

# Automation Engine 22

chapter 'AE SaaS'

11 - 2022

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# 1. SaaS Concept and Setups

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## SaaS versus On-Premises

- **Automation Engine On-Premises**

The Automation Engine server software is on-premises when it is installed on a computer of your organization, at a location that you chose. This Automation Engine can be used within the LAN it is installed in.

The company that purchased (or rents) the licenses of this Automation Engine typically also fully manages this setup. Their staff is trained by Esko in its configuration and usage.

This company, depending on its maintenance contract, can be assisted by Esko support staff (Esko direct or via a reseller).

- **Automation Engine SaaS**

Software as a Service is a software delivery model in which software is centrally hosted at a hosting company that is not a location of the end-user organization, often referred to a 'data center'. Esko decides the hosting company and manages the installation and maintenance of the software.

An Automation Engine SaaS setup is a single-tenant setup. It is dedicated to one Esko customer.

Your organization, based on an annual license subscription, configures and uses the attributed server(s). All access to it from applications within your organization (Pilot, browser client, ArtPro + ,DeskPack, devices) happens via the web in a secure way.

The files and central resources that an Automation Engine SaaS can process also need to be present at the hosting company, in that data center. Data that are no longer active can be off-loaded to reside on Esko Cloud.

## Setting up Automation Engine SaaS: Who does what?

- Initially, Esko's Platform Operations team ('PlatOps') will have been closely involved with the customer and Esko sales to agree on the setup in the data center.
- Esko PlatOps takes care of the installation and main configuration of this agreed setup at the data center company.
- Esko Academy, especially when Automation Engine was not yet used before this SaaS setup, provides training of the (licensed) Esko software tools used in this setup.
- In a SaaS setup, the role of administrator is split in 2 levels:

- **System Admin**

Esko PlatOps + Esko Support team members.

The configuration tools they use are not available for non-Esko users.

- **Operational Manager**

The customer's administrator(s) of Automation Engine, responsible for daily configuration and customization. The operational manager may also provide application training of other (admin) users.

In the Configure tool of an AE SaaS setup, this operational manager will see a reduced list of topics to manage. The full list is only available to Esko PlatOps team members.

- **User**

The daily user of Automation Engine (client) tools.

The operational manager may have reduced it access rights.

## 1.1. Not available in SaaS (only in On-Premises)

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Following features are not supported (not available) in an AE SaaS setup. The main reason is that they are technically impossible in a SaaS setup or that their use case is missing:

- RIP'ing (from AE SaaS data) on a local Imaging Engine.
  - RIP'ing with Imaging Engine needs to happen on the IE that is on board the AE SaaS server setup.
- Regular hot folders (Folder Access Point)
  - but replaceable with the setup of 'Agent Folders'
- Interacting with local (external) databases via SmartNames or via a Database Access Point
  - The 'Interact with Database' task is supported
- SAP connectivity: no SAP Access Point and no 'Interact with SAP' task.
- Shuttle integration with editors
  - replaced in AP+ and DP by its integration with My Workspace (browser client)
- Esko classic editors (ArtPro, PackEdge, Plato, I-cut, FastImpose). Learn more in [The Syncer Tool](#) on page 38.
  - As a consequence, resources that are only editable by these classic editors, i.e. SmartMarks and CAD style data, are also not supported in an AE SaaS setup.
- The Server Admin web page is not available. It is only available to Esko Platform Operations staff who have access to the data center.
- No support for LDAP user accounts.
- Standard Edition ArtiosCAD Servers
- External Script Runners
- (PS-)Printing to a local (office) printer: not possible via PS-print command/task from AE SaaS
  - but is possible via an Agent Folder - at least if the printer can pick up the file somehow (like a GMG proofer can)
- FlexRip
- Commercial Print (page) workflow modes in Pilot

## 1.2. FAQs

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We refer to the section FAQs in the eLearning module "**AE SaaS - Concept and Technology Overview**"



**Note:** All eLearning modules can be found on [the Esko Blended Learning platform](#).

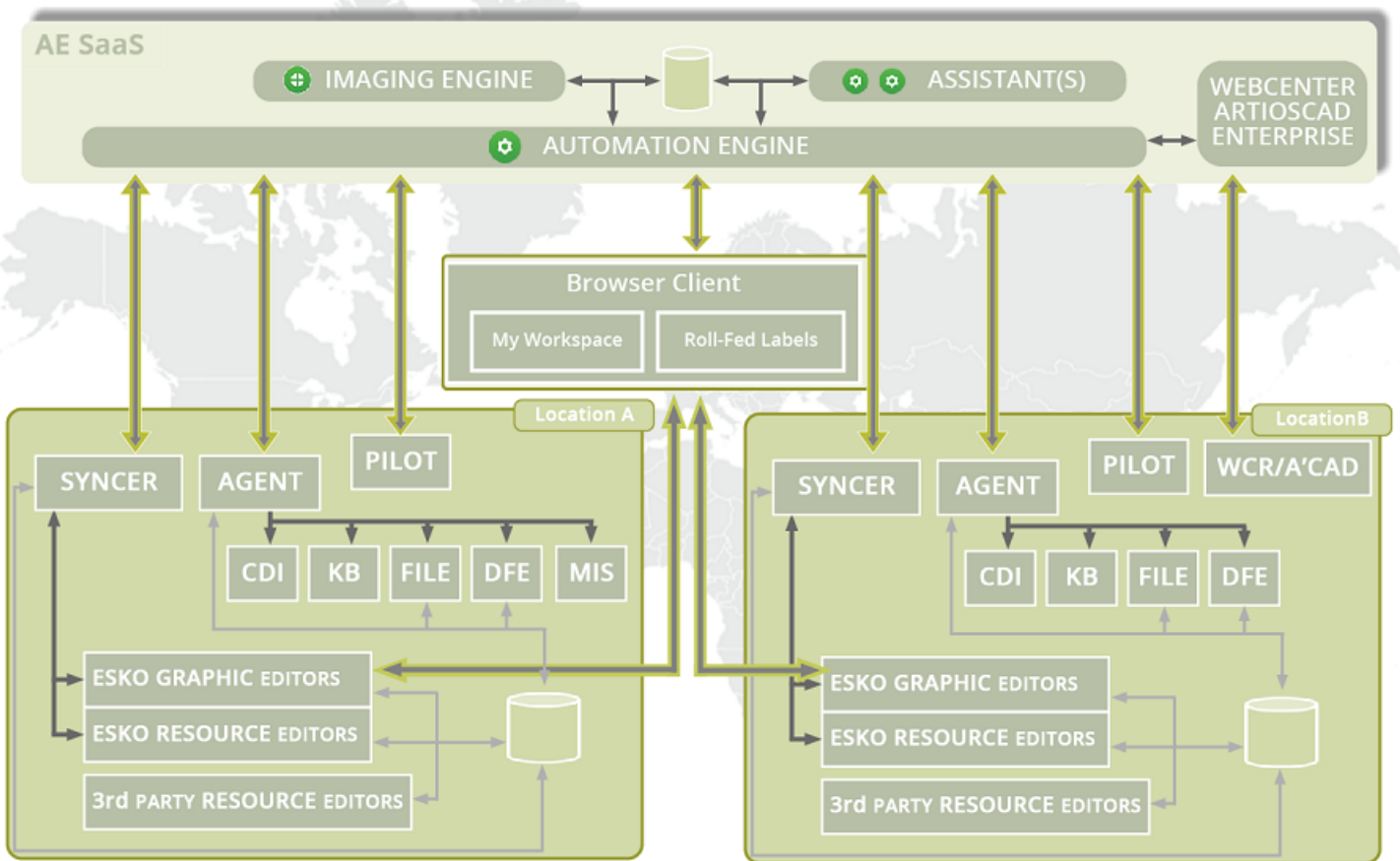
## 2. SaaS Technology Components

See the AE SaaS eLearning module 'Concept & Technology'



**Note:** All eLearning modules can be found on [the Esko Blended Learning platform](#).

The eLearning module "AE SaaS - Concept and technology Overview" includes a step by step explanation of this schema:



### Main Technical Components

- **Agent:** An Automation Engine Agent is a component in a local network that represents the AE SaaS server. It communicates to local devices and provides the necessary files and resources.



**Attention:** The local administrator needs to install this component on a chosen (Windows) computer and also take care of its updates.

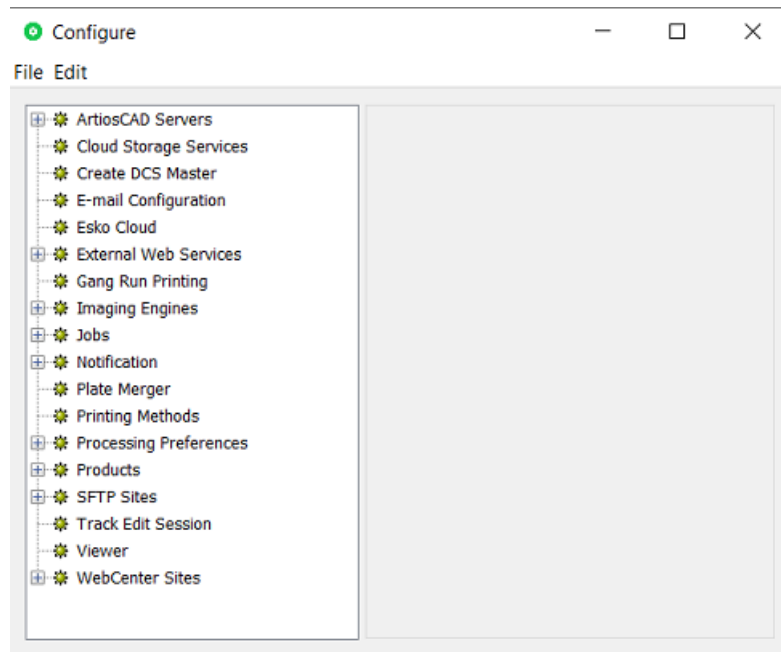
Learn more in [The Agent](#) on page 9.

- **Syncer:** When editing ArtPro+ or DeskPack files, this tool handles the data synchronisation between your local cache (of your local workstation) and the source data in the AE Container. Learn more in [The Syncer Tool](#) on page 38.
- **App Launcher:** When you ask to open a file in the AE browser client in some local application, this tool enables this and also helps to define which application you want to open for which file type. Learn more in [The App Launcher Tool](#).

## 2.1. How the Pilot client Adapts to a SaaS Connection

A Pilot client adapts to the type of server setup in these areas:

- **Connection protocol:** Depending on the chosen server, the Pilot adapts its connection protocol:
  - When the selected Automation Engine server is on-premises: the connection is done over TCP/IP and a classic version of the Pilot will open.
  - When the selected Automation Engine is a SaaS server in a data center, the connection is done over HTTPS (the 'Tunnel' protocol) and some functionality in the Pilot will not appear.
- **Configure tool**
  - **Full:** A Pilot using a TCP/IP connection will open a Configure tool with all topics available. This enables a full system configuration of an on-premises server, by its administrator or by Esko support staff
  - **Limited:** A Pilot using an HTTPS connection will open a Configure tool with a limited list of topics. The customer's Automation Engine administrator so only has access to topics on operational level.



**Note:** When Esko PlatOps staff is 'present' within the network of the hosting company and signed in to an AE SaaS server within that network, the connection will be TCP/IP and so they will have access to the full set of topics in the Configure tool.



## 2.2. The Agent

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The Agent was introduced in [SaaS Technology Components](#) on page 7.

The Agent is a component that enables general communication between the local site and the AE SaaS server. It specifically enables these tools:

- Setting up a local **Device**, to output from the AE SaaS server to your local CDI, DFE or Kongsberg cutting table.
- HTTP JDF/JMF communication to a local device that you can't add to the Devices view, for example an AVT inspection system, a Xeikon digital press, etc. This avoids the need to expose the HTTP port of that local device, something that your local IT will refuse for security reasons.
- Interact with a local external database. An Agent will do this on request of the AE SaaS task '[Interact with Database](#)'.
- Some classic communication via file exchange that is also wanted between a location and the SaaS server:
  - Extra Access Point: [Agent Folder Access Point](#) on page 14
  - Extra task: [Task 'Send File to Automation Engine Agent'](#) on page 18.

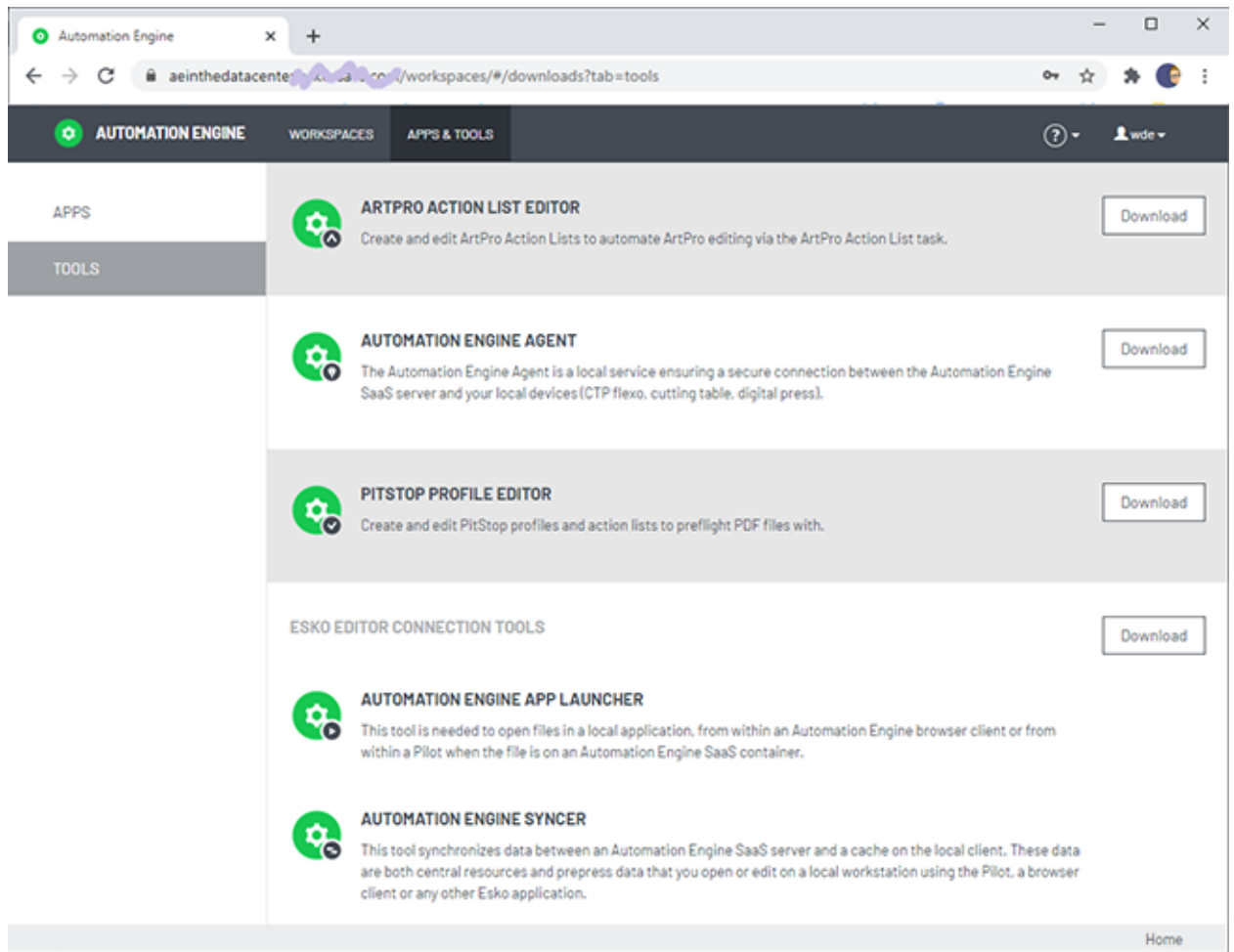
The local administrator needs to [install this Agent](#) on a local (Windows) computer and also take care of its updates.

### 2.2.1. Agent Installation

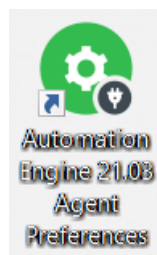
Installing an Agent is also done from browser client's home page. Follow these steps:

On the computer in the location where you want to install an Agent:

- Make sure the computer meets its requirements to serve as an Agent. See a special page under [the system requirements page of Automation Engine](#).
- In a browser, go to `http://<AESaaSserverName>:9000/`
- Click on the AE icon and in the left slide-out click on '**Home**'.
- Go to **Apps & Tools > > Tools**.
- For the tool **Automation Engine Agent**, click **Download**.



- Follow the installation instructions.
- When finished, you will have this extra desktop shortcut:



- Double click it open the [Agent Preferences web pages](#).

### 2.2.2. Agent Preferences web pages



**Important:** Find a valuable instruction video about this configuration in the course "AE SaaS - Agent Configuration for Administrators" on [Esko Blended Learning platform](#).

To open the web pages to configure and set preferences for your local Agent, go the computer where you installed the Agent and

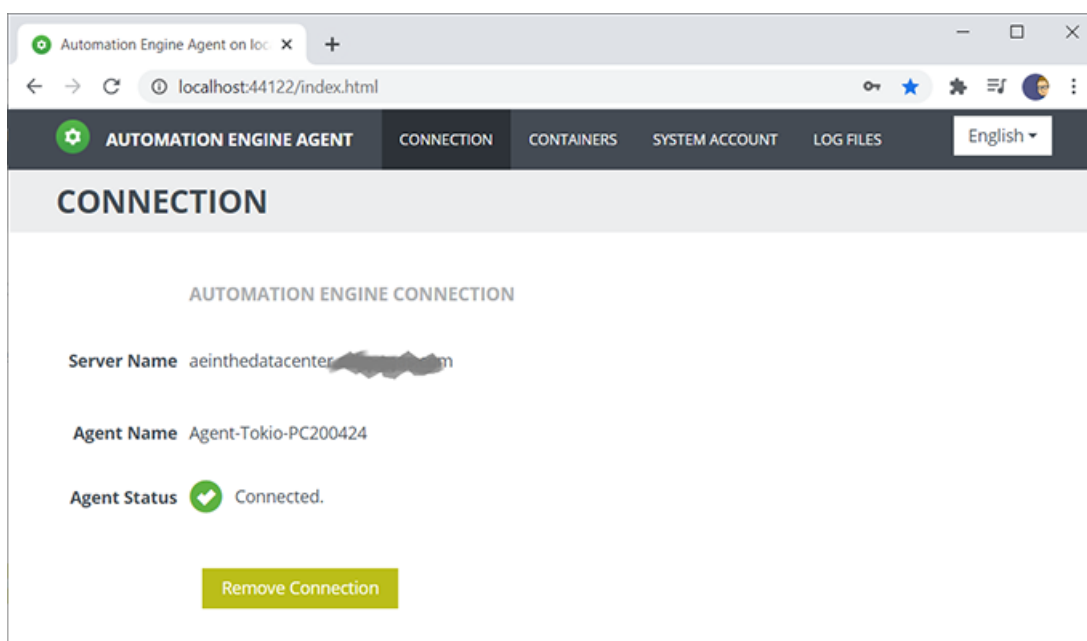
- open the URL `http://localhost:44122`.
- or double click the desktop icon for these pages.



**Attention:** To make any changes, you need an administrator account to the AE SaaS server.



**Note:** To support live updates, your browser needs to minimally this version: Chrome v61, Safari v30, Firefox v55, Edge v14).



**Note:** For most of below actions, you will be asked to authenticate (again) as an Automation Engine administrator user.

### Connection

When signing in here for the first time, the Agent Status will mention that the Agent is running but that it is not connected to an Automation Engine server.

- **Server Name:** Enter the name of your AE SaaS server.
- **Agent Name:** Enter a name for this local Agent. This name will be picked up in task tickets or other tools that users might see.

You only need one Agent per location, so we advise to refer to this location in its name. You can also add the actual name of the computer, but be aware that many users might not know that name. A good example: `AE-Agent-Tokio-PC375877`.



**Note:** The URL encoded version of this name should be smaller than 36 characters.

In the [Users](#) view, a user named after this Agent will appear. It has no functionality there. This user is linked to the user-based token that an Agent uses in its communication.

- **Agent Status** and subsequent action button:

- "Running, not connected to an Automation Engine server" - button **Connect**:  
Status when there is no configuration yet. Click **Connect** to connect and test the link between your local Agent and the SaaS server.

- "Connected" - button **Remove Connection**:

Click **Remove Connection** to remove the connection.



**Note:** This does not remove the Agent service or any of its configuration, only its connection to AE.

- "Automation Engine is up and running. The agent could not connect to Automation Engine" - button **Connect Again**:

The connection is invalid. Click **Connect Again** to try again.

- "Could not connect to Automation Engine. Please verify whether Automation Engine is up and running." - button **Modify Connection**:

The above specified AE SaaS server can't be reached.

- Check if the server is indeed running. As soon as the server is back up and running again, the connection will automatically be re-established.
- Click **Modify Connection** to change a field before trying again. Any Admin user can set or remove this connection.



**Important:** Early users of an Agent v22.07 that upgraded to v22.11 are recommended to remove and re-establish this connection before upgrading to a next major version (v23.03). This is required to start using the user-based tokens of the dedicated Agent-user described above.

## Containers

You can set up local **Agent Containers**. These are data zones within your local network that you want to use in some connection to the AE Server.

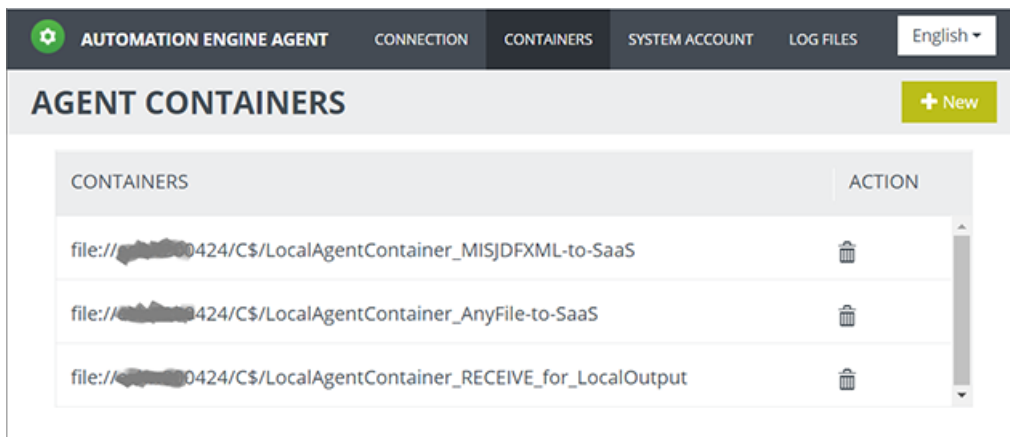
There are 3 main use cases for such Agent Containers:

- **To send files** to the AE SaaS server ; to serve as local "hot folder". For example
  - to trigger an action.
  - to send JDF files from your local MIS to the AE SaaS server
  - to be able to use TIFF Devices.

These Agent Containers are used in an [Agent Folder Access Point](#).

- **To receive files** from the AE SaaS server, typically data that should be output locally (proof, plate, press). Local devices can then pick up incoming jobs from such a folder (when they support such a basic 'hot folder' type of input).

These Agent Containers are used in the [Task 'Send File to Automation Engine Agent'](#) on page 18



Click **+ New** to add an Agent Container.

- The folder URL can be set by typing in a path to a share in the local network. For example: `file://computername/foldername`.  
An error message will be shown when the entry is not valid.
- You can add multiple Agent Containers.
- To remove any from this configuration, click the trash can icon and confirm with **Yes**.

### MIS

Learn more in [Working with Prefixes](#) on page 50.

### System Account

Agent technology is a Windows service ('EG Devices Agent') that is run by a system account that you define here.

### Log Files

Displays the Agent log files.

Typically, Esko support staff will check these type of files when needed.

Use the **Refresh** button to see live updates.

## 3. Extra Functionality in SaaS

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Because the client and the SaaS server are in different networks, these tools have been developed to re-enable functionality that otherwise would not be possible (or not secure).

### 3.1. Agent Folder Access Point

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When your Automation Engine server is a SaaS server (has that license), the type 'Folder Access Point' is replaced by a different one: **Agent Folder** Access Point.

Find a valuable instruction video in the course "AE SaaS - Agent Configuration for Administrators" on [Esko Blended Learning platform](#).

#### Concept: Sending local files to the SaaS network

When data are already within the AE Containers on the AE SaaS server, you can use many other tools to have AE actions done on those data.

The specific reason for this tool is that there are data on your local network that need some action on AE SaaS, which is not in your local network.

Typical examples:

- Some **data is created at your location**: A local system, for example the MIS system in your location, needs to transfer file data to AE SaaS. JDF or XML files can so create Jobs on your AE SaaS.
- Other **data arrives at your location**: For example customers send you files on your local FTP server, or via some physical medium arrives on your computer desktop, etc.). And these files also need to end up somewhere within the Containers of your AE SaaS server.



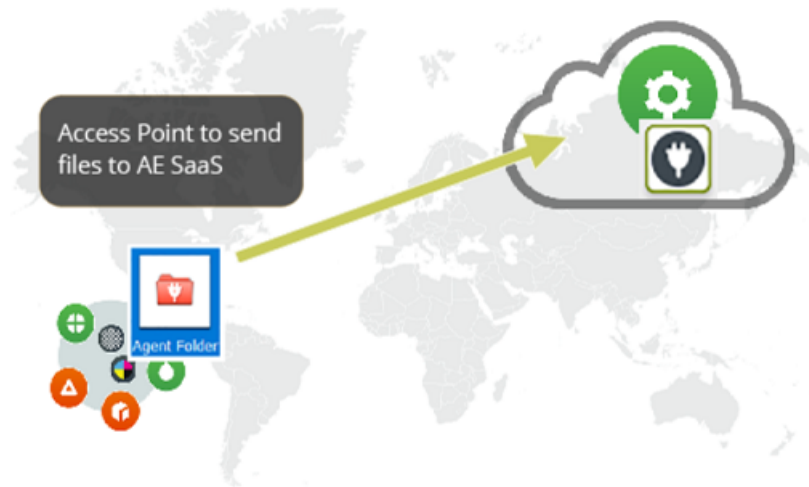
**Note:** An Access Point picks up files, not complete folders.



**Note:** Part of this use case can also be managed by using the [Drop File](#) functionality in My Workspace (browser client).



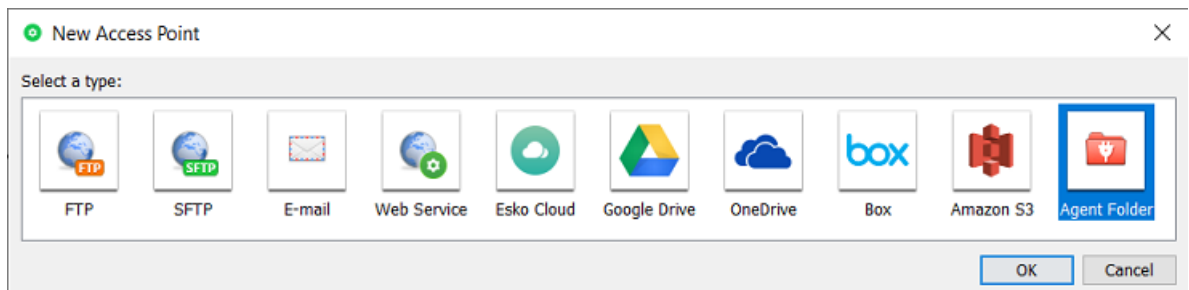
**Note:** In a Pilot client of an AE SaaS, the functionality to drop files onto folders in the Pilot or to use 'Explore' is not available.



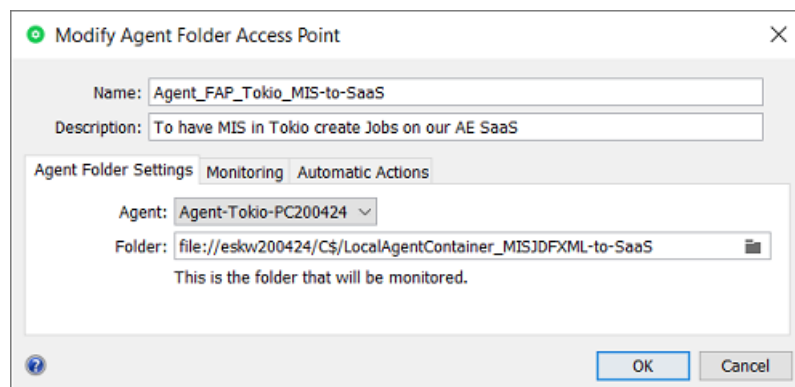
### Setup

**Note:** First make sure you have [set up](#) a local Agent and one or more Agent Containers.

- In the **Pilot** go to the **Access Points** view. Alternatively, choose **Tools > Access Points**.
- Click on . Alternatively, choose **File > New**.
- In the list of types, select **Agent Folder** and click **OK**.

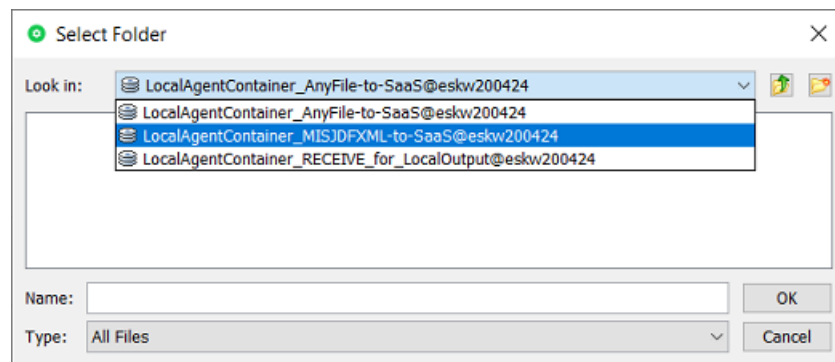


- The **New Agent Folder Access Point** dialog opens. An example:



- Enter a **Name** for the **Folder Access Point**.
- Optionally, enter a **Description**. This helps to identify this Access Point without having to read all its settings.
- In the tab **Agent Folder Settings**:
  - **Agent**: Select your local Agent.
  - **Folder**: Define which local folder will be the actual Access Point that will be monitored by your Automation Engine SaaS (through use of the local Agent).

Use the browse button to select a folder (within one) of the configured local [Agent Containers](#).



**Note:** This folder may not be used for any other Access Point.

- In the tab **Monitoring**:
  - **Check Every**. Enter the time interval with which Automation Engine should check if any new files came in. Think of the time interval as the *maximum* time it takes for the new files to be picked up.
  - **Schedule**. If you want this Access Point to be inactive during a part of the day, then activate this option and indicate the start and end time of that period.



**Note:** Such a temporary inactive state will not be shown in the general Access Points View. In that View, the column 'Active' shows its *general* status.

- In the tab **Automatic Actions**:  
Define what needs to happen when a file is detected.

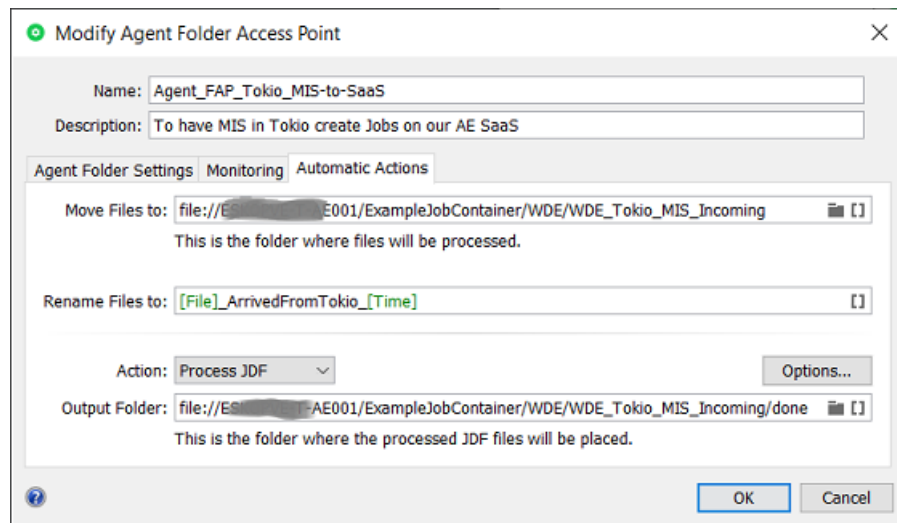
- **Move Files to**: This is the folder where the files will be processed. These files have to be moved to avoid that the **Access Point** would process the same files again and again.



**Important:** If this destination folder is part of a Job Folder, the workflow that this access point launches will run in the context of that Job.

- **Rename Files to**: If you want you can choose to rename these files too. Typically, SmartNames are used here to help indicate in their name *when* they were processed or *where* they came from.
- **Action**:





- **None:** Choose this option when you only want to use this Access Point to *move* the files to somewhere in an AE SaaS Container.
- **Launch Workflow:** Choose this option when you want a workflow to start. Select the workflow ticket from the offered list. The new accessed files will be used as input files for this workflow. If these files are inside a Job Folder, the workflow will be run in the context of that Job.



**Attention:** Make sure your workflow **can** start with the type of files that will arrive.

**Options:**

- **Operator:** Choose the operator that will be shown as operator for the workflow task.



**Tip:** If you do not want to assign one specific person, you could create an operator named "Access Points" or "Automatic" and assign that one here. Also remember that the Access Points Task Monitor shows you the tasks launched by the selected Access Point.



**Note:** If you leave this option blank, a system user "UPLC" will be used (referring to *UPLoad Client*).

- **Priority:** Choose the priority for this workflow: Low, Normal or High. The default priority is 'Normal'.
- **Process JDF:** Choose this option when this Access Point will be used to process incoming JDF files.
- **Output Folder:** Define where the JDF files should be placed once they were processed.



**Note:** Do not use this for XML files ; the JDF server behind this option will not process them. For XML files, select 'Launch workflow' and use the [Create Job task](#).

For more info on JDF, read this section: [What about JDF?](#)

### 3.2. Task 'Send File to Automation Engine Agent'

Find a valuable instruction video in the course "AE SaaS - Agent Configuration for Administrators" on [Esko Blended Learning platform](#).

#### Concept

Use this task to have Automation Engine SaaS send files (and folders) to a client location that has installed and configured an Agent.



**Important:** The data is copied, not moved.



**Important:** At the destination folder, identical files will be overwritten without warning.

Use this task for example at the end of a workflow by sending the (RIP'ed) output files to the location where they will be produced. i.e. being picked up by a proofer or CTP or press (some device that you could not configure as a local Device in the Pilot).



#### Task Settings

- **Agent:** Select the Agent in the target location.
- **Destination:** Select the folder, in one of the [local Agent Containers](#).



**Note:** It's possible to cancel the task while files are already transferring, however, their transfer will complete in the background anyway.

## 3.3. Adding a Local Device

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### Concept

Adding a Device (CTP Flexo, Digital Press, Kongsberg) is very similar to adding them as described for an on-premises Automation Engine.

Main extra is that you have to assign the name of the local Agent that will do the communication with the SaaS server.

Find valuable instruction videos in the course "AE SaaS - Agent Configuration for Administrators" on [Esko Blended Learning platform](#).

### Specifics for Local Devices in a SaaS setup

1. First make sure that your location has set up [a local Agent](#).
2. In the Views bar, in the group **Setup**, open the view **Devices**.
3. Click , select the device category and click **OK**.
4. In the **New Device** dialog:
  - **Agent:** Click  and select your local Agent.
  - **Server:** Type a name you will give to this local device.  
After having clicked 'Add', open the info dialog of the device, in the field for **Server**, make sure to type in the name or the IP address of the front end computer controlling that local device.
5. Click **Add** to confirm. The colored status box of the newly created device appears.
6. Double click its status box to see or change any attributes.

Learn much more detail in the main pages on adding specific devices:

- Flexo CTP device: [Devices \(CDI\)](#) or [Devices \(TIFF\)](#)
- Cutting Table device: [Devices \(Kongsberg\)](#)
- Digital press (DFE) device: [Devices \(Digital Presses\)](#).

### Outputting on the local Device

For a user, outputting on a local device is not different in a SaaS setup.

In the output tasks ('Submit to ...' , ), select the **Device** that you added here, set its parameters and launch.

The task will also show you the feedback it gets from that local device.

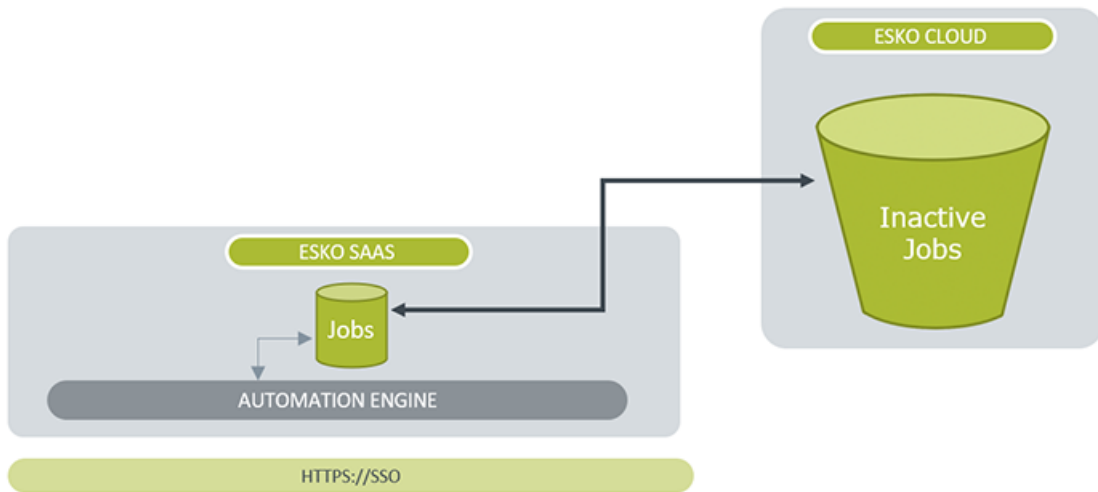
## 4. Storing Inactive Jobs on Esko Cloud

### 4.1. Concept and Configuration

#### Concept

An AE SaaS setup requires that the AE Containers are also in that data center. However, data storage in a data center can become quite expensive.

Automation Engine SaaS customers that have an Esko Cloud account can also use it as a nearline storage. They can move Jobs to Esko Cloud where they are stored as **Inactive Jobs**.



**Note:** Esko Cloud uses AWS S3 technology which stores data in 'buckets'.



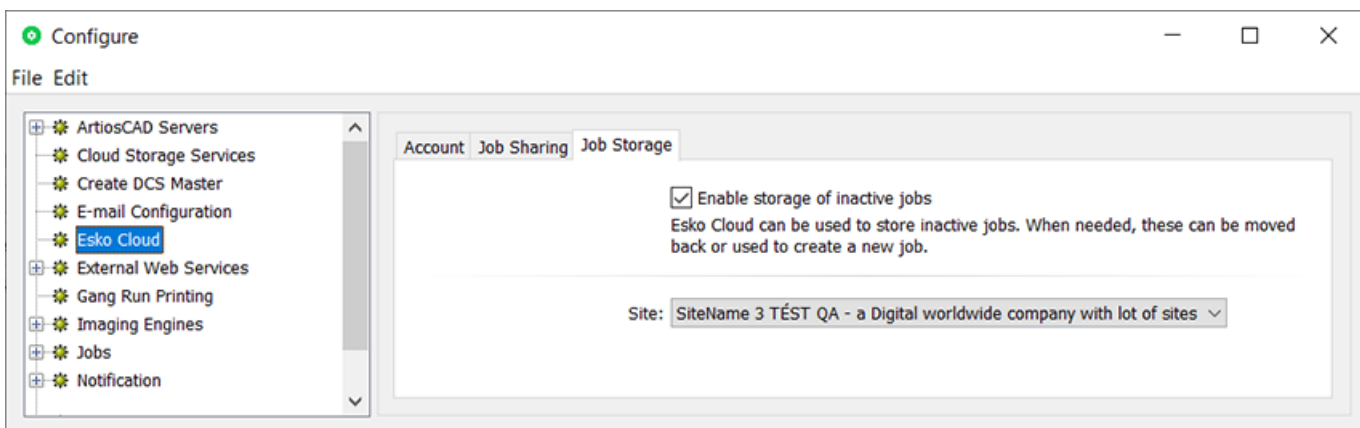
**Note:** Another tool that uses Esko Cloud is Job Sharing, which is about temporarily sharing selected files from within a Job with an other Automation Engine on-premises location within your company group. Learn more in the chapter [Sharing to Collaborate with other AE servers](#).

Jobs can be moved back and forth by manual actions in the dedicated View (Pilot) or Gallery (browser) or by launching a task.

And also these tasks can be automated by being linked to an Access Point or started from external system, etc.

#### Configuration

An administrator of the SaaS setup sets this up in the Pilot's Configure tool.



Once the Esko Cloud account is set up and signed in (learn more in [Esko Cloud](#)), select **Enable storage of inactive jobs** and select the Esko Cloud **Site** you will use for this purpose.




**Attention:** To avoid confusion, and also for performance reasons, it is strongly advised to set up the site for **Job Storage** on an different site than the site used for **Job Sharing**.

From now on, the Pilot will show the view 'Inactive Jobs'.

## 4.2. The View 'Inactive Jobs'

### General

 This view shows the inactive jobs that this location stored on Esko Cloud.

In the Pilot, it is part of the category of **General** views.

In [My Workspace](#) (browser client), it is shown in the page Jobs.

All functionality on inactive jobs is available in the Pilot or in [My Workspace](#). There is no specific reason to sign in to Esko Cloud and use the Esko Cloud browser interface.

The screenshot shows the 'Automation Engine Pilot' application window. The main area displays a table of inactive jobs with columns: Name, Inactivation Date, Inactivated By, Order ID, Sub Order ID, and Description. Below this is a 'Tasks' section with columns: Job Name, File Name, Task Type, Progress, Phase, State, and Launched. The status bar at the bottom indicates '13,895 jobs' and provides location, server, and user information.

Name	Inactivation Date	Inactivated By	Order ID	Sub Order ID	Description
0000002_0001	9/21/21 10:40 AM	kvha_user	0000002	0001	PALA Test Jo...
0000002_0002	9/9/21 11:26 AM	Francis	0000002	0002	PALA Test Jo...
0000002_WEB06	9/9/21 3:28 PM	kovdb	0000002	WEB06	PALA Test Jo...
0000002_WEB08	9/23/21 9:47 AM	kovdb	0000002	WEB08	PALA Test Jo...
1Movejob_Name_20210902140500	9/24/21 9:06 AM	weic	1Movejob_202...	001	Description of...
1Movejob_Name_20210902140610	9/24/21 9:06 AM	weic	1Movejob_202...	001	Description of...
1Movejob_Name_20210902140620	9/24/21 9:06 AM	weic	1Movejob_202...	001	Description of...
1Movejob_Name_20210902140630	9/24/21 9:06 AM	weic	1Movejob_202...	001	Description of...
1Movejob_Name_20210902140640	9/24/21 9:05 AM	weic	1Movejob_202...	001	Description of...
1Movejob_Name_20210902140652	9/24/21 9:05 AM	weic	1Movejob_202...	001	Description of...
1Movejob_Name_20210902140700	9/24/21 9:05 AM	weic	1Movejob_202...	001	Description of...
1Movejob_Name_20210902140710	9/24/21 9:05 AM	weic	1Movejob_202...	001	Description of...

Job Name	File Name	Task Type	Progress	Phase	State	Launched
		Wait	0%		🕒	10/8/21 4:00 PM
		<b>Workflow</b>	<b>0%</b>	<b>Running</b>	📄	<b>10/8/21 4:00 PM</b>
		Move Inactive Job t...	100%		✅	10/8/21 3:58 PM
		Move Inactive Job t...	100%		✅	10/8/21 3:58 PM

As usual, you can show or hide a selection of columns and you can re-arrange them.



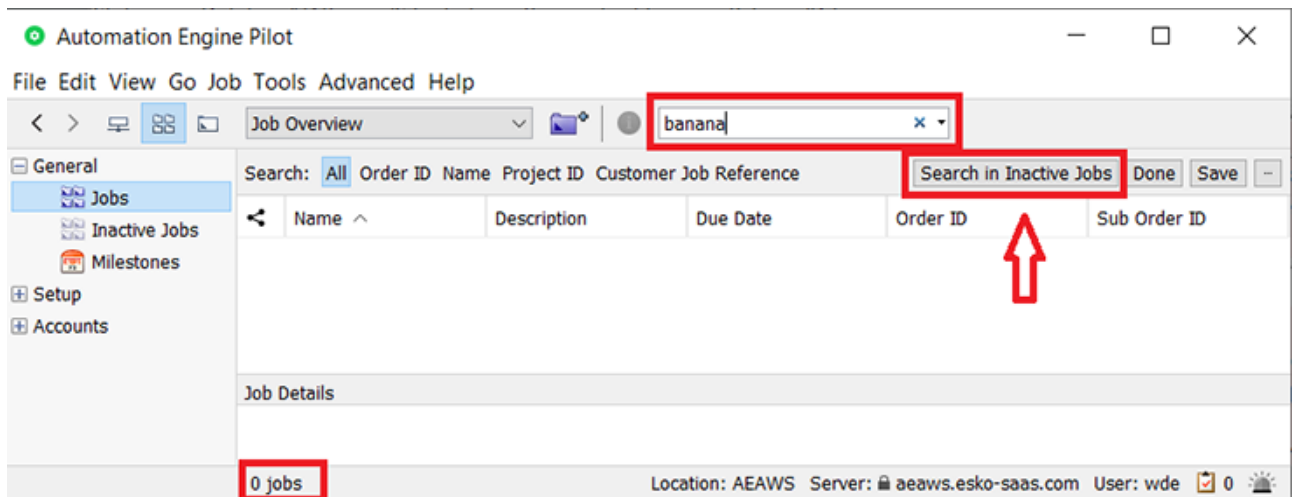
**Note:** This view shows all inactive jobs for this Esko Cloud account. When multiple locations use that same Esko Cloud account, then this view will show jobs coming from these multiple locations. This is also why there is a column showing the name of the **Location**.

Within an Esko Cloud site, a job's path is formed as <Customer>/Jobs/<Location>%2F<job-name>. And the <customer> is prefixed with the name of the AE 'Equipment' that is used to access the cloud.

The total number of jobs is shown in the bottom bar. When scrolling down to the bottom of the list, you may notice that this view only shows the first 10,000 jobs. When there are more than 10,000, a message will inform you about this.

The view is not live. Use the usual shortcuts to manually refresh this view.

With this second view on Jobs, the search and filter tool offers an extra button to repeat this same search in the view Inactive Jobs, and vice versa:



### Functionality in Jobs View

We will first mention the extra functionality in the classic **Jobs** view, as this is where it all starts.

Select one or more Jobs and (r-click or use the menu bar) and choose **Move to Inactive Jobs**. A dialog will ask confirmation before it launches the task **Move Job to Inactive Jobs** (1 task per job).



**Note:** *Shared Jobs* cannot be moved to Inactive Jobs.

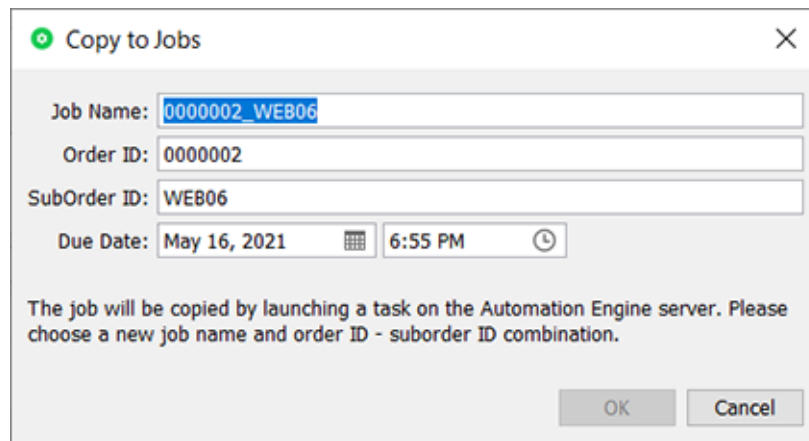
The Job and its Job Folder content is moved out of the Container and moved to the near-line storage on Esko Cloud.

### Functionality in Inactive Jobs View

Functionality on selected Inactive Job(s):

- **Info:** The **Job Info** dialog shows all the available attributes. All fields are read-only.
- **Explore:** Shows the file contents of this inactive job. The dialog is read-only and the files cannot be opened
- **Move to Jobs:** Launches the task *Move Inactive Job to Jobs* on all selected inactive jobs.
- **Copy to Jobs...:** Opens a dialog where you must define a new unique name for the job. The **OK** button will stay disabled until a new was defined.

Click **OK** to launch the task *Copy Inactive Job to Jobs* on that selected inactive job.

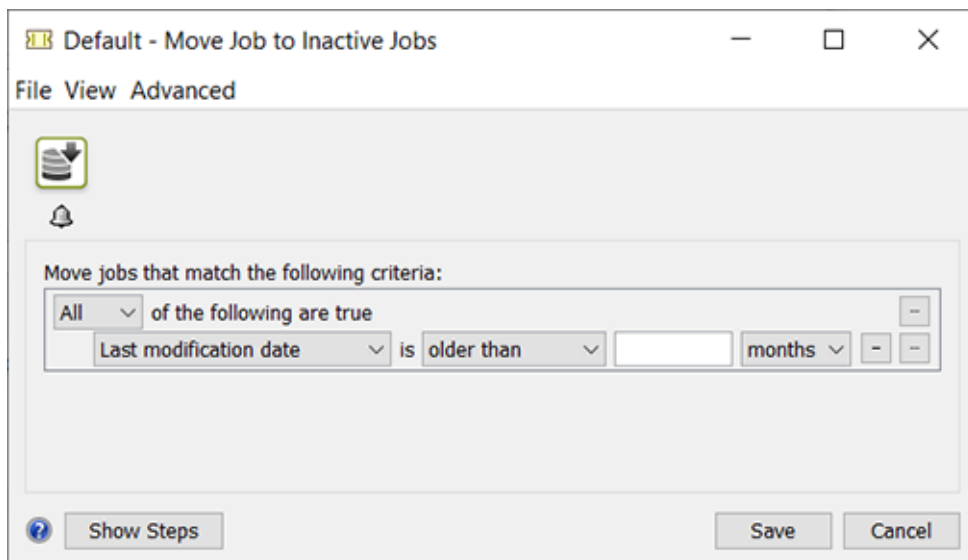


- **Delete:** Launches the task *Delete Inactive Job* on all selected inactive jobs

### 4.3. Task 'Move Job to Inactive Jobs'



This task moves the selected Job(s) and all its attributes to the database of Inactive Jobs (on Esko Cloud). Once that is successfully done, it removes all that Job's entries in the local Jobs database and also its Job Folder.



Some examples of criteria for job selection:

- **Last modification date** older than x days.
- Contains a **Job Parameter** x set to value y
- **Milestone** x was confirmed x days ago
- or a combination of the above.

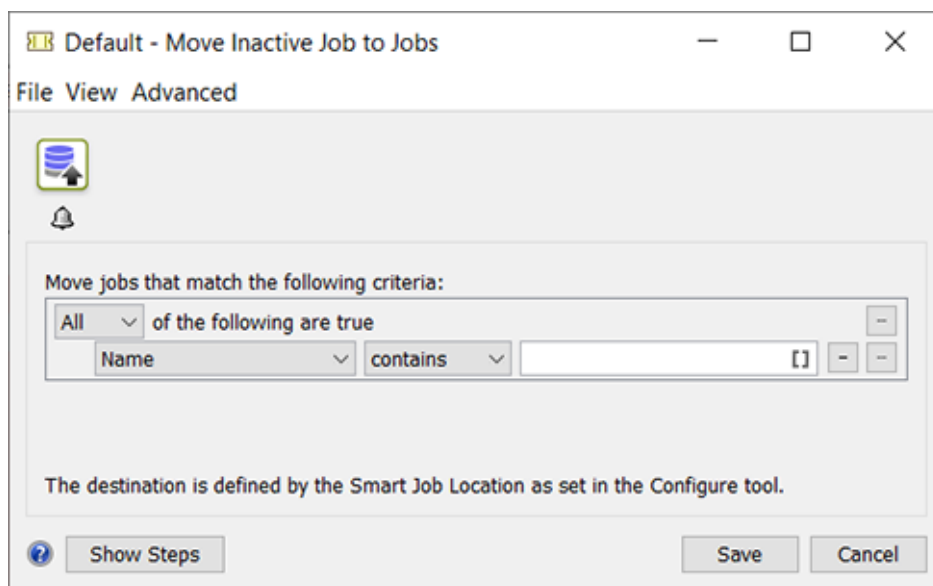


- When the Job's Customer ID does not yet exist on Esko Cloud (IAM partner), it is automatically created.
- When the task is launched on multiple input files, any SmartNames it uses are resolved against the first input file.
- The task will fail in these situations:
  - when the Job does not have a Customer assigned (Customer ID).
  - when the Job does not have a Job Folder assigned.
  - when there is already an Inactive Job with that same Job Name or with a same combination of Order ID and SubOrder ID.
  - when the Job is marked for Job Sharing. Learn more in [Sharing to Collaborate with other AE servers](#).

## 4.4. Task 'Move Inactive Job to Jobs'



This task creates the selected Inactive Job(s) on the local Jobs database with its same Order ID, SubOrder ID, Name, Creation Date, Due Date (the original dates), ... Also its Milestones are restored (with new calculated timings). Once this is successfully done and all files are downloaded, the Inactive Job on Esko Cloud is removed.



The target location for the Job Folder in an AE Container is defined by **Smart Job Location** rules that an administrator set up in the Pilot's Configure tool. Learn more [here](#).



**Attention:** For this to work, make sure that the Smart Job Location rules are specified in terms or SmartNames using only Job attributes (like `job.orderid`, `job.customerid`, `job.customerdescription`, ...).

When, for example, SmartNames are used that refer to some input file (directly or indirectly), this will lead to an incomplete or unusable path for the Job Folder.

- The task will fail when a local Job with the same Job Name or a same combination of Order ID and SubOrder ID already exists ; it will not overwrite such a same Job.
- When there is no local Customer ID yet that corresponds to the one of the Inactive Job, it will be created automatically on the local database.

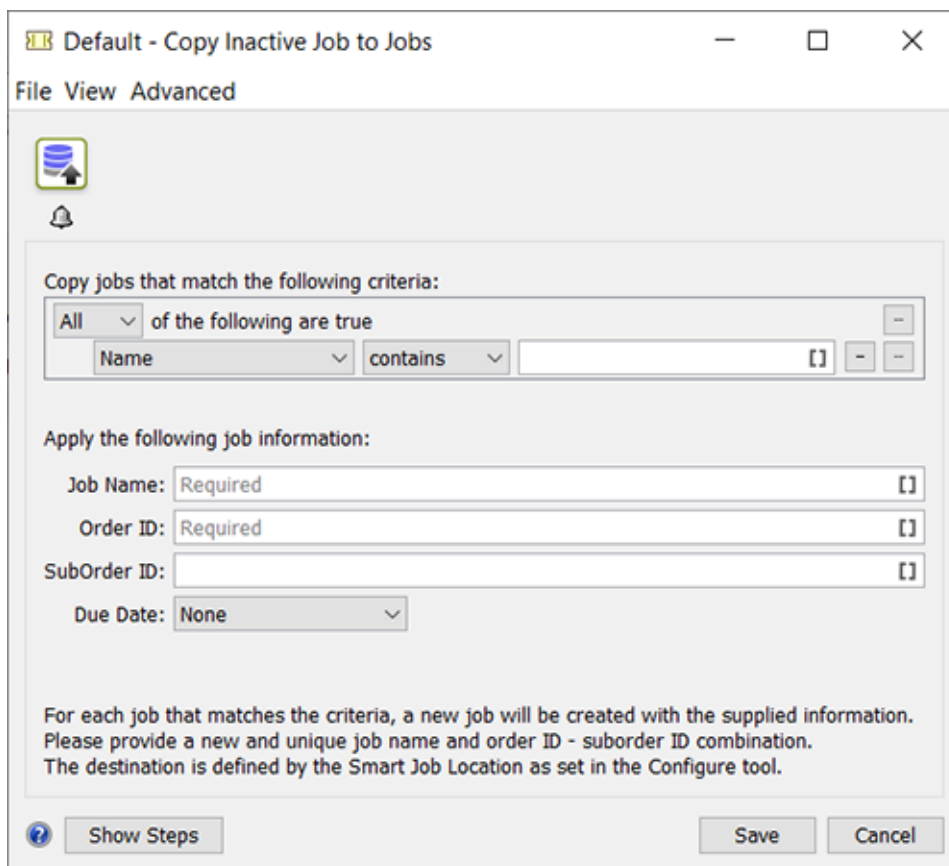
## 4.5. Task 'Copy Inactive Job to Jobs'

---



This task *copies* an Inactive Job to the local Jobs database. You typically do this when the Inactive Job has files or specifications that you want to re-use in a new Job.

However, to avoid that a Job with a same Name or combination of Order ID and SubOrder ID exists in 2 places (as a local Job on AE and also as an Inactivated Job on Esko Cloud), the task requires you to define a new unique name.



The task will fail when these options do not result in a new unique Job Name or combo or Order ID and Suborder ID.

The SmartNames Order ID, SubOrder ID, Name and Due Date can be used: these are resolved to the attributes of the Inactive Job. .

SmartNames relating to job parameters or job inks can not be used (are not available).

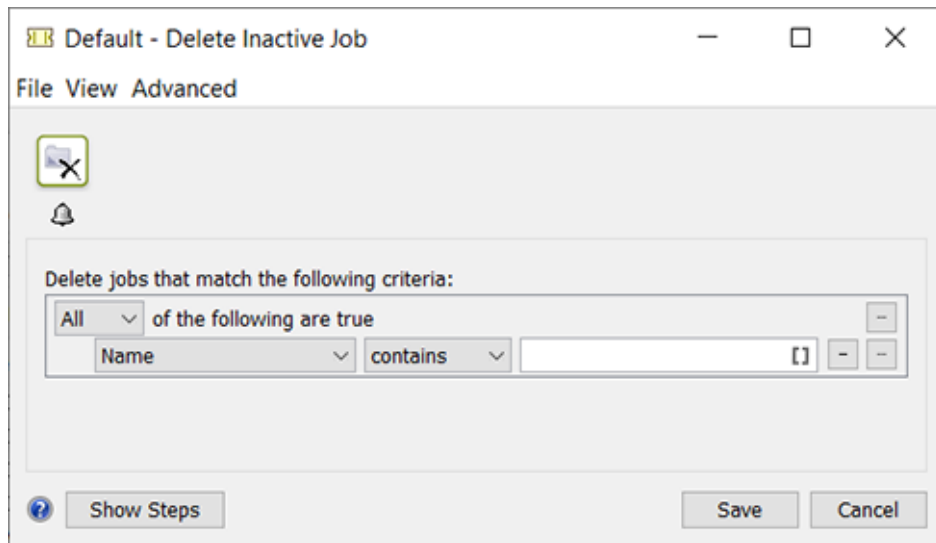
About the new Job's time-related settings:

- The **Creation Date** is set to the current time (when this task runs).
- The **Due Date** is set as specified in the task options.
- The Job's **Milestones** are not restored.

## 4.6. Task 'Delete Inactive Job'



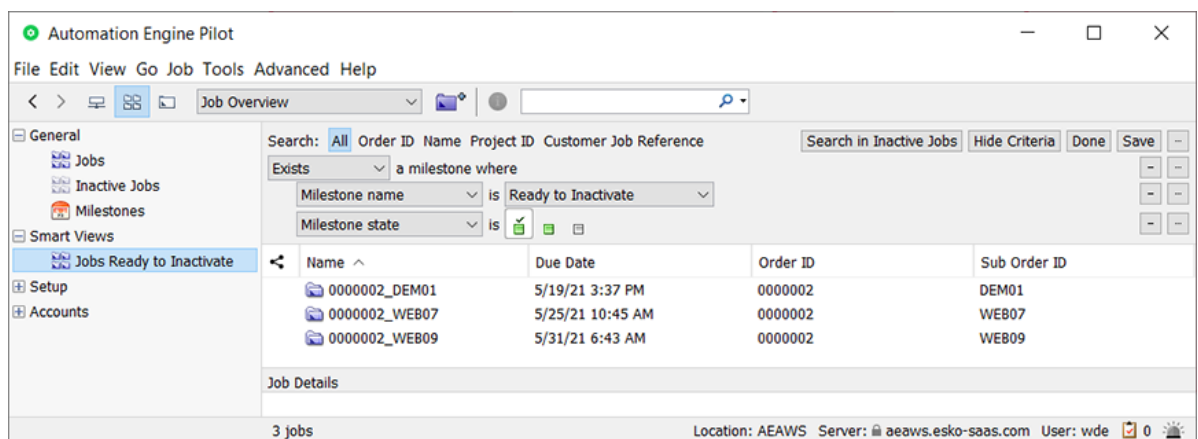
This task deletes the selected Inactive Jobs from that database on Esko Cloud.



## 4.7. Automating the moving of Jobs

### Example: A Smart View with Jobs that are ready to be Inactivated

1. When is it time to move a Job to the cheaper storage? One example could be that you want to move that data away from the SaaS data center 3 months after the Job was 'done' ; or one month after your MIS confirms its 'archive' state because the finance department confirmed in the MIS that the bill for that Job was paid.
2. Whatever your custom timing is, you can set a dedicated Milestone for that Job, for example the Milestone 'Ready to Inactivate'. Learn all about Milestones in [Milestones: Tracking Job Status](#).
3. Make a Smart View of the Jobs view that only shows jobs which have that milestone confirmed. Learn about Smart Views [here](#).



4. Make a selection and launch a workflow ticket that contains the [Task 'Move Job to Inactive Jobs'](#) on page 24.

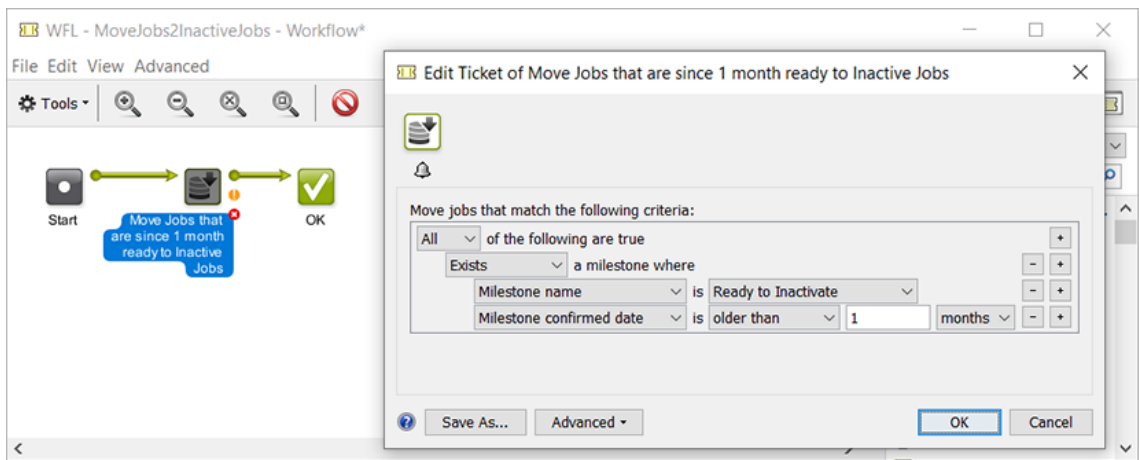
**Note:** A limitation in the current version requires this task to be part of a workflow ticket ; using the single task will only move the first in the selection.

**Example: An Access Point checking a Job's Milestone**

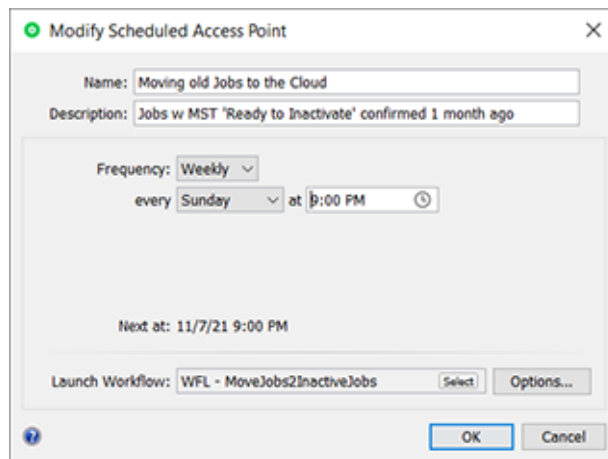
This starts the same way as above: Jobs having a Milestone that confirms they are ready to be moved away to Esko Cloud.

In this example we automate this by using an Access Point that, once a week, will launch that moving as a scheduled task.

1. Create the workflow that the Access Point will launch - an example:



2. Create the Schedule Access Point - an example:



## 4.8. Task 'Change Location of Inactive Jobs'

---

The term '**Location**' here refers to the concept of data-filtering as explained in [Filtering on Locations after consolidating all data](#) on page 46.

In a setup where you decided to use this Location attribute for Jobs, you might start with many Inactive Jobs that do not have this attribute set yet.

This task enables to set (or update) this location attribute for all Inactive Jobs that match the filter defined in the task ticket.

You can not start this task by first selecting a set of Inactive Jobs ; this selection is built into the task itself.

1. Make a task ticket with the wanted filtering of inactive jobs.
2. In the Workflow Editor, add this ticket to a workflow and save this workflow.
3. Launch this workflow (from within the editor or later for example as a favorite ticket).

## 5. Storing Products on Esko Cloud

### 5.1. Concept and Configuration

#### Concept

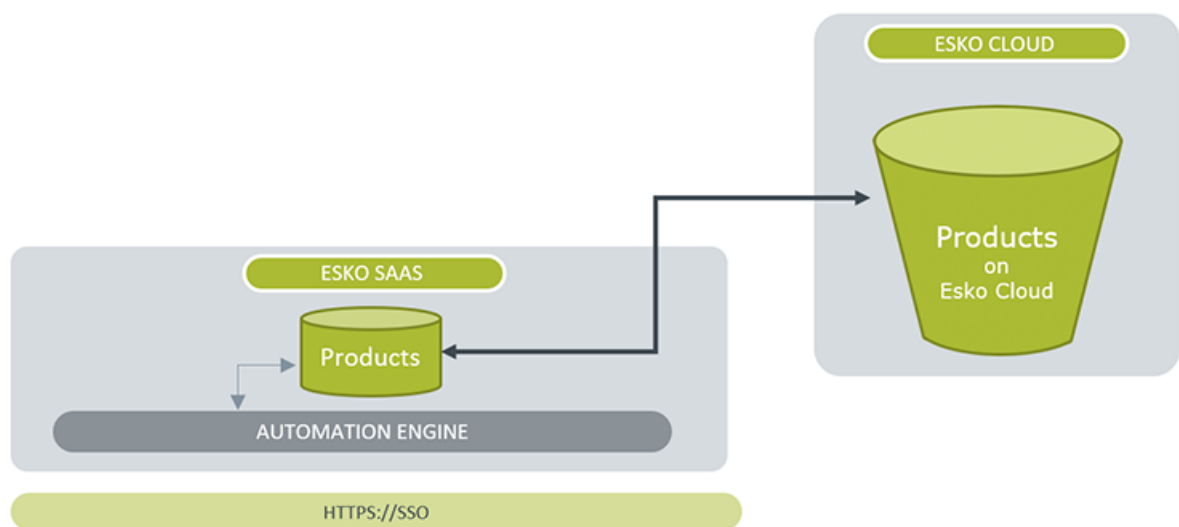
When working with *Products*, an AE SaaS setup also requires that they are stored within an AE Container, which means in the data center. However, data storage in a data center can become quite expensive, especially for Product related data, which conceptually represents long term data and probably the largest amount of data you may have.

Products and their data are kept until you are sure that you will never have to produce them again, or that you will never need their data as basis for some new variant.

Automation Engine SaaS customers that have an Esko Cloud account can also use it as a nearline storage. They can move or copy Products and their Product Data Zone to Esko Cloud and back.

It is also a lot easier to scale up storage on Esko Cloud than in a data center.

On Esko Cloud, Products are read-only. To use them actively, you need to (temporarily) bring them back to Automation Engine.



**Note:** Esko Cloud uses [AWS S3](#) technology which stores data in 'buckets'.

Products can be moved back and forth by manual actions in the dedicated View (Pilot) or Gallery (browser), or by launching a task.

And also these tasks can be automated by being linked to an Access Point or started from an external system, etc.

## Configuration

To be able to store Products on Esko Cloud, you only have set up a link to Esko Cloud in **Pilot > Configure > Esko Cloud > Product Storage**.

This [configuration](#) is very similar to the one for storing [Jobs on Esko Cloud](#).

The steps to follow are identical as described in [Initial Configuration](#) (in the chapter [Sharing to Collaborate with other AE servers](#)).

## 5.2. The View 'Products on Esko Cloud'

### General

This view shows the Automation Engine Products that this Automation Engine uploaded to Esko Cloud.

In the Pilot, this view is part of the category of **General** views. In [My Workspace](#) (browser client), it is shown in the page **Products**.

As with Inactive Jobs, all functionality on Products on Esko Cloud is available both in the Pilot and on My Workspace. There is no specific reason to sign in to Esko Cloud itself and use that Esko Cloud web interface.


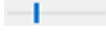
Job Name	File Name	Task Type	Progress	Phase	State	Launched
		Synchronize With Esko Cloud (D...	100%		✓	1/31/22 3:02 PM
		Synchronize With Esko Cloud (D...	100%		✓	1/31/22 1:04 PM
		Synchronize With Esko Cloud (D...	100%		✓	1/31/22 11:22 AM
	search_cloud_products_000.json	Convert JSON to XML	100%		✓	1/31/22 7:35 AM
	x_input file.xml	QATASK	100%		✓	1/31/22 7:35 AM
		Select File	100%		✓	1/31/22 7:35 AM



The total number of products is shown in the bottom bar. When scrolling down to the bottom of the list, you may notice that this view only shows the first 10.000 products. When there are more than 10.000, a message will inform you about this.

This view is not live. Use the usual shortcuts to manually refresh this view.



**Differences between this view and the 'Products' view:**

- In the top bar of this view:
  -  A delete button. You will be asked to confirm.
  -  Use the slider to change the size of the icons.
- The status of a product is indicated by a small colored circle. When you see more than one circle, this means that not all product parts have the same status. Maximum 3 such small circles are shown in this view.

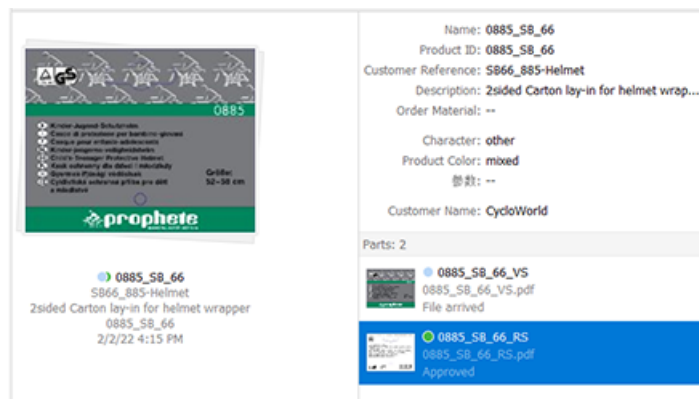
Learn more about the status of a product in [Products Views and Menu](#).

- The icon of a product with multiple parts will indicate this with a tilted shadow:



- Control of view options: Right-click anywhere in the products gallery and select **Show View Options...**
  -  When the gallery is in **icon** mode:
    - **Sort by:** By default, products are sorted by name. You can select a different method.
    - **Order:** Select if the sorting is done **Ascending** or **Descending**.
    - **Icon Size:** Use the slider to set the wanted size of the icon.
    - **Info:** The information shown underneath the icon can be customised. Select how many lines of info should appear below the icon. Then select what should be shown in those lines.
    - **Show status:** By default, a small colored circle underneath the preview indicates the product's status. You can switch this off.
  -  When the gallery is in **list** mode:
    - **Icon Size:** Select if you want a **Small** or **Large** preview icon.

- **Show icon:** By default, the column with the product's name also shows a small icon. You can switch this off.
- **Show status:** By default, the column with the product's name also shows its status. You can switch this off.
- The right-side panel shows details on the selected product. This example shows a product with 2 product parts:



**Tip:** To see further details of one of the product parts, double click its icon to see an extra info dialog.

### Related Functionality in the other View showing the LOCAL Products

Because this is where it all starts, we here first mention the extra functionality in the classic **Products** view.

- In the view 'Products', select one or more products and (right-click or use the menu bar) and select **Upload Product to Esko Cloud...**. A dialog will ask confirmation before it launches the task [Upload Product to Esko Cloud](#) (1 task per product).



**Note:** Only [global products](#) can be uploaded to Esko Cloud. This task fails when you launch it on a Job Product. Your only workaround to upload a Job product is by first removing the Job, which will also remove the product (not the data). Then re-create the product as a global product.

- Option: **Remove local product after upload**
  - When **selected**: After a successful upload to Esko Cloud, the local product and its complete data zone will be deleted.



**Attention:** Make sure that these product data zones do not overlap with data zones of any other products!

- When **not selected**: The local product remains in the local AE database of Products and its data zone is also untouched.

### Functionality in the View 'Products on Esko Cloud'

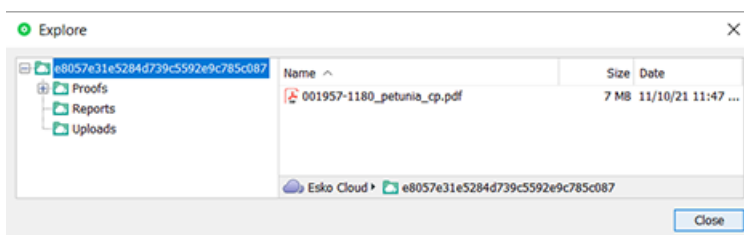
Select one or more products and right-click (or use the menu bar) to discover the available functions :

- **Info:** The **Product Info** dialog shows all the available attributes. All fields are read-only.



**Restriction:** In this dialog, not all customer related attributes are shown. Still, they are stored and will re-appear when downloading this product again.

- **Explore:** This dialog shows the content of the Product Data Zone on Esko Cloud. .



**Note:** While it is stored on Esko Cloud (using AWS buckets data system), the root folder or the Product Data Zone has a name using a unique ID.

The dialog is read-only and the files cannot be opened. However, there is one function available in this dialog: make a file selection, right-click and choose **Save to Downloads Folder**. This saves a copy of these files in to the 'downloads' folder on your local client computer.

A typical use case would be to download only a product's external image to be used in a new variant of that product.

- **Download...:** Launches the task [Download from Esko Cloud](#) on all selected products. It will create the product on Automation Engine and download the product part files.
- **Download complete Data Zone:** Select this to not only download the product part files but its complete data zone.



**Restriction:** When you want to download more than 100 products, we advise to use one of these alternatives:

- In this view, create a filter, then select all the results, and then choose 'Download...'. Or, for example in the Tickets view, open a ticket of this download task, then define your selection via the filter in the ticket, and launch the task from there.

- **Delete:** You will be asked to confirm. Click **OK** to launch the task [Delete Product on Esko Cloud](#) on the selected Product(s).

All related data on Esko Cloud will be deleted.



**Note:** As mentioned above, this view in 'My Workspace' (browser client) does not allow a user to delete or change a Product.

## 5.3. Task 'Upload Product to Esko Cloud'



Learn about uploading products to Esko Cloud in [The View 'Products on Esko Cloud'](#) on page 32.

This task ticket offers a filter to define the products to upload.

- **Remove local product after upload and delete its data zone:**



**Attention:** Make sure the data zone does not overlap with the data zone of other products. Even in that case, it will still be deleted!

When the product is already on Esko Cloud, the task will overwrite the data on Esko Cloud.

When the local product has no customer specified, the task will fail.

These data zone subfolders are not uploaded: ".metadata", ".view" and ".dip".

## 5.4. Task 'Download Product from Esko Cloud'

---



### Concept and Task settings

Learn about downloading products from Esko Cloud in [The View 'Products on Esko Cloud'](#) on page 32.

This task ticket offers a filter to define the products to download.

Downloading a product does not remove it from Esko Cloud. When that is what you want, use the dedicated [Task 'Delete Product on Esko Cloud'](#) on page 37.

- **Download complete Data Zone:** When selected, the task will not just download the product part files but the complete data zone.

### Example use case

An MIS could be the first system to know that a product is going to be needed again in (prepress) production. It can send the command to Automation Engine (XML/JDF...) to launch this task on that required product.

Learn about system integration in the chapter [Integrating with External Systems](#).



**Note:** An external system can not access a product directly on Esko Cloud.

### Where in the AE Containers is the new Product created?

- When the product **already exists** as a local product, the downloaded data and properties will overwrite all the local data in its existing product data zone.
- When the product is a **new** local product, it will be created as a local product and the destination of all data is decided by the Smart Product Location rules. Learn more in [Products Data Structure](#) and in [Smart Product Location](#).

### What happens to Modification Dates?

The modification dates of the transferred files do not change.

As a result, for example the SmartID of a file remains the same.

### What happens to Custom Statuses?

When you download a product that has a custom made status, and this custom made product status does not exist (or no longer exists) on Automation Engine, then this status will be kept for that product, but only its name, not its custom color or icon (you can re-add those attributes afterwards).

## 5.5. Task 'Delete Product on Esko Cloud'

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### Concept and Task settings

Learn about storing products to Esko Cloud in [The View 'Products on Esko Cloud'](#) on page 32.

This task ticket offers a filter to define the products to delete.

This task deletes the product on Esko Cloud and also deletes all its related files on Esko Cloud.

## 5.6. Task 'Change Location of Products on Esko Cloud'

---

The term '**Location**' here refers to the concept of data-filtering as explained in [Filtering on Locations after consolidating all data](#) on page 46.

In a setup where you decided to use this Location attribute for Products, you might start with many Products that do not have this attribute set yet.

This task enables to set (or update) this location attribute for all Products that match the filter defined in the task ticket.

You can not start this task by first selecting a set of Products on Esko Cloud ; this selection is built into the task itself.

1. Make a task ticket with the wanted filtering of Products on Esko Cloud.
2. In the Workflow Editor, add this ticket to a workflow and save this workflow.
3. Launch this workflow (from within the editor or later for example as a favorite ticket).

## 6. Editor Connection Tools

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### 6.1. The App Launcher Tool (SaaS + On-Premises)

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Opening files from within a browser client is possible both in SaaS as in on-premises setup. To the user, its functionality is identical.

See its description in the chapter on the browser client, in [Opening Files from the Browser Client](#).



- Note:** App Launcher communicates with Syncer: When a user requests to open a file,
- the App Launcher first informs the Syncer that that file is not yet in the local cache of the user's workstation and so that the syncer needs to copy it over from the AE SaaS Container.
  - Right after that it asks the user which local application should be used, or immediately opens the file in the default local app (as soon as the sync is done).

### 6.2. The Syncer Tool

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#### Concept

The Automation Engine Syncer tool allows users to work with a local synced copy of files and folders that are located in a SaaS data center, aka a mirror data set. When you open such a file on your local workstation, the Syncer will first sync the file from the data center to a local cache folder and only then that cached file will open in your local application.

When the user modifies the contents of the local mirror (i.e. adding, removing or modifying files and folders), the same modification is applied to the corresponding files and folders in the data center.



- Note:** When both the local file and the version in the data center has changed, a conflict is detected and a warning shown. Learn more below.

The Syncer is only aware it has do something when the opening of the file is done via any of these tools:

- **Clients:** AE client (Pilot or browser client)
- **Editors:** ArtPro+ and DeskPack (Adobe Illustrator + Esko plug-in)
- **Resource editors:** Color Pilot, Curve Pilot, PitStop Profile editor.



- Note:** Learn more below on what happens when the local applications are Esko classic editors (PackEdge, ArtPro, Plato / i-cut) or non-Esko applications (Acrobat, Photoshop, ...).

Also resource files are being sync'ed. Calibration resources (CMS, DGC, screens, profiles) consist of multiple files and to avoid data corruption, any edit and upload action is protected by locking flags. There is no automatic upload of modifications, the upload is under control of the editing application.

When starting up (and signing in to AE SaaS), the syncer already syncs these resource files ; there is no reason to wait until the user opens a first PDF file.

### Cache Folder Location and Warning

This is the default (and automatically created) location of a local cache is on the client, in the users' home directory:

- ~/AESYNC (macOS)
- %USERDIR%\AESYNC (Windows)



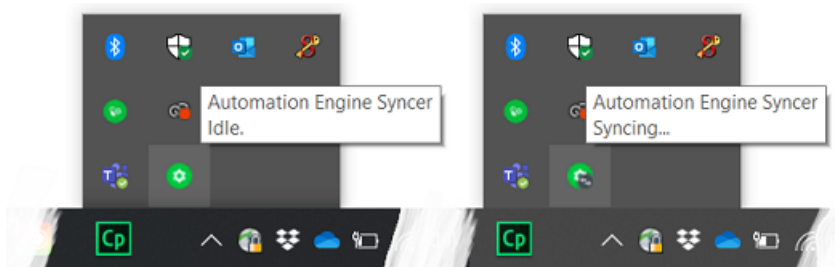
**Note:** This is a folder on each local workstation. This is not one folder for all workstations.



**Danger:** It is strongly dis-advised to make any manual changes to these folders. There are no foreseen reasons to do this. For example:

- Any manual deleting of data in this cache automatically triggers the deletion of the equivalent data in the data center!
- If someone opens a file directly from the local cache, then it is quite possible that you open an outdated file. For example: Applications that are not integrated with the Syncer and that show a list of 'Recent files' that you opened: Mind that to that application those are files in the local cache, not the source files in the AE SaaS data center! (example: PackEdge, ArtPro, Photoshop, Acrobat)

### The Syncer Tray icon



Very similar to the tray icons of OneDrive or Dropbox, you can see what the Syncer is doing when you hover over its tray icon.



**Note:** The Syncer tray icon is invisible until the syncer gets a first synchronization request.



**Note:** The Syncer has no entry in the task bar (Windows) or dock (macOS).

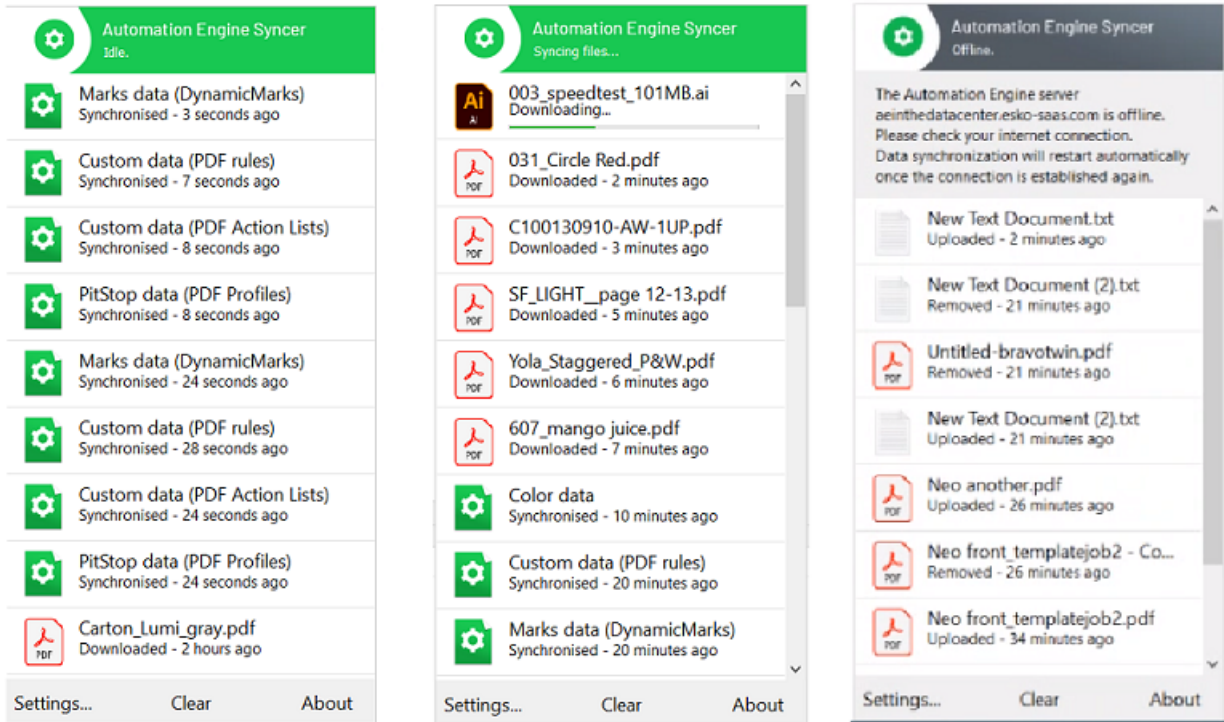
The system tray icon reflects the state of the syncer through different icons:

- **Idle:** All data is synchronized.
- **Syncing...:** Syncer is busy synchronizing data.
- **Waiting:** Syncer is waiting till the user signs in to Automation Engine.
- **Offline:** Syncer is not able to contact the Automation Engine server.

The syncer also pops up an alert dialog when there is a problem. Some ask the user what to do / which file to keep (learn more below).

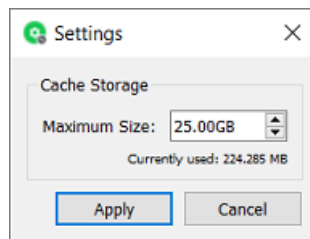
### The Syncer dialog

Click on the tray icon to open the Syncer dialog. Some examples:



In normal circumstances, there is no need to check this dialog. However, it can serve these purposes:

- to see that something is happening.
- to see that resources are also involved in the current syncing
- to see that there is some problem. However, any issues will also appear as pop-up messages.
- **Settings**



- **Cache Storage**
  - When the user downloads more Container data files than the **Maximum Size** of the cache, the Syncer will automatically remove files that have not been used for a while (i.e. not accessed since 3 days).
  - It does this until the size of the cache data again drops under the here defined Maximum Size.
  - The maximum cache size (default 50 GB) cannot be set lower than 5 GB.
- **Clear:** Click here to manually clear all finished (failed and successful) synchronization messages in this dialog.





**Note:** When this list has grown to 5000 entries, it auto-deletes the oldest 1000 entries.

- **About:** Shows the software version and build number.

### What about other Esko and Non-Esko Editors?

Interactive applications (editors) that are not integrated with the Syncer tool can only be incorporated in this syncing in a limited way or not at all.

- **Basic Syncing is possible with non-Esko editors:**

When the data that such an application opens is inside an AE SaaS Container (in the data center), then that file will also be synchronized to the local cache folder. For example: Photoshop opening a PSD file, Acrobat opening a PDF file.

- **Esko Classic Editors AP/PE/PL/i-cut are not supported in a SaaS setup:**

With Esko classic editors, we mean (all versions of) ArtPro, PackEdge, Plato / i-cut, FastImpose.

Typical of Esko's graphical editors is that they work with central resources (color book data, fonts, marks...) and also that they operate on files that can contain links to other files (aka 'external files', such as images, one-ups, CAD files...).

This smart working with external data is crucial for them to work.

However, the Esko classic editors were not and will not be updated to be aware of the Syncer tool.

**That is why these editors are not supported in an AE SaaS setup.**



**Important:** As a consequence, resources that are only editable by these classic editors (SmartMarks & CAD style data) are also not supported in an AE SaaS setup.

### Conflicts

When the Syncer detects a conflict, he will ask you what should be done:

- A file is updated in the local cache but it was also modified in the data center after its last sync operation.
- A file is updated in the local cache but it got removed in the data center after its last sync operation.
- A file gets removed from the local cache but it was modified in the data center after its last sync operation.

In these rare situations, a detailed dialog appears mentioning this conflict.

- When a file has updated both in the local cache and in the data center, a dialog appears where the user can choose to keep the local cache file or the data center file or both.
  - When the user chooses to keep the local cache version, this version is uploaded to the data center.
  - When the user chooses to keep the data center version, the data center version is downloaded into the local cache/
  - When the user chooses to keep both:
    - the file in the data center gets renamed by adding a suffix to the file and this file gets downloaded to the local cache/
    - the updated file in the local cache gets uploaded to the data center/
- When a file is updated in the local cache but it was removed in the data center after its last synchronization operation, a dialog appears where the user can choose to:

- OR upload the updated file from the local cache to the data center
- OR remove the file in the local cache
- When a file is removed from the local cache while it was modified in the data center after it's last synchronization operation, a dialog appears where the use can choose to:
  - OR remove the file in the data center
  - OR download the updated file from the data center to the local cache

**FAQs**

- **Q: What with linked files / placed art?**
  - A: When a file is opened in ArtPro+, then ArtPro+ checks if the embedded data is still in sync with the placed art. When that file is opened from the a SaaS data center, it will be avoided when there is no need to download that placed art (again).
- **Q: What if 2 users both open, change and save a same file?**
  - A: The last one that saves overwrites the previous version. No message will pop-up. There is no locking technology in place.
- **Q: What if 2 users work on the same file and their saving crosses the syncing?**
  - A: If a user works on a file in AP+ saves the file AND there is someone else also working on that file and has already saved a newer version on the data center, then there will be a conflict. The syncer dialog will pop up a message and make the user choose an option: replace - cancel - keep both (see details above).
- **Q: Can I open more than 1 file at once?**
  - A: Yes.
- **Q: Can we have only one local cache in our location, in stead of one for each workstation?**
  - A: No.
- **Q: What happens when the network temporarily goes offline?**
  - A: The Syncer reacts actively when there is any change to local machine's network.  
 As soon as the network connection with the Automation Engine server is established again, the Syncer automatically resumes its work. Also when this network problem occurs in the middle of an upload, the Syncer will be aware and, as soon as he can, start that upload again from zero.  
 There is no way (and no need) to start the Syncer again manually.

## 7. Local Editing Applications in a SaaS workflow

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What happens when local editors open and save files is described in the above page about the [The Syncer Tool](#) on page 38.

## 8. Migrating from an On-Premises AE to a SaaS setup

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### A gradual process

There are fundamental differences between Automation Engine SaaS and its on-premises counterpart. Not everything can be migrated as-is, this due to practical, technical and security reasons: some things will have to be configured differently, workflows might have to be adapted.

Before attempting a migration, make sure you have a good understanding of what Automation Engine SaaS is all about. A good starting point for this is the [eLearning Module "AE SaaS Concept and Technology overview"](#). This chapter in this manual then adds some detail.

As mentioned in that eLearning module, Esko offers dedicated personnel and tools to advise and assist you in migrating from a single or multiple on-premises server(s) to a SaaS setup.

Migrating to a SaaS setup is always prepared and executed by specialized Esko staff.

Typically, a migration to SaaS is a gradual process (opposed to switching overnight). Over time, more and more of the production is migrated. For some time the on-premises server and SaaS server will run alongside each other (in a typical migration, the on-premises server is licensed for another year). That will have an impact on how data and configuration is moved.



**Attention:** To migrate an on-premises Automaton Engine to SaaS, the on-premises Automation Engine must be on version 22 or higher.



**Tip:** It is possible to sign in to multiple Automation Engine (master) servers. Administrators may need this functionality in special cases like during this migration of an on-premises server to its SaaS setup. To do this, sign in to the Pilot of server 1, and in the resulting Pilot's File menu, ask a **New Connection**. This will open an extra sign-in dialog where you can sign in to another AE master server.

### As a tool in this migration, restoring a backup is limited

When migrating your on-premises AE server to its SaaS setup, it is possible to restore many parts of the configuration of the on-premises server onto the SaaS server. The **Server Admin > Restore** function on a SaaS server even offers a dedicated extra option: **Migration Configuration (From on-premises to SaaS)**.

This restore mode will restore all the configuration items that do not conflict with the base configuration that was already set up in the data center by dedicated Esko staff.

This partial restore will also be executed by specialized Esko staff.

And not only the configuration can not be simply copied over. To cope with some limitations of a SaaS setup there will probably also be a need to check and change some of the workflow tickets. For example to remove absolute URLs pointing to the old server, reconfiguring devices over an Agent, ...).

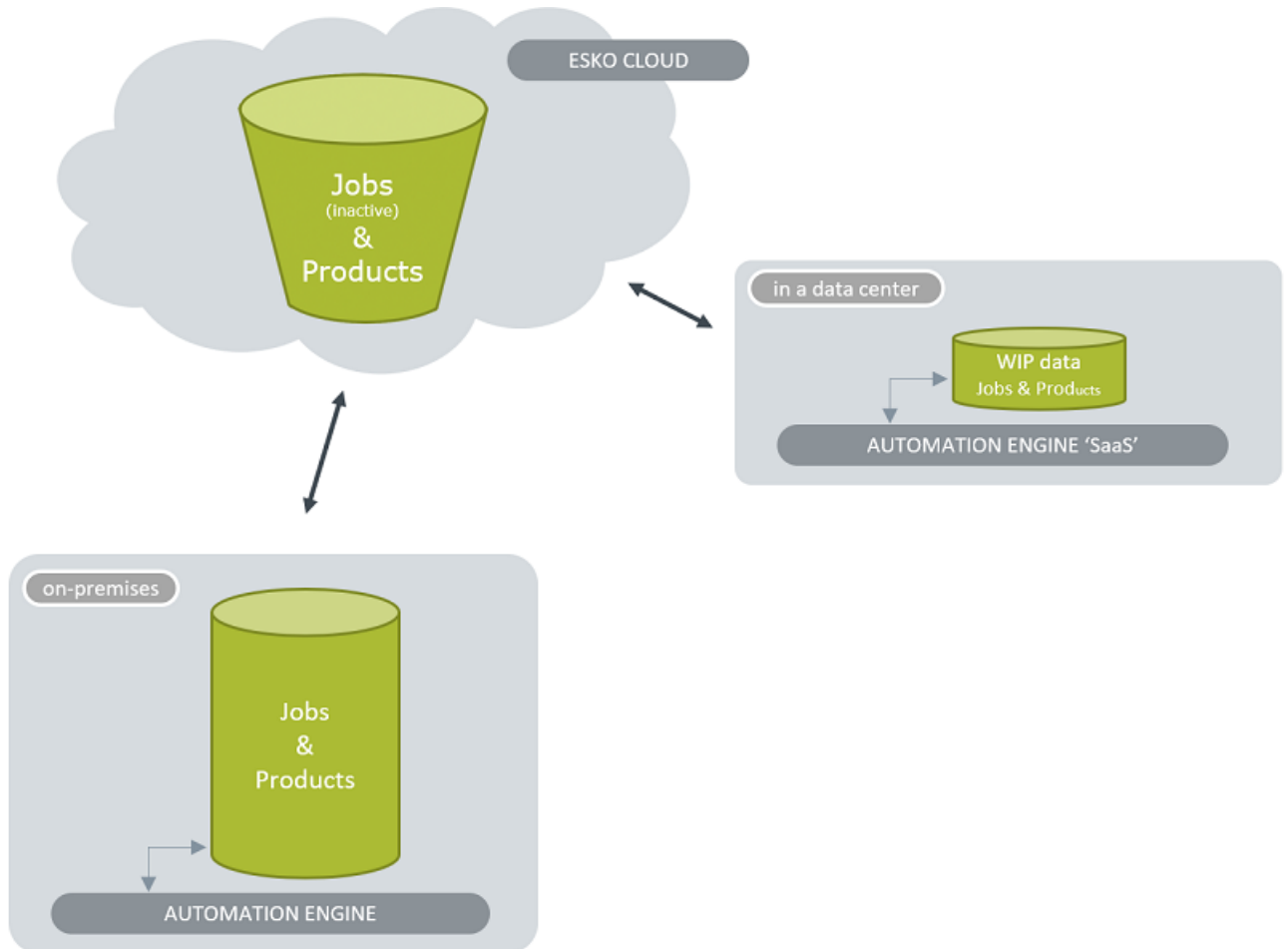
### What about migrating my files?

As mentioned earlier, storage on Esko Cloud is cheaper and more scalable than regular storage on AE SaaS containers. Therefore AE SaaS customers should store Jobs and Products that are not actively used on Esko Cloud (as [Inactive Jobs](#) and [Products on Esko Cloud](#)).

Migrating Jobs and Products to AE SaaS means moving them to Esko Cloud.

This has the added benefit that both the AE SaaS and the on-premises server can work with the same Jobs and Products database. This avoids the need to sync during a gradual migration.

Also here, Esko specialized staff will assist you.



# 9. Filtering on Locations after consolidating all data

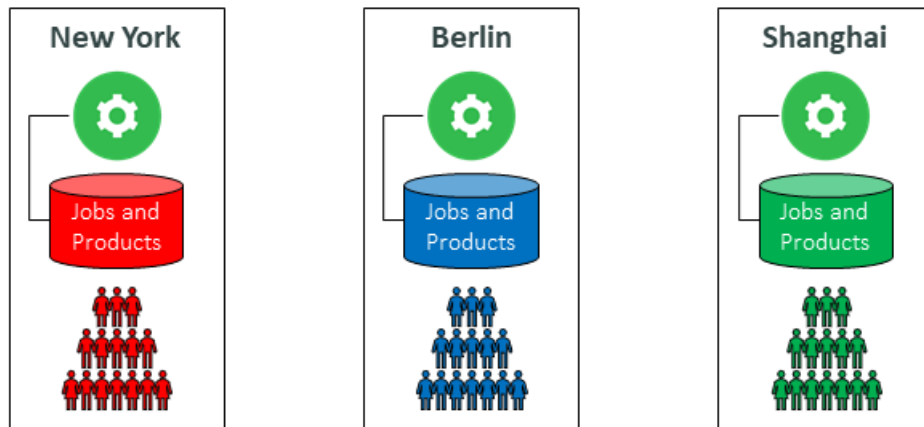
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**Concept**

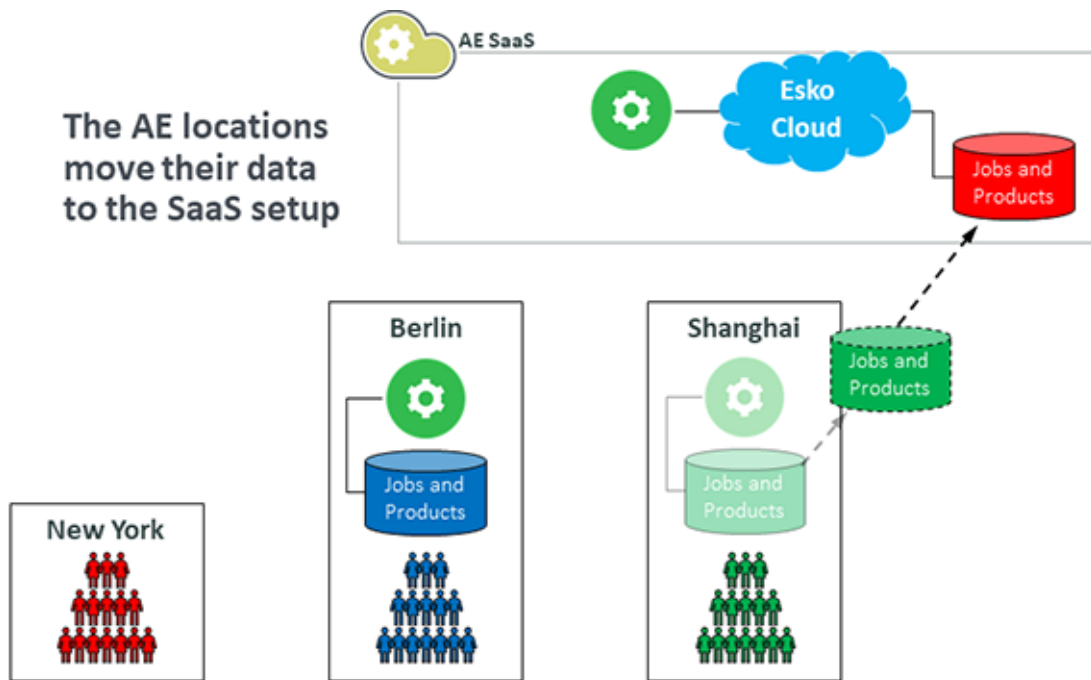
We'll use these illustrations to explain the concept of 'Locations':

1. A company with many locations plans to migrate its on-premises setups of Automation Engine to a SaaS setup.

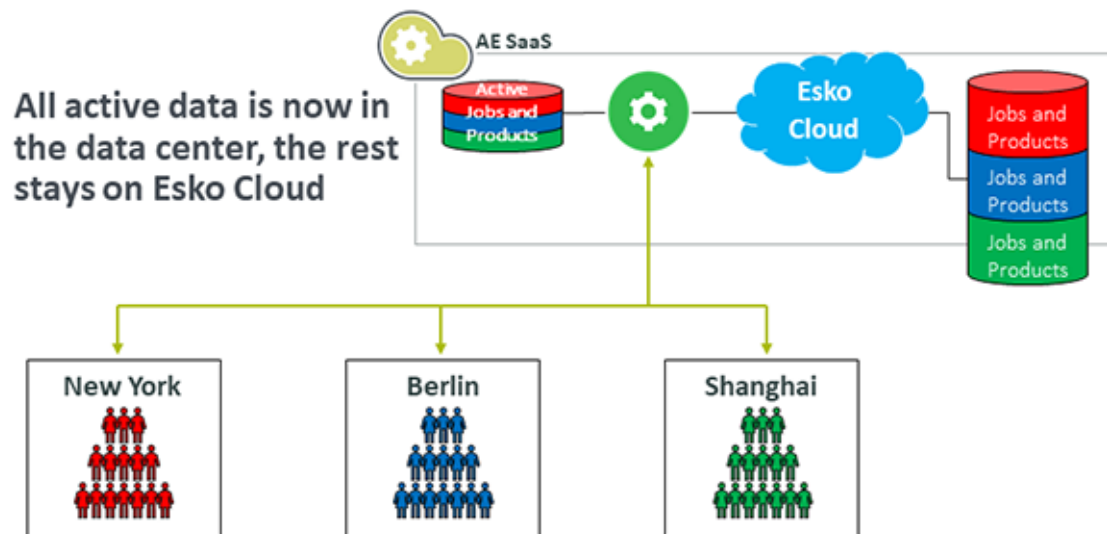
**A multi-location company wants to consolidate its prepress production**



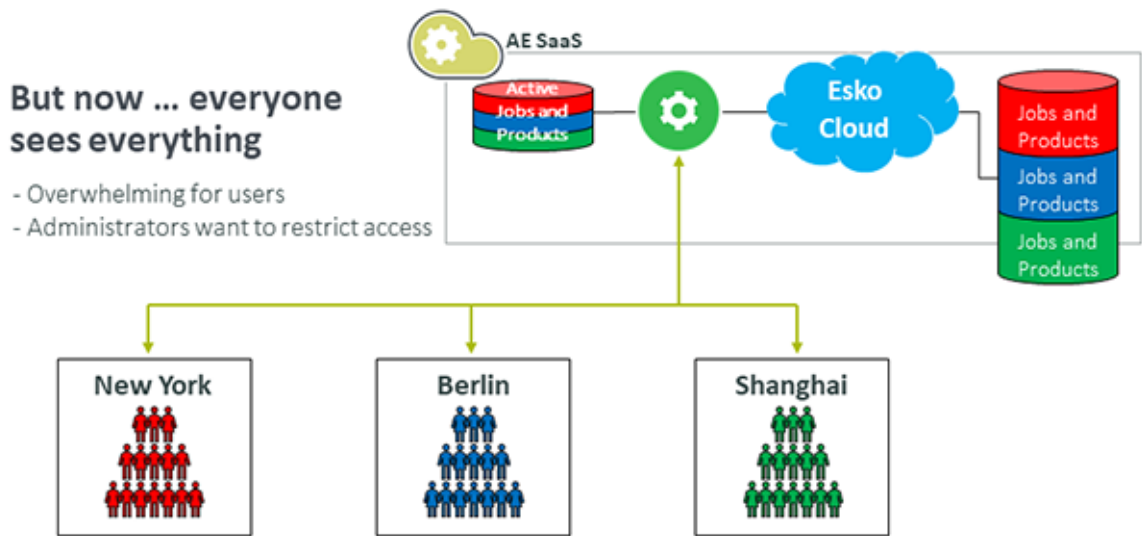
2. Each location moves its data to the SaaS setup, most probably to the Esko Cloud storage.



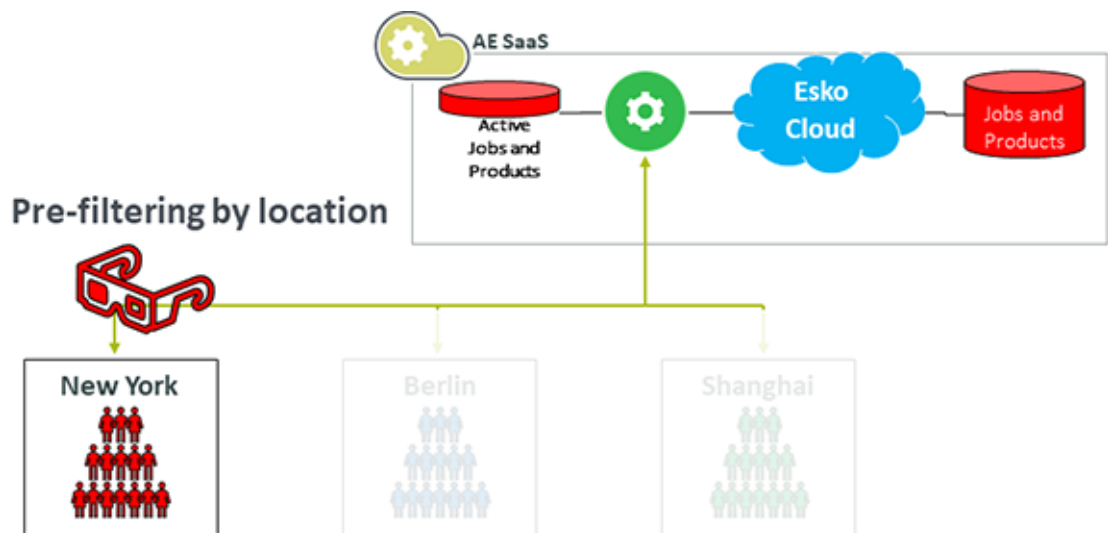
3. All data that currently is used or relevant is kept in the data center, the bulk of prepress data can stay on Esko Cloud.



4. But now all users will see and have access to all jobs of the whole company, while maybe they still only need focus on their 'regional' jobs.



- Administrators can introduce the use of Locations: Its first main objective is to function as a filter on the data the (regional) users can see.



**Using 'Locations'**

- First set a location as an attribute of a Job or Product (when creating new ones or by setting a location for existing ones).
- Then define, per user group, which location(s) these users are restricted to.

A user will notice this in these places (in My Workspace):

- Only Jobs and Products of that location are shown (and all those that do not have a location attribute yet).
- The Activity and the To Do list only show items of these Jobs / Products.



# 10. Integrating with (multiple) MIS



**Note:** Learn the basics about integrating Automation Engine with an external system like an MIS or ERP in the dedicated chapter [Integrating with External Systems](#).

## Integrating with one MIS

When the AE SaaS only gets commands from one MIS, the workflow is as described earlier: A local Agent will handle all communication between the 'local' MIS and the AE SaaS.

Learn more in [The Agent](#) on page 9.

## Integrating with more than one MIS

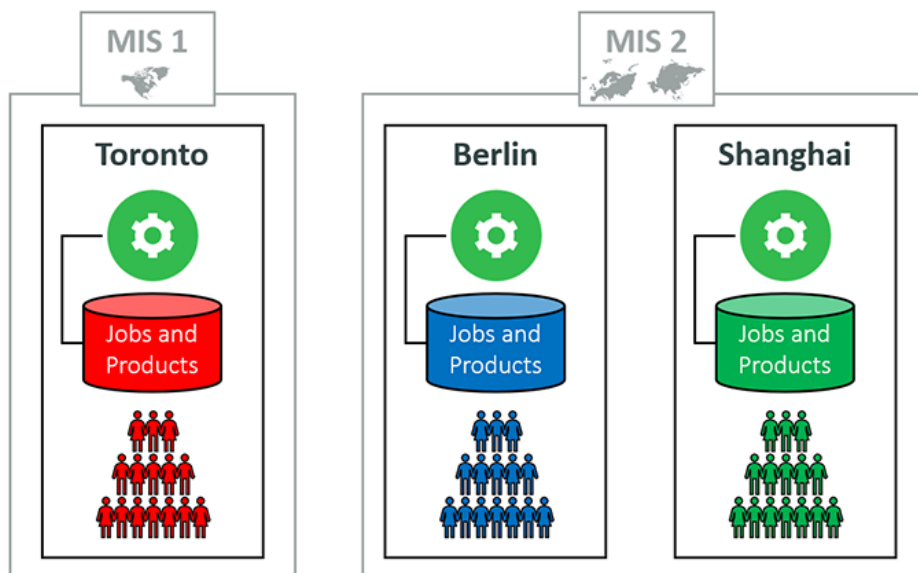
When multiple MIS want to create Jobs, Products or Customers on AE SaaS, you risk conflicting names ; these names have to be unique on AE.

Also, the feedback from AE SaaS back to the MIS needs to be to the right MIS.

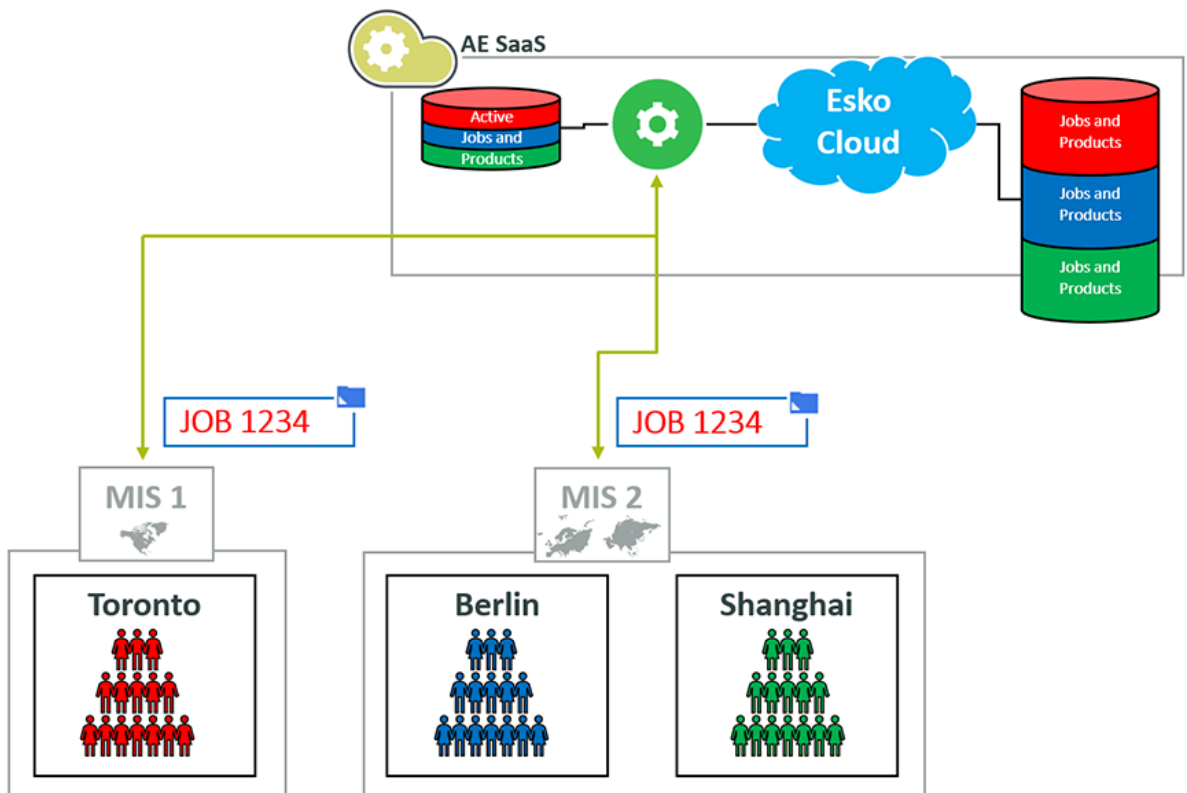
Below illustrations show how, in JDF/JMF integrations with more than one MIS, we need to avoid these clashing names of Jobs, Products or Customers.

**Problem:**

1. A multi-location company that uses more than one MIS wants to consolidate its prepress production:



2. The risk of clashing Job, Product or Customer names:



**Note:** This workflow typically also uses the 'Locations'. Learn more in [Filtering on Locations after consolidating all data](#) on page 46.

## 10.1. Working with Prefixes

### Concept

Below illustration shows how, in JDF/JMF integrations, adding prefixes to the names of Jobs, Products and Customers avoid clashing of these names on Automation Engine.

This happens automatically once an administrator of the Agent configured such a prefix.

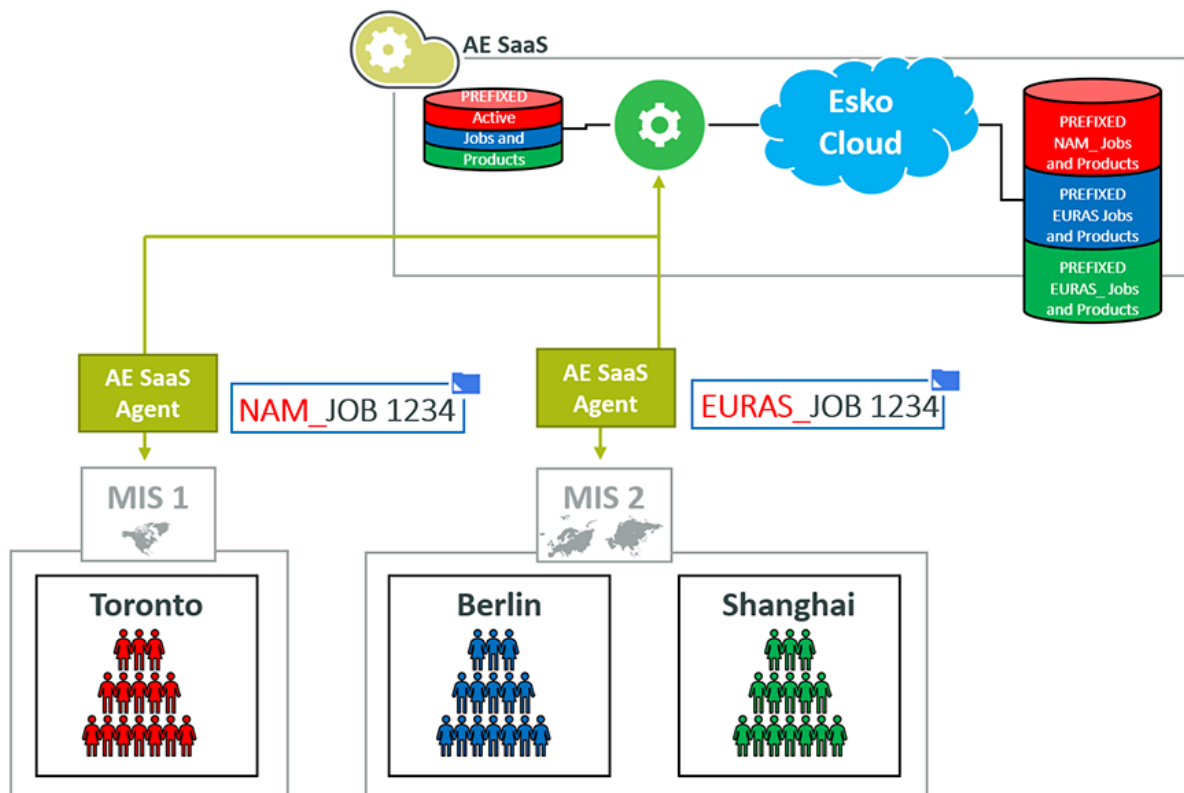


**Attention:** This tool is not supported in these environments:

- When multiple MIS's connect to an on-premises AE server.
- When multiple MIS's directly connect over HTTPS to an AE SaaS server.
- When MIS integration is not done via JDF/JMF (via an Agent), but for example via XML files.

### Solution:

In below example Illustration, we see Agents prefixing the name of Jobs with `NAM_` when they come from the MIS used in North America and with `EURAS_` when they come from the MIS used by the European and Asian users.



This solution also requires **Un-Prefixing**:

When Automation Engine sends feedback to the MIS, it un-prefixes the related fields again: This way the MIS will recognize the exact name it initially sent to the Agent (Automation Engine).

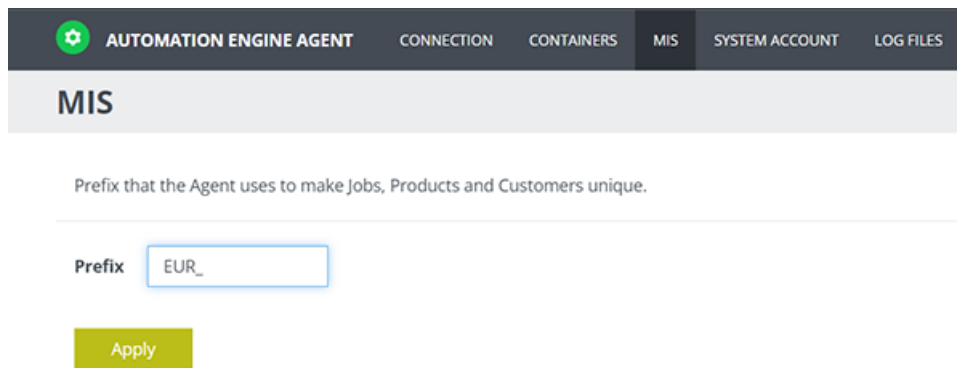
### How to set up prefixes

1. Sign in to the [AE Agent web pages](#) as an AE administrator.
2. Go to the page **MIS**.
3. The **Prefix** currently used by the Agent is displayed. You can modify the prefix. A prefix can have a maximum of 8 characters (the typical valid Windows file name characters).



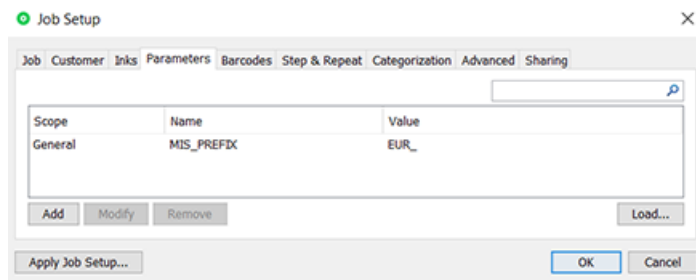
**Note:** The amount of characters you use here as a prefix will reduce the maximum length of the name of the Job/Product/Customer.

4. When clicking **Apply**, the modified prefix is saved and the Apply button is disabled.



### What happens in background

- All JMF messages that the MIS sends to the AE SaaS now use the Agent's MIS prefix.
- All JMF messages that AE SaaS sends back to the MIS are un-prefixed, i.e. the MIS prefix is removed. An Agent also ignores messages that have another prefix or that have no prefix.
- These JMF/JDF attributes are (un-)prefixed by the Agent:
  - **JobID**
    - When prefixing a JDF for Job creation, a *general Job Parameter* 'MIS\_PREFIX' is added to the Job's setup (so also becoming available as a SmartName).



- When un-prefixed, this job parameter is removed from the message (so to not confuse the MIS with this extra parameter).
- CustomerInfo/**CustomerID**
- Company/**OrganizationName** (used as CustomerName)
- PageList/PageData/**ProductID**
- PageList/**ProductID**: Just like with Jobs:
  - When prefixing, a Product Parameter is added to Product's setup (so also becoming available as a SmartName).
  - When un-prefixed, this product parameter is removed from the list.

## 10.2. Task 'Prefix Products on Esko Cloud'

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**Note:** Learn about the concept of adding prefixes in [Integrating with \(multiple\) MIS](#) on page 49.

In such a setup where multiple MIS are connected to a same Automation Engine on-premises, to be able to migrate to a SaaS setup, the names of the Product should first be made unique.

This task serves to prepare that migration.



**Note:** After the migration to AE SaaS, all new products can get a prefix in their name from the beginning. Learn more in [Working with Prefixes](#) on page 50.

### Task settings

- **Prefix products that match the following criteria:** Define a filter to list the products on Esko Cloud of which the name and ID should be prefix-ed.
- Define the **Prefix**:
  - It may not be longer than 8 characters.
  - It may not contain invalid Windows file-name characters.



**Note:** The task will not add the prefix when it detects that the product already has that same prefix.



**Note:** This task can be started on an empty token, i.e. it can be started without any input files.



**Note:** Any SmartNames in this task will calculate their value based on the first input file (found with that filter).

### Task result

- The prefix is applied to:
  - the **Name** of the product
  - the **Product ID** of the product
  - the **Name** of each product part.
- A product parameter is automatically added with as name `MIS_PREFIX` and as value the chosen prefix. This allows AE workflows to react to this presence, for example to remove that prefix on a proof or report.