Kongsberg integration

Description

Unlock the full potential of your Kongsberg cutting systems with the Kongsberg iPC Integration Bundle for Enfocus Switch. This powerful app bundle seamlessly connects your Enfocus Switch workflows with Kongsberg iPC (iCut Production Center), enabling streamlined, automated production processes. Whether you are preparing production files, sending cut jobs, or monitoring production status, this bundle ensures a smooth, efficient workflow from start to finish.

Compatibility

Switch 2023 Fall and higher. Windows or Mac OSX.

Compatibility third-party applications

Kongsberg prepare: Compatible with Kongsberg iPC version 2.6 or later, and requires PitStop Server 2023 Update 1 or newer.

Kongsberg submit: Compatible with Kongsberg iPC version 2.6 or later.

Kongsberg wait: Compatible with Kongsberg iPC version 3.0 or later

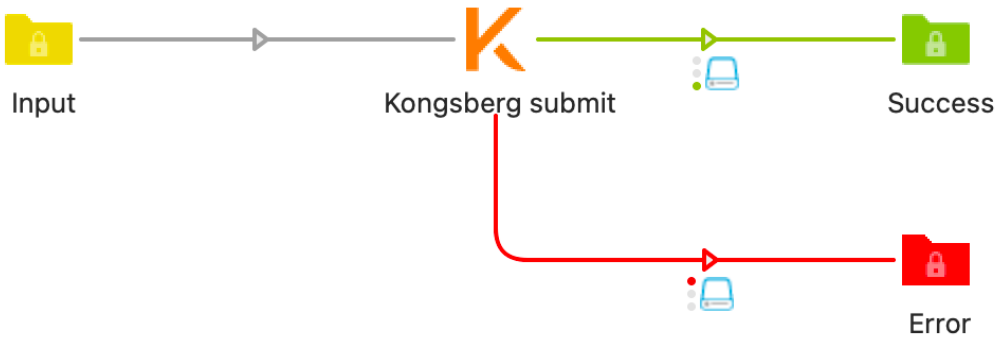
Kongsberg Integration Bundle

This bundle includes three applications: **Kongsberg Prepare**, **Kongsberg Submit**, and **Kongsberg Wait,** designed to be used sequentially.

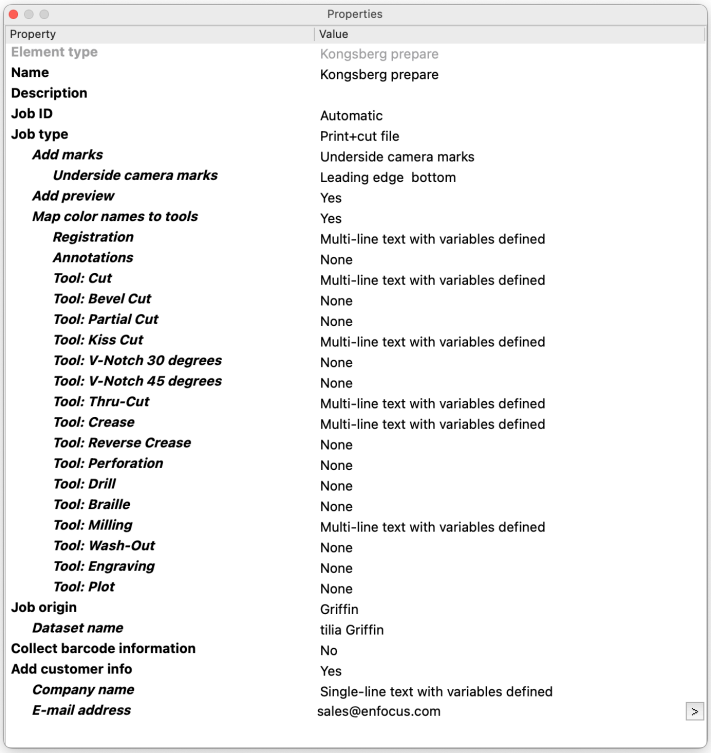
1. **Kongsberg Prepare** creates a ZIP file containing the PDF cut file and a JDF file with the settings for the cut job (substrate, copies, customer), and optionally a PNG preview of the print file. In workflows that use tools that can create such a ZIP file, this app can be skipped.
2. **Kongsberg Submit** sends the ZIP to a Kongsberg Hub via HTTP. The Kongsberg Hub is a component of the iPC with which Switch communicates. It returns information about the submitted job like the estimated production time. That information is added as a dataset. This app can load balance jobs over three Kongsberg Hub instances by choosing the one with the lowest estimated production time for all jobs that are waiting in the queue.
3. **Kongsberg Wait**: holds the job in Switch until the Kongsberg Hub reports the job as being produced. The job will then continue with the production information attached as a dataset. The dataset will contain the actual production time, and this can then be inserted into an MIS.

Connections

The app has an incoming connection and a traffic-light output connection. All the apps have a data connection that includes both success and error connections. When a job is processed successfully, it seamlessly continues along the success connection. However, if an issue arises during processing, the job is rerouted to the error connection. In such cases, a detailed error message is provided within the messages pane, offering insights into the problem encountered.



Kongsberg prepare properties



Flow elements properties

- **Job ID:** The Job ID property allows users to define a unique identifier for a job that will be sent to the Kongsberg iPC. Users can manually specify a custom Job ID to ensure clear tracking and management of jobs within the system. If set to automatic, the app will use the name of the incoming job, excluding the file extension, as the Job ID.
- **Job type:** This property allows users to select the type of job that arrives in the app; it is either a Cut File or a Print + Cut File.

  If the input job is a Cut File, the app generates a ZIP file containing a JDF (Job Definition Format) file, which includes all the data needed for automatic setup in Kongsberg iPC, such as media type, the required cutting tool, and other job specifications, and the input job as is.

  If the input job is a Print + Cut File, the app splits the file into a Print file and a Cut file, generates the ZIP file as described above and outputs the ZIP and the print file. It is optionally possible to include a preview of the print file the ZIP file.

  If defined, the print file can also include optional topside or underside QR barcodes, enabling the Kongsberg camera to automatically load the corresponding cut file and job specifications. It also contains specific camera marks for underside recognition, ensuring accurate alignment and cutting.
- **Add marks:** This property enhances print files by incorporating additional marks that support automated production processes. Users have three choices within this property: None, Topside Barcodes, or Underside Camera Marks. Selecting None means no additional marks will be added to the print file.

When Topside Barcodes is chosen, the app automatically generates and embeds QR codes within the print file. These QR codes are critical for enabling the Kongsberg camera system to recognize the cut file and automatically load the necessary production data. Upon selecting this option, an additional setting becomes available, allowing users to specify the placement of the QR codes on the print file. It's essential to ensure there is sufficient margin around the print file to accommodate these QR codes.

Alternatively, if Underside Camera Marks is selected, the app will add specific underside camera marks to the print file. These marks are used by underside cameras to ensure accurate alignment and cutting during the production process. Like with Topside Barcodes, users need to ensure that enough margin is left in the print file to properly place these marks without interfering with the design. Proper margin allocation is crucial for the accurate functioning of automated systems during production.

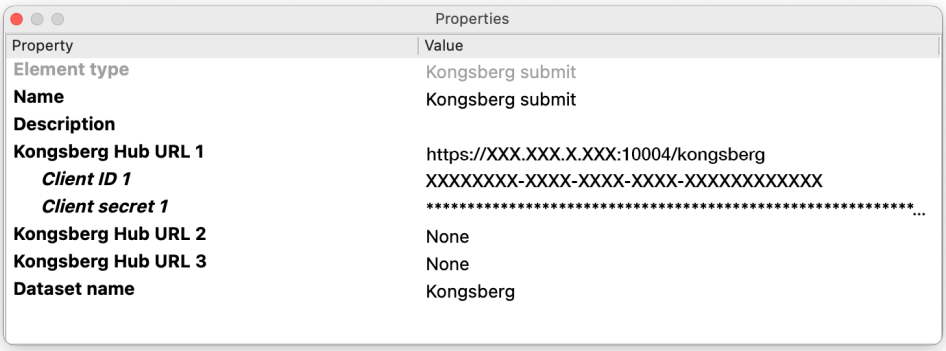
- **Add preview:** When set to "Yes," the **Add Preview** property automatically generates a preview image of the print file and embeds it within the .zip cut output for Kongsberg iPC software. This preview image is attached to the cut job in iPC, providing users with a visual reference directly within the iPC interface.
- **Map color names to tools:** This property allows users to assign specific spot colors defined in an incoming job to designated Kongsberg tool sets, ensuring that the correct tools are applied to the corresponding colors during production. Users have the flexibility to use regular expressions for mapping, such as "cut.*" to match all spot colors related to cutting.

  Each spot color name must be listed on a separate line, with no separation using spaces, commas, or semicolons; they must be entered one by one, each on a new line. For jobs where the camera registration marks are not defined as a spot color but as a registration or 100% CMYK, the term "All" can be used to assign the tool set to all applicable marks.
- **Job origin:** This property allows you to specify the source of your job within the application, offering three options: Griffin, Phoenix, or Other.

  Choosing either Griffin or Phoenix will reveal an additional property called **Dataset Name**. In this field, you'll need to enter the name of the dataset used in Griffin or Phoenix that you have previously defined in your Switch flow. This entry will automatically define the **Quantity** and **Substrate Name** fields, ensuring that the relevant information is accurately captured based on the dataset.

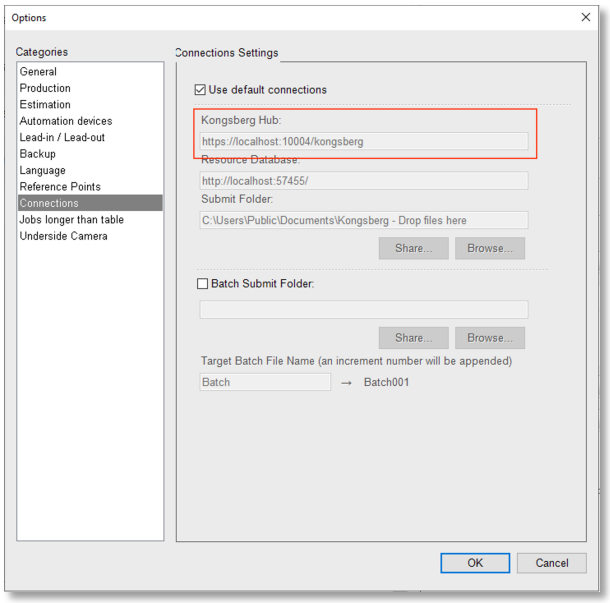
  If you select **Other**, the process requires manual entry. You'll need to define both the **Quantity** and **Substrate Name** fields, as these will not be automatically populated.
- **Collect barcode information:** When this property is set to "Yes," the app will automatically extract all barcode data from incoming jobs and include it in the Job Definition Format (JDF) file. This allows the Kongsberg iPC to accurately determine the position of the first camera mark based on the QR barcode. Additionally, you can specify a layer name for the barcode. However, if the QR barcode is created by the Kongsberg Prepare app, the value of the Barcode layer name must be set to "None" as these barcodes are not associated with any predefined layers.
- **Add customer info:** When set to **Yes**, this option allows users to input additional customer details beyond the basic information. This includes fields for capturing the customer's company name and email address, enabling a more comprehensive customer profile.

Kongsberg submit properties



Flow elements properties

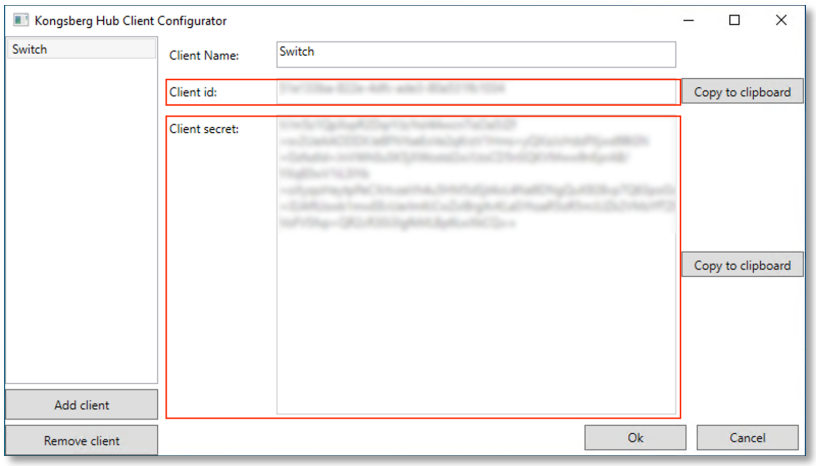
- **Kongsberg Hub URL:** This property allows you to specify the URL(s) for your Kongsberg Hub, enabling the app to connect and communicate with the Kongsberg iPC software. To find the correct URL, open the Kongsberg iPC software, navigate to **Tools** and then select **Connections**. Replace the default localhost with the IP address of the computer where the Kongsberg iPC is installed.



  You can define up to three URLs. If multiple URLs are provided, the app will automatically distribute jobs across the specified Kongsberg Hubs, facilitating load balancing and improving overall performance. The Kongsberg Hub with the lowest total estimated production time is chosen.

- **Client ID & Client secret:** These are essential credentials required for authenticating and authorizing your application within the Kongsberg Hub system. Both of these properties must be defined using the values obtained from the Kongsberg Hub Client Configurator application, which can be found on the computer where the Kongsberg iPC is installed. The application is located at: C:\Program Files (x86)\IcutProductionConsole\KongsbergHub\KongsbergHubClientConfigurator.exe

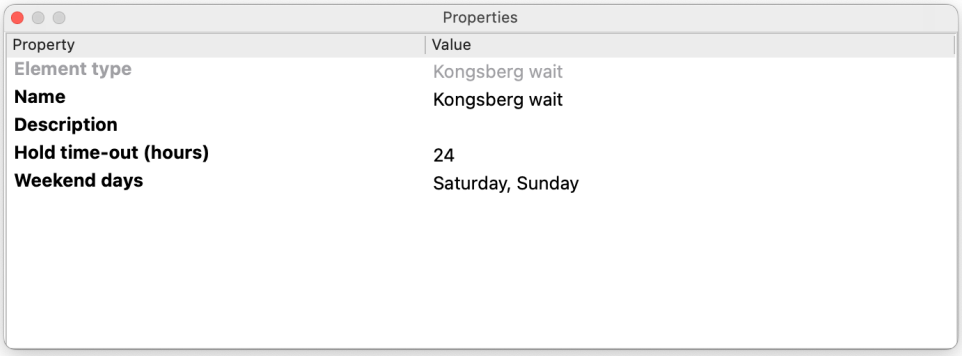
To obtain the Client ID and Client Secret, launch the Kongsberg Hub Client Configurator from the specified location. If no client has been created previously, you will need to create a new client within the configurator. Upon creation, the configurator will generate both the Client ID and Client Secret. If a client already exists, you can retrieve the existing Client ID and Client Secret from the configurator.



Once you have obtained the Client ID and Client Secret, enter these values into the corresponding properties of your app. These credentials are crucial for establishing secure and authenticated communication with the Kongsberg Hub system, so it is important that they are correctly defined.

- **Dataset name:** This property allows the user to define the name of the JSON dataset associated with the job. The dataset includes general details, production information, estimation data, status, and other relevant job-specific metrics.

Kongsberg wait properties



Flow elements properties

- **Hold time-out (hours):** This property allows the user to specify the maximum duration (in hours) that a job will wait for a completion signal from the Kongsberg iPC software before proceeding in the workflow. During this hold period, the job remains paused until it receives confirmation that the task has been completed. Upon receiving the completion signal, the app will automatically store key details such as the number of copies produced, the total cutting time, and other relevant metrics, as a dataset linked to the job.

  If the job does not receive the completion signal within the specified hold time, it will automatically be rerouted to the error connection, indicating that the process was not successfully completed within the allotted time.

- **Weekend days:** This property allows the app to automatically recognize and exclude weekend days. This feature is designed to work in tandem with the "Hold Time-Out (Hours)" property, which specifies the number of hours a process or task can be held.

  When the "Weekend Days" property is defined, the app pauses the countdown of the hold time during the weekend, ensuring that only business days are counted.

  For example, if a task is set to be on hold for 48 hours and the hold begins on a Friday afternoon, the hold will pause over the weekend and resume on Monday morning, allowing for accurate timing that reflects actual working hours.