proof Server.

Before you begin: Make sure the Esko Proof Server is not running.

1. Do one of the following:

    • In the taskbar: Right-click **Esko Server Control**, and then click **Server File Paths**.
    • In Server Manager: On the sidebar, click **Server**, and then click **Server File Paths**.

2. Click the appropriate **Choose** button, and browse to the new folder.

3. Copy the files from the previous file location to the new file location.

4. Restart the Esko Proof Server.

17.1.5. Start Esko Server Control with Windows

By default, Esko Server Control appears in the taskbar of the computer that is running the Esko Proof Server. You can deactivate the autostart feature for Esko Server Control.

Do one of the following:

• To deactivate: In the taskbar, click **Esko Server Control**, and then clear **Start Esko Server Control with Windows**.
• To reactivate: In the Windows **Start** menu, click **Esko** > **Esko Server Control**.

17.2. System backup

Creating regular backups enables you to restore Command WorkStation to an earlier state quickly and easily.

A system backup saves your complete Esko Proof Server system, including all user settings, all presets, and all printer configurations in a single file.

The backup does not save any jobs.

17.2.1. Create a system backup

You can back up your complete Esko Proof Server system, including all user settings, all presets, and all printer configurations, in a single file.

1. In Server Manager: Click **Server**, click **Backup & Restore**, and then click **Backup**.

2. Select the items that you want to include in the backup, in addition to the server configuration.

3. Select the backup location.

    By default, the backup is created on the desktop. To choose a different location, click **Choose** and browse to a new destination.

4. Click **Backup**.

Now watch the video *here*.

17.2.2. Restore a system backup

You can return an Esko Proof Server system to a former state by restoring a previously created backup.

> **Note:** A backup will delete any existing calibrations, and replace them with those from the backup file. Jobs will not be restored from the backup file.

1. In Server Manager: Click **Server**, click **Backup & Restore**, and then click **Restore**.
2. Select a backup file from the list.

    By default, the list displays backup files that are saved to the desktop. If the backup file is saved elsewhere, click **Choose** and browse to that location.
3. Click **Restore**.
4. Restart the Esko Proof Server.

Now watch the video *here*.

17.3. Environments

Saving your environments ensures that you use exactly the same settings if you need to output repeat jobs at regular intervals. You can also use an environment to provide customers with exact workflow/ printer information.

An environment saves your printer configuration, including all workflows and all media, in a single file. It contains all the information necessary to reproduce the same printer environment on a different Esko Proof Server.

Now watch the video *here*.

17.3.1. Create an environment

You can save your printer configuration, including all workflows and all media, in a single file.

1. In Server Manager: On the sidebar, click **Printers**, right-click a printer name, and then click **Save as Environment**.
2. Type an environment name (optional).
3. Select the save location.

    By default, the environment is saved to the desktop. To choose a different location, click **Choose** and browse to a new destination.

4. Click **Save**.

17.3.2. Restore an environment

You can restore a previously saved environment, consisting of printer configuration, workflows and media.

1. In Server Manager: On the sidebar, click **Printers**. In the **Printers** tab header, click the **Load Environment** button.

2. Click **Choose**, and browse to the environment.

3. Clear the **Allow overwriting** check box (optional).

By default, existing files of the same name, such as media, reference profiles, and media profiles are overwritten. By clearing this check box, you can retain the existing files.

4. Click **Restore**.

Each environment has a unique printer connection. If the printer connection already exists, Command WorkStation restores the environment with placeholder printer information. In this case, you must configure the printer connection before you can import jobs.

17.4. Tidy up job files

Command WorkStation creates different types of files during job processing. Some files remain in the server program folders (`C:\ProgramData\Esko\Proof\Server`) indefinitely after job completion, so that an excessive volume of data can build up over time. You can delete files when they are no longer needed.

File type	Description
Source files	For every job that you load in your application, a source file is created in the `Server\JobFolder` folder. Deleting the source files does not remove the jobs themselves from the job list.
Output files	An output file (print file) is created in the `Server\Output` folder when you send a job to the printer.
Preview files	If the preview function is turned on, a preview file is created in the `Server\Preview` folder.
Temporary files	Various temporary files are created in the `Server\Temp` folder.
Job list	You can delete all jobs from the job list. However, you cannot delete the job list if jobs are currently being processed.

File type	Description
Log files	Log files are created in the `Server\Log` folder. They provide a record of all Command WorkStation processes. Log files can assist Support with problem solving.

17.4.1. Delete job files immediately

You can delete output files, preview files, temporary files, all jobs from the job list, and log files to free up space on the hard disk.

1. In Server Manager: On the sidebar, click **Server**, and then click **Maintenance**.
2. Do one of the following:

    - Select the items you want to delete.
    - Click **Delete All** to delete all file types.

3. Click **Delete Now**.

17.4.2. Delete job files after a specified criterion has been met

You can set a condition to delete source files, output files, and preview files.

The following criteria are possible:

- You can delete source files automatically after printing or after a certain number of days. You can also select which source files to delete from a hot folder.
- You can delete output and preview files automatically after printing or after a certain number of days.

1. In Server Manager: On the sidebar, click **Printers**, and select a printer. In the printer's tree view, select a workflow. On the **File** tab, expand the **Basic Information** panel.
2. Under **Delete source files**, specify when sources files are deleted.
3. Select **Delete source files from hot folder** (optional).
4. Under **Delete output/preview files**, specify when output and preview files are deleted.

    This setting is only available if you never delete source files. If you specify a criterion for deleting source files, the same setting is applied also to output and preview files.

17.5. Upload files from an external source

> **Note:** This is not applicable when working with an Esko Proof Server.

You can upload color files and media profiles from an external data storage medium or from the desktop. File Uploader copies the files directly into the correct program folder, thus saving you from having to browse manually.

Make sure that the external data storage medium is connected to your computer, if applicable.

1. In Server Manager: On the sidebar, click **Server**, and then click File Uploader.
2. Do one of the following:

   - Click **Standard Files**.
   - Click **Media Profiles**

3. Click **Choose**, and browse to the file you want to upload.

   You can upload the following file formats:

   - Source profiles (*.icc, *.icm)
   - Spot color tables (*.cxf)
   - L*a*b* optimizations (*.3cc). Note that this is not supported when working with the Esko Proof Server.

   - Visual color correction files (*.vcc)

4. Select the file, and click **Open**.
5. Click **Upload**.

17.6. Make regional settings

You can change the language and the unit of measurement for Command WorkStation.

1. In Job Center: Click **Edit > Preferences**.
2. Click **Region**.
3. Do one of the following:

   - Select a language.
   - Select a unit of measurement.

4. Click **OK**.
5. Restart Command WorkStation.

Now watch the video *here*.