Automation Engine 18.1

Collaborating via Esko Cloud

ESKO✱

Contents

1. Concept and Terminology

1.1. What is Esko Cloud?

Esko Cloud is the name of an Esko web architecture. It is used as basis for several Esko products offering collaboration between partners, both internal or external.
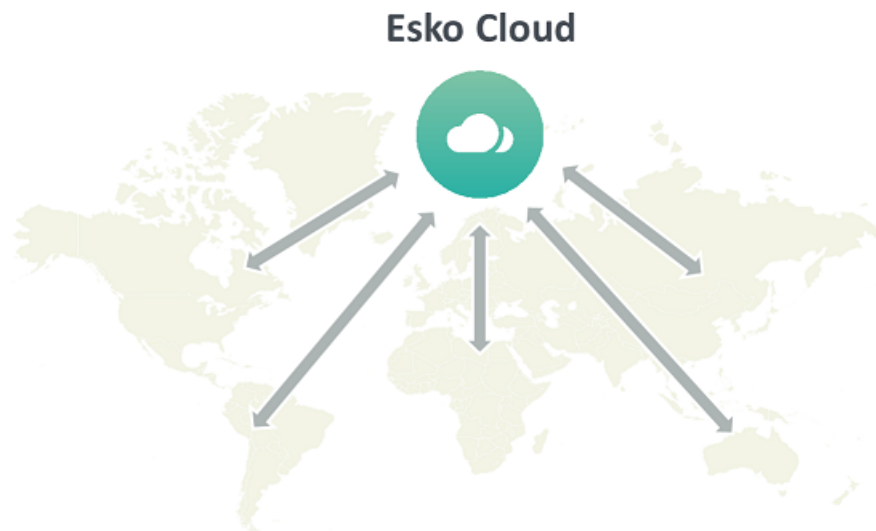
- When the main goal is to share and approve data over the web, the Esko product is named "**Share & Approve**". This product does not require Automation Engine. Therefore it is not described in this manual. Find more information on *https://www.esko.com/en/support/ documentation*.

- Esko Cloud can also be used to exchange Jobs between Automation Engines in different locations. This collaboration between AE sites is enabled by dedicated tasks and tools within Automation Engine.

  This workflow is what we describe in this chapter.

  Note: "Cloud Connector" is the commercial name of the software module that enables this collaboration.

1.2. Concept of Collaborating Automation Engines

The main reasons to have Automation Engine's from different locations collaborate are:

- Spreading work-load over multiple sites.

- Offloading work to a location where cost of staff is lower.
- Offloading work to locations where staff has more specialized skills.
- Executing exceptional tasks (rare processing) in the site that has that software license.

The way these Automation Engine (Master) servers can collaborate is via *Esko Cloud*, an Esko web architecture.

In this first version of this integration with Esko Cloud, the focus is on exchanging Jobs and their data, i.e. these 2 use cases:

- As an AE user, I want to make a job available to other sites for collaboration.
- As an AE user, I want to see a list of the jobs on Esko Cloud so I can collaborate on a certain job from another site.

Automation Engine users can also share (workflow) tickets to Esko Cloud.
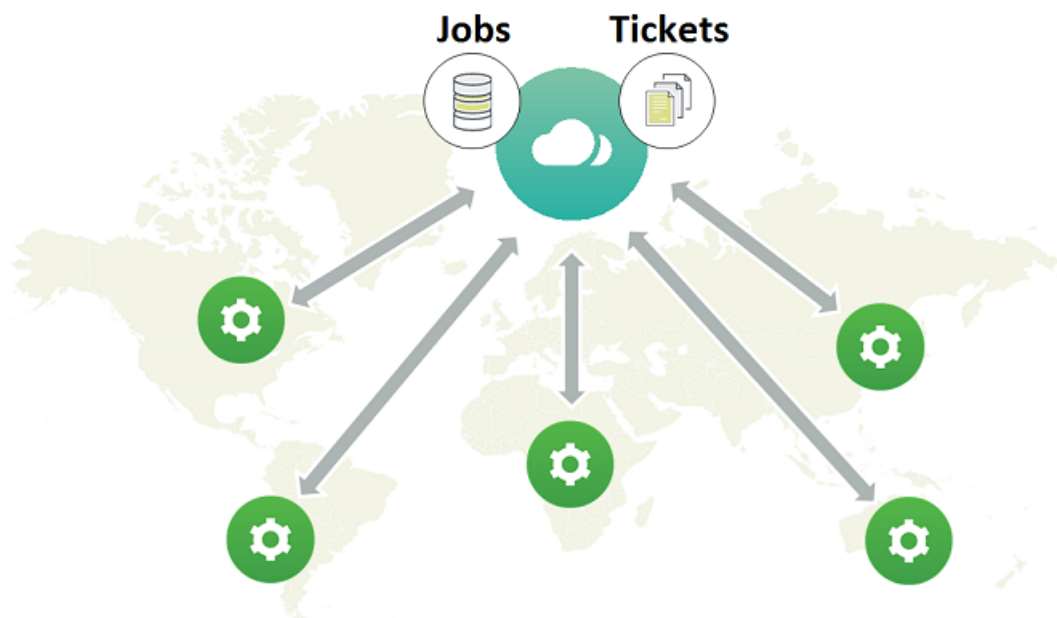
Important: Esko Cloud stores all data **per customer**. This is why standardization of customer IDs or names between all these locations is crucial. Learn more in *FAQs and Tips on Customer Consolidation* on page 43.

1.3. What is a Group? What is a Location?

In the context of collaborating Automation Engine servers,

- a **Location** is the place where an Automation Engine master server is located.

- The **Group** is the company that owns several of these locations and that wants to set up this collaboration. Typically it is this group that sets up its own (web)site in Esko Cloud.

Note: It is however possible that a groups sets up more than one site in Esko Cloud. For example to separate all files related to beauty products from those that are pharmaceutical (and the involved staff).

In this chapter, we use the example of the group "`SuperPrint`" that has 4 locations that use an Automation Engine:

- `MEX001`, in Mexico City, MX
- `BER001`, in Berlin, DE
- `SYD001`, in Sydney, AUS
- `TOK001`, in Tokyo, JP.

1.4. What is Uploading? What is Sharing?

Uploading and Downloading Files

An Automation Engine user can, in the job folder of an active job, make a selection of files and or folders and *Upload these to Esko Cloud*. This copies that data to the group's site in Esko Cloud, more specific in the data zone of the customer of that job.

Note: It is not foreseen to upload all data from a Job. You need to make a selection.

Note: FAQ: Why is this only supported on files that are inside an active (blue) job? Because, conceptually, when you initiate collaboration on data with other location(s), this means that this job is 'busy'.

Note: You can also upload job data to Esko Cloud for archiving reasons. Once it is in the cloud, you can delete the data on Automation Engine.

Attention: The job will be created automatically on Esko Cloud when it doesn't exist there yet, but this is not the case for the job's customer. Before any uploading, you **first** need to establish links between local and cloud customers. we also call this the *customer consolidation*.

An Automation Engine user can, while being in a an active job, go to the view "**Esko Cloud**" and see which files were uploaded to Esko Cloud. The user makes a selection and chooses to *Download to Job Folder*. This copies the data to the selected job folder and, if needed, creates the same structure of subfolders as on Esko Cloud. This also overwrites any same file in the same place.

Sharing and Unsharing Jobs

When you share a job, you create that job on Esko Cloud. This is not just a folder but also includes all its meta-data (the 'Job Setup').

Sharing a job it does not move or copy any files.

You can also specify which other location(s) you want to share that Esko Cloud job with. You thereby invite these locations to collaborate on that job. They will then also see that job and its files on Esko Cloud.

You can only share jobs with other locations when their local customer was linked to a cloud customer.

You can't share files, only jobs.

The location that shared the job is called the "**Owner Location**". Only the this location can unshare it.

Unsharing a job remove the job and its files from Esko Cloud.

Can you Upload Files of a Job that is Not Shared yet with another location?

Sure you can. But no other location than yours will be able to see that job and those files until you share it with that other location.

When the job does not exist yet on Esko Cloud, it will automatically be created.

Note: As mentioned above, the customer of this local job needs to be linked first with its counterpart on Esko Cloud.

1.5. What is the Owner Location, Job Ownership?

The **Owner Location** of a job is the location that shared the job to Esko Cloud.

This location has the **Ownership** of that job.

Only this location can unshare it.

2. The Importance of Standardisation between Locations

Standardisation between Locations on Customer Names/IDs

In Esko Cloud, data is stored per customer.

It is crucial to avoid placing data of one customer in a folder of another customer. Therefore, it is important that every local AE customer is linked to the correct customer in Esko Cloud. We often refer to those as 'local customer' and 'cloud customer'.

Note: Esko Cloud is also able to share this data with the end customer, for example via the tools in the product "**Share & Approve**". Obviously, it is then even more important to keep data separate per customer.

That is why it is crucial that all your locations use the same name for a same customer (ID).

Note: An example:

- On (one of) your Automation Engine servers, there is a local customer named `Cola`. On Esko Cloud, there are 2 cloud customers with more elaborate names like `Best Cola` and `Super Cola`.
- It is crucial that the local customer `Cola` is linked onto the correct cloud customer, so to prevent `Super Cola` users seeing data from `Best Cola` and vice versa.

Managing this list of customers needs to happen on your company group level.

Standardisation between Locations on Folder Structure

It is also important that the different locations standardize on the structure of their Job folders in Automation Engine.

The tool **Smart Job Location** and standardisation on where tickets write their output files can help to achieve that.

Why is Customer Linking so Important?

Linking the customers from each local customer to the right customer on Esko Cloud will mostly have to be done manually, by an operator. Esko software is reluctant to link local customers automatically to cloud customers.

To share a job for collaboration with another site, the job must be assigned to a customer and that customer must be linked to a counterpart in the cloud.

Only when the above is fulfilled, you can start uploading files into such a job or downloading files from folders in Esko Cloud.

The correct linking of customers of course needs to **assure** that data from one customer does not end up in the Esko Cloud folder of another customer.

When all up- or downloading of files happens in the Job context of the correctly linked customer, then the risk of making mistakes is drastically reduced.

3. Setup and initial Configuration

3.1. Required Esko Products

Required Esko Products

- A license and an administrator user to set up an Esko Cloud site for your group.
- 1 or more Automation Engine master servers, each connected to the internet.

To start collaboration, you need 2 or more Automation Engine master servers, each in a different LAN, probably in a different location.

3.2. Initial Configuration (v18.0.1)

3.2.1. Step 1 - Create your Site on Esko Cloud

First thing to do is to create your group's ('Share & Approve') **site** on Esko Cloud.

Note: In most cases, an Esko support engineer will assist in setting this up.. The main steps are described below. Learn more details in the documentation of the product '*Share & Approve*'.

Note: Each site on Esko Cloud is backed up by servers running *Amazon Web Services*.

Note: In fact, several websites are made available and the choice of which one to use, might depend on your group's geographical position. For example: *https://approve.eu.demo.cloudi.city* for organizations with most locations in Europe, *https://approve.as.demo.cloudi.city* for organizations with most locations in Asia.

Follow these steps:

1. In a standard web browser, use the administrative account of your group to log on to Esko Cloud. That is where you can create and configure the site in the interface of 'Share & Approve'.

   As mentioned before, in this context of Automation Engine, we only use the interface of Share & Approve to set up job collaboration between different locations. This means that you need to:

2. Allow this site to connect with the Automation Engine servers in your group/company. Go to **Setup** > **Automation Engine** and check the box to allow connectivity:
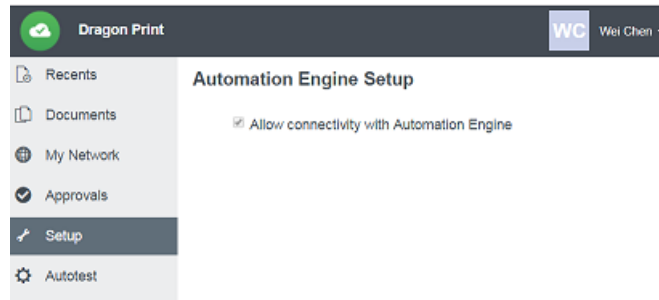
3. Provide sufficient permissions to the group of Automation Engines for them to access the Share & Approve site.

   a. Go to **Documents**, click 🗋 to make sure you are in the root folder (top left). Then click ⬳ (**Share this space**) and choose **Manage Permissions** (top right):
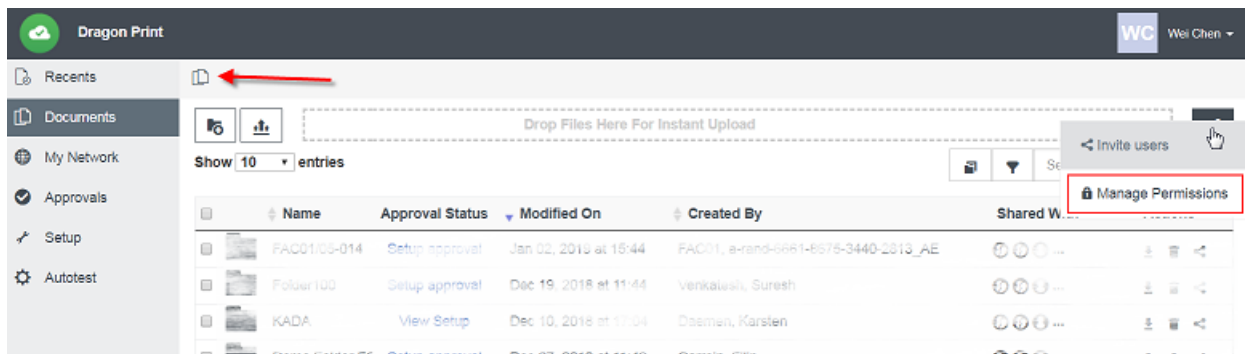
   b. Make sure the group of **Automation Engines** is invited and that this group has the right permissions:
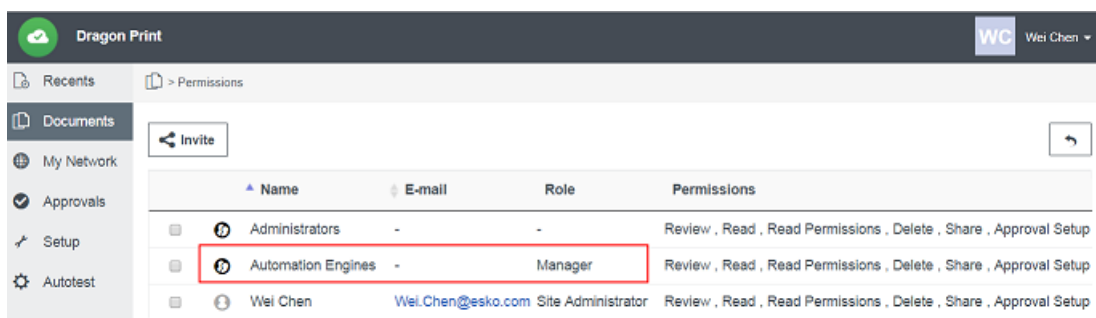
Note: This group is the group of *AE software servers*, not their AE user accounts.

3.2.2. Step 2 - Create an Equipment entry for each Location

Concept - Summary

In the Share & Approve site that you created in previous step, you now need to create an **Equipment** for each location.

Note: On Esko Cloud, 'Equipment' can represent various things. In our context, they are not (output) devices but software servers.

To gain access to Esko Cloud in an automated way, a **token** is needed to identify yourself. The bearer of the token receives access. Once identified through that token, you get the permissions of the user or machine or ... that corresponds to the supplied token.

Learn below how to safely transfer that token to the Configuration panel of Automation Engine.

Adding Equipment

1. Go to **My Network** > **Equipment'** and click **Add Equipment**.
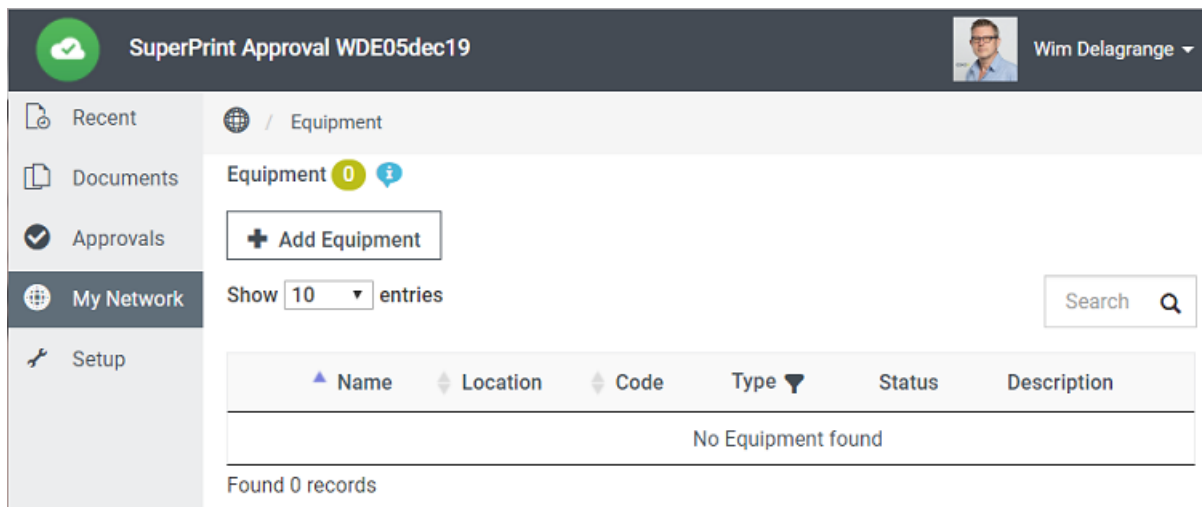
2. In our context (AE servers using Esko Cloud to collaborate), only the fields **Equipment Type** and **Equipment Name** are mandatory.

- **Equipment Type**: Select 'Automation Engine' from the list.

- **Equipment Name**: This is the name of the location of this AE server that all users will get to see, including Automation Engine users.

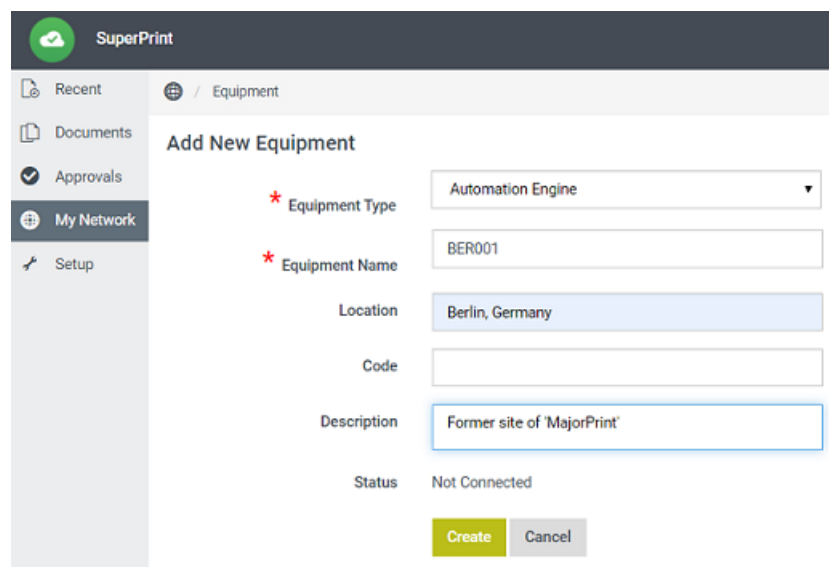 Of all these fields, only the name of the equipment is important to the Automation Engine server software.

  > **Attention:** The name of an equipment is limited to 7 characters! That is because this name is also used as a prefix to make local customer-IDs unique when they are seen from another location.

  > **Attention:** You can not change this name later. So think wisely before deciding them. Changing this name would mean removing the equipment first and starting again with a new name, new token, etc. This is an unsupported workflow change.

  We strongly advise to **not** use the name of the computer on which the master Automation Engine is running. A name like `AeServer01` or `vm-production-0012` is quite meaningless to AE users in other locations.

  Instead, we advise to use a name that refers to the location of that AE server, in a way like *IATA codes* are used for airports. For example: Using '`BRU`' for the equipment in Brussels, or `BRU01` and `BRU02` when there would be multiple locations in that same city.

  > **Note:** These names that are used to identify locations within the organization, will pop up at several places in the user interface (Pilot). These names should make sense to the users of AE.

  > **Note:** Also, it is best to keep these names as simple as possible. Avoid special characters in the name like `/`, `space`,`*`,`?`,`#` and similar.

- **Location**: Add a location name that is informational for users of this Esko Cloud site, probably less cryptic than the equipment name. This field is not seen by Automation Engine users.

- **Code**:

- **Description**: You could here mention the actual name of the AE server. Or any other info that describes this location.

- **Status**: Indicates if this Esko Cloud site is currently connected to this Automation Engine.
3. Click **Create**. This also creates the token for that equipment:
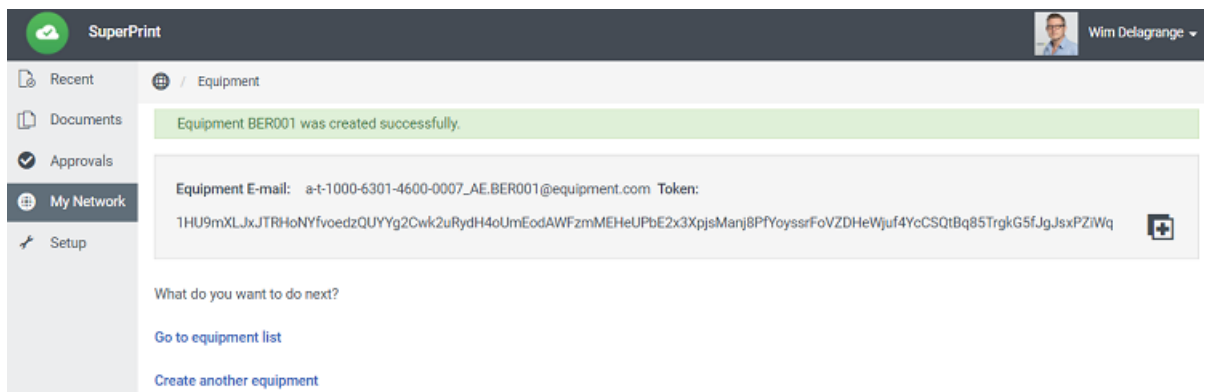
4. Click to copy the token to your clipboard.

> ⚠ **Attention:** Do **not** manually copy the characters of the token! This will not
> be enough, The copy-to-clipboard button will copy **more** information than the
> characters that are shown there.

Keep this copied data in your clipboard until you paste it in AE's Configure tool. See next
Step 3.

5. Example of a resulting list of Equipment:
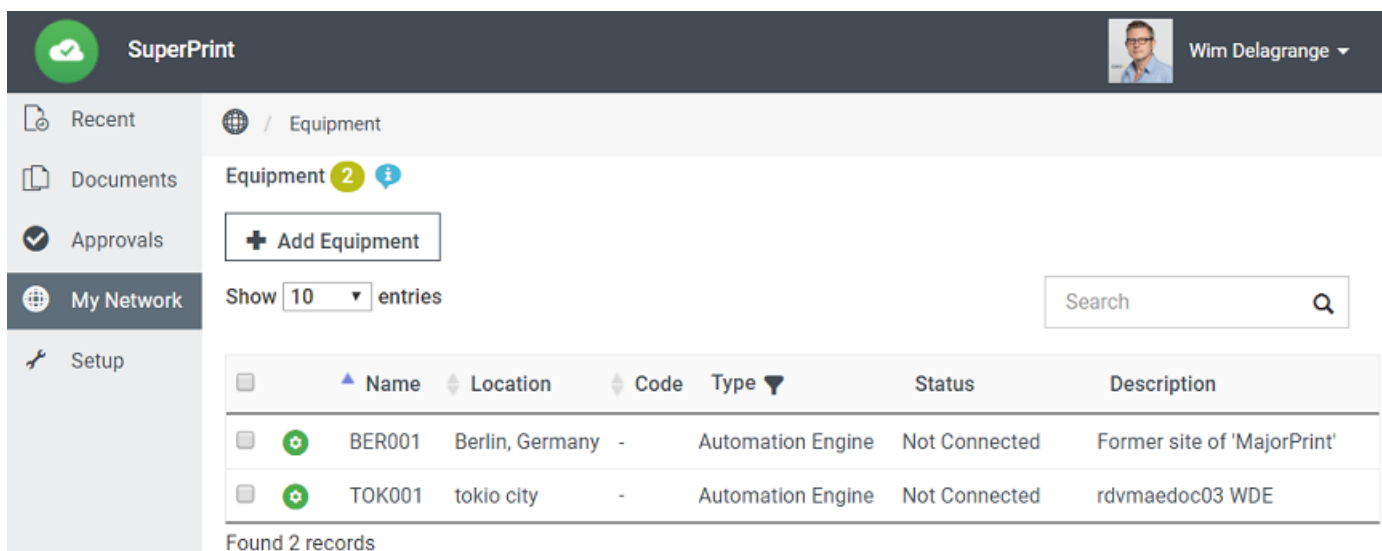
3.2.3. Step 3 - Bring the Token to AE's Configure tool

What does the Token do?

The Automation Engine stores the token and from then on uses it to gain access to Esko Cloud.

So when an Automation Engine tries to connect to Esko Cloud, it presents its token to the Esko
Cloud authentication mechanism (*Okta*).

The token is checked for validity and whether it corresponds to an equipment of type 'Automation Engine'. The Share & Approve site is set up in such a way that every equipment of this type obtains the necessary permissions for file up- and downloading.

**Conclusion**: When Automation Engine presents its token, it gains access to Esko Cloud and enables all functionality in Automation Engine related to this setup: Job (data) sharing, up- and download of files inside a Job folder, sharing tickets.

How to Safely transfer the Token to the Automation Engine (Location) and Use it

Safely transfer to the Automation Engine (location) it was generated for.

1. The responsible (administrator) for Esko Cloud connectivity within your organization, will have a (power) user account that will allow him to log on interactively to Esko Cloud.
2. In that browser, he logs on to Esko Cloud and, in that UI of Share & Approve, navigates to the page where he can create an 'equipment' for a specific AE location. He there generates and 'captures' the corresponding token (using that 'copy' button).
3. The generated token is now automatically copied to his clipboard. Note that it is there is in a readable format. This point is where our description in *Step 2* ended.
4. To bring the token securely to the Automation Engine for which it is intended, the *Organization Administrator* can open a remote control application (like 'TeamViewer') and open a session to that Automation Engine server.
5. He then asks the local AE administrator to start a Pilot and there open the **Configure** tool (using his own local account and password). He goes to the item **Esko Cloud** and clicks **Sign In**.
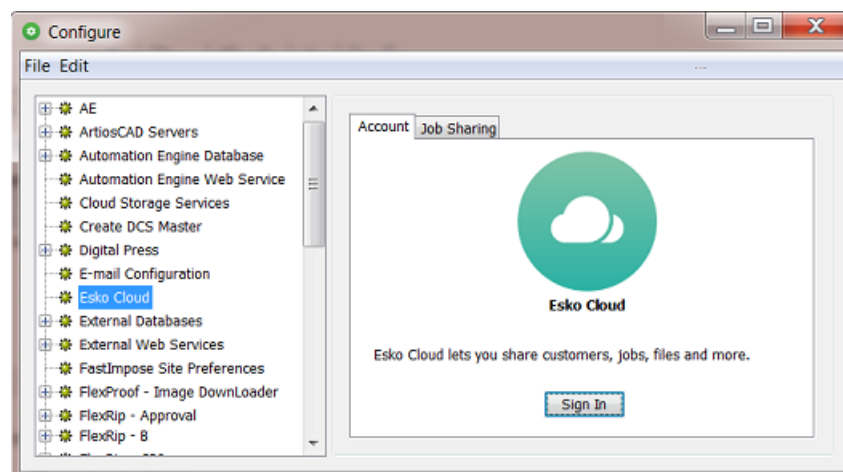
6. Now the Esko Cloud admin user can paste the token from his clipboard directly in the field **Token Details**. This way, he makes sure the token was not exposed in clear text anywhere.

   See this example right after the clipboard info was pasted:
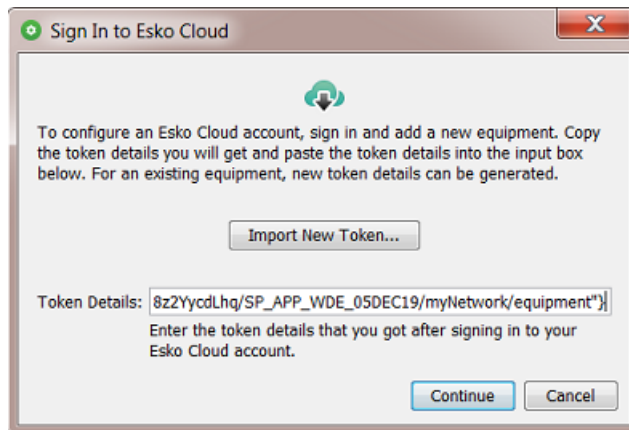
7. Press **Continue** to see the resulting Esko Cloud connection:
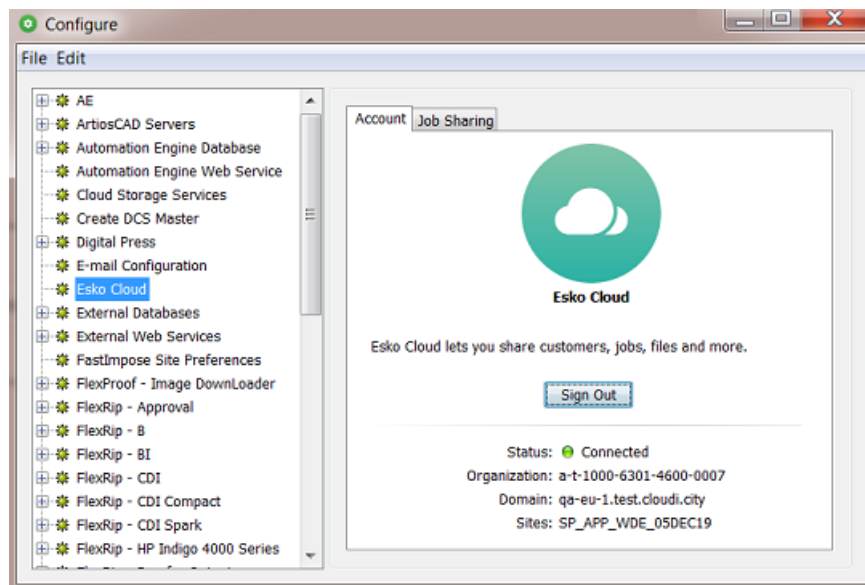
8. He must then repeat this procedure for each location. As mentioned above, each Automation Engine server requires its own token.

FAQ: How secure is the token stored?

Before the token is stored in the internal registry of that Automation Engine server computer ('CFS'), it is encrypted using a 'Certificate' (a private/public key pair).

This certificate is automatically generated at installation time and is stored in the 'Windows Certificate Manager'.

To decrypt the token, you would need that same certificate that was used to encrypt it. Because it is stored in the Windows Certificate Manager, it is pretty secure.

4. Tools and Tasks

We here describe the tools and tasks that enable AE servers to collaborate via Esko Cloud.

In the chapter *Workflow Examples*, we show how they can be combined to automate this workflow.

4.1. On Customers

As mentioned in earlier sections, it is crucial that each local Automation Engine customer is linked to the correct counterpart on Esko Cloud.

Starting to upload files or sharing jobs is simply not possible when the related customers are not correctly linked yet.

In the list of customers on your Automation Engine (i.e. your 'local customers'), the below described tools become available when you select one or more customers or when you right-click the empty canvas in that list.

Note: Deleting a customer locally on or the cloud is always a manual action.

Note: When you delete a customer on Esko Cloud, all jobs using this cloud customer will automatically be unshared. And jobs that become unshared are automatically removed on the locations that are not the **owner location**.

4.1.1. Link to Esko Cloud Customer...

Go to the view **Customers**. This shows all your local customers.

Notice the new column that shows an icon of a cloud. When it shows a cloud, it means that this local customer has been linked to a customer on Esko Cloud.
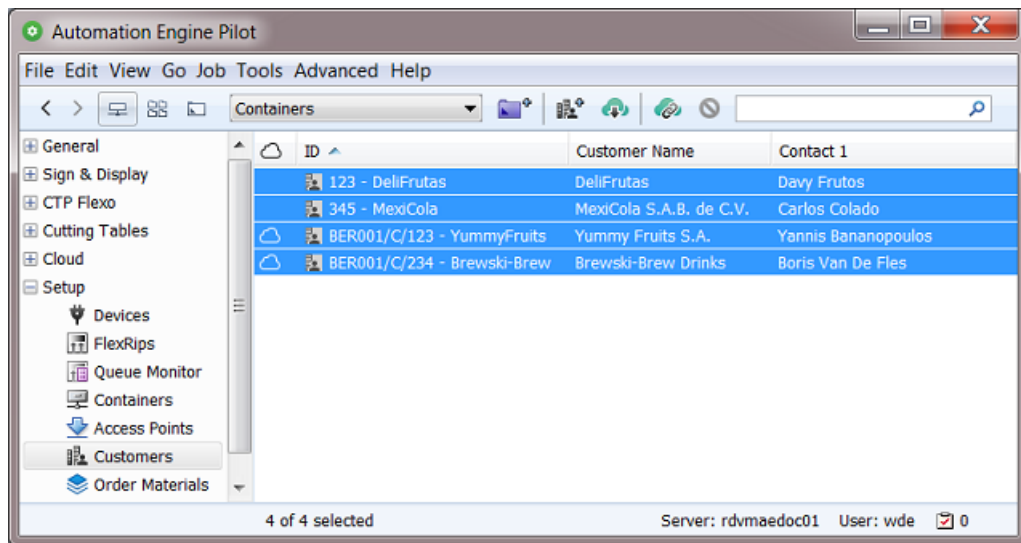
- Select one, multiple or all customers, and click (or right-click the selection and choose **Link to Esko Cloud Customer...**).

- A panel appears where you are asked to manually decide with which cloud customer you want to link. The local customer is shown on the left (icon of Automation Engine). On the right, you see the cloud customer that most resembles this local one (icon of Esko Cloud).

  Answer the question that is shown on top.
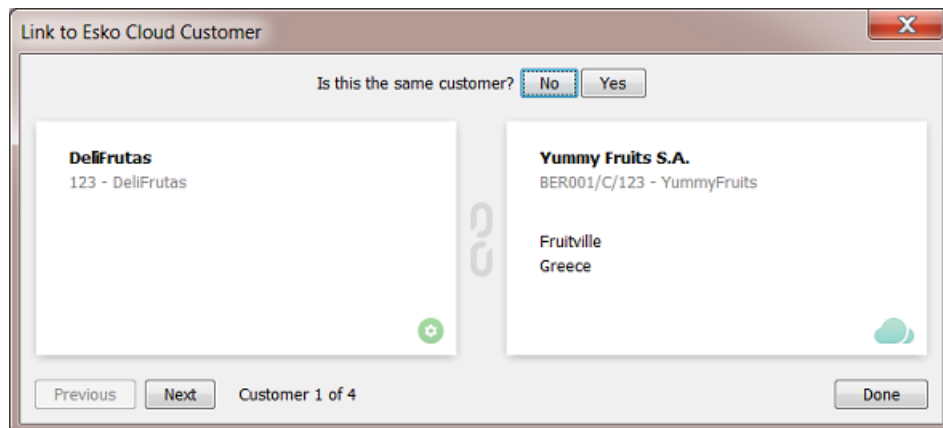
Note: In this panel, apart from answering **No** or **Yes**, you can also click **Next** to skip this customer and maybe make this decision later.

- When you answer **No**, another panel opens that shows more cloud customers that resemble this one.
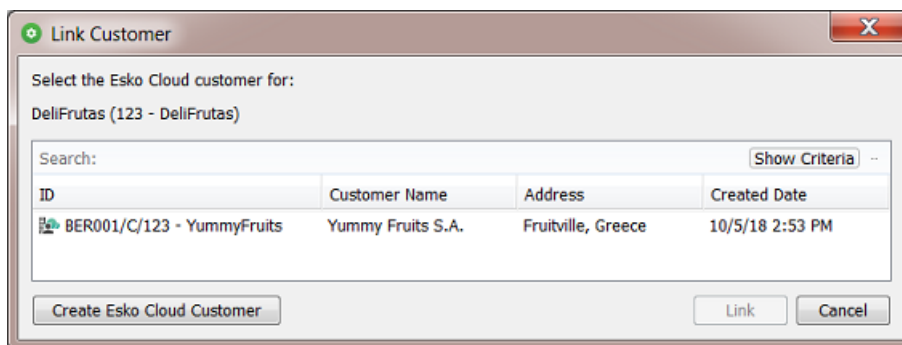
Note: Click **Show Criteria** to see which criteria the system used to find similar customers. Change them if that helps you find the one you are looking for.

In our example, the proposed customer `YummyFruit` is not the same company.

When none of the proposed ones matches or when this list is empty, click **Create Esko Cloud Customer**.

• You are then asked to confirm:
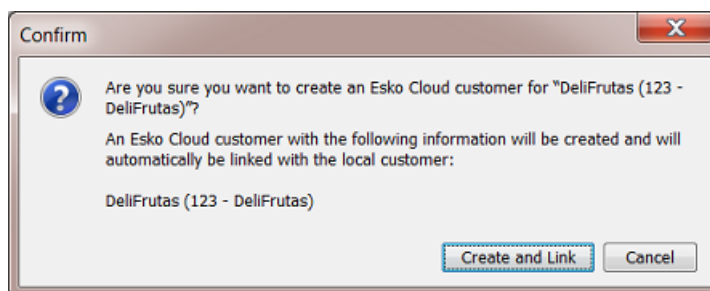
If this is what you want, click **Create and Link**.

• The system then checks the next customer and asks again if the customer on the right matches the local one.

We compare them and we conclude that our local customer is the same as the one in the cloud. We click **Yes**.

> **Attention:** Linking only creates a link. Linking does not change their own settings!

- The system links them and immediately shows us the next one of those we selected. In this case, we see the icon in the middle that informs us that these 2 are already linked to each other:
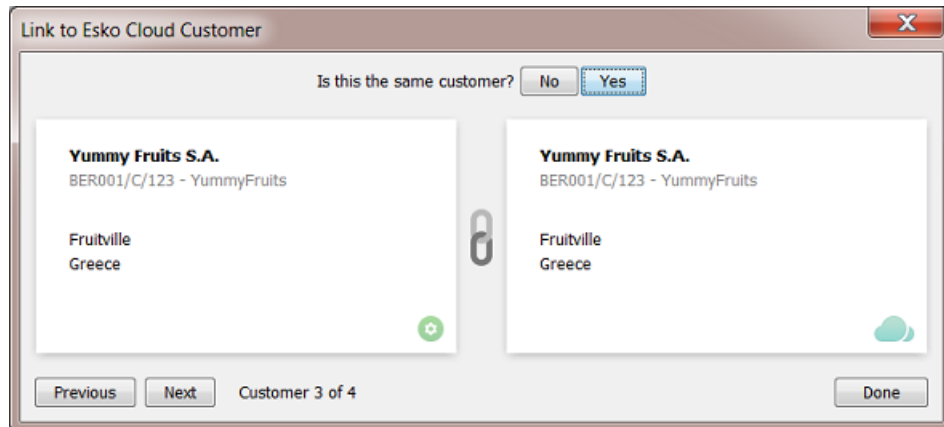
We still agree with this link. We click **Yes**.

- At any time, you can click **previous** to see the result of the previous comparisons. Or click **Next** to postpone the decision for this customer.

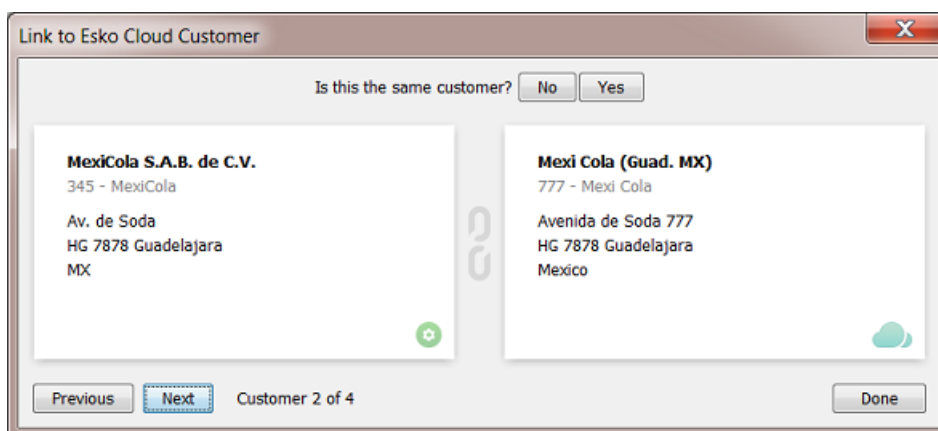- This next one was also already linked. It is also part of this comparison because it was part of our selection when starting this tool.
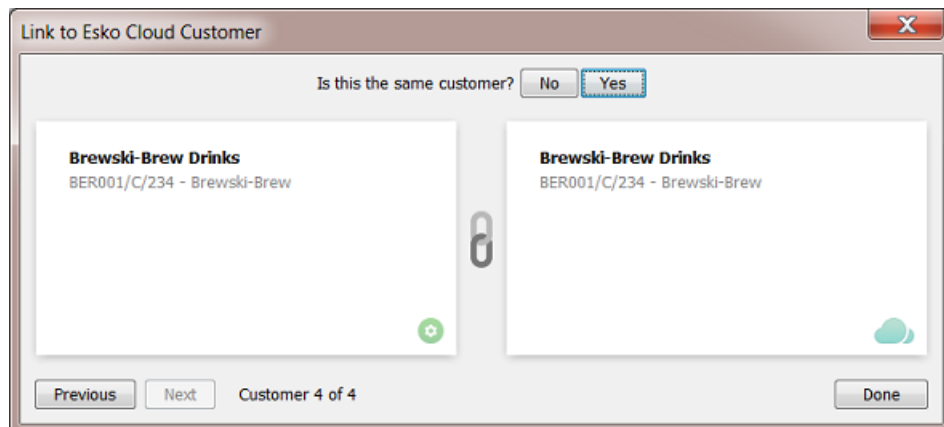
So we click **Yes**.

> **Note:** In this example, we can also click **Done**, which means we don't answer this last question. But these two were already linked so that status will simply remain.

- The result: All our local customers are linked to some cloud customer.
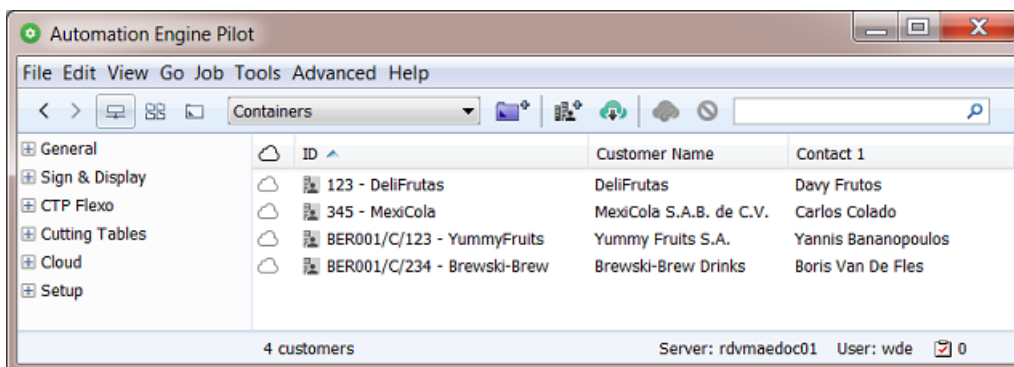
Note: In this Pilot view, you always see your local customers only. You do not see their cloud counterparts. For a quick check, select all your customers, click 🔗 and go through the pages of this wizard.

Note: 2 of them have a special ID that starts with `BER001/C/`. This is because they were originally imported from Esko Cloud ; they were not first created locally. Learn more about this naming structure in *Import from Esko Cloud…* on page 22.

Note: (05-Oct-2018) There is no functionality (yet) to remove a link. You can only re-link or skip it.

4.1.2. Download Changes from Esko Cloud

This tool makes the selected local customer identical to the one it is linked with on Esko Cloud.

This changes the settings of your local customer.

⚠️ **Attention:** There is no merging of information! Also fields that are empty in the cloud will then become empty locally.

4.1.3. Upload Changes to Esko Cloud

This tool makes the customer on Esko Cloud identical to the selected local customer it is linked with.

This changes the settings of your customer on Esko Cloud.

> ⚠ **Attention:** There is no merging of information! Also fields that are empty locally will then also become empty in the cloud.

4.1.4. Import from Esko Cloud...

*   In the **Customers** view of the Pilot, click on ⬇ or right-click anywhere in the list of customers and choose **Import from Esko Cloud...** to open the dialog where you can import a customer from Esko Cloud.

    > **Note:** This tool is also offered when you first selected local customers and then right-click. Your selection will be ignored in that case.
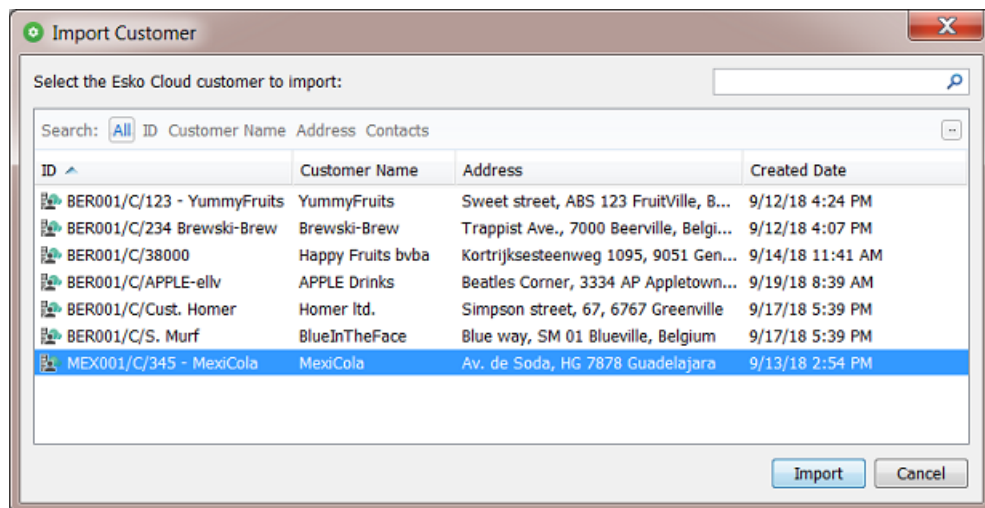
    The dialog shows the list of all Esko Cloud customers of your organisation.

    > **Note:** The ID of a Esko Cloud customers is constructed as `<location>/C/<local-id>` :
    >
    > *   It starts with the name of the location from where it was first uploaded.
    > *   Then followed by "/C". This refers to the fact that, on Esko Cloud, this is a "partner" of the type "Customer".
    > *   And then the actual ID of that customer (in above example we also added some part of the name after the usual numbers in the ID).

*   Select the one you want to import as local customer and click **Import**.

    > **Note:** When it was already imported, you will get a warning. You can not import it again (unless you delete the local customer first).

*   A dialog appears showing you all the fields of the selected customer. We advise to click **Import** without making any changes here.
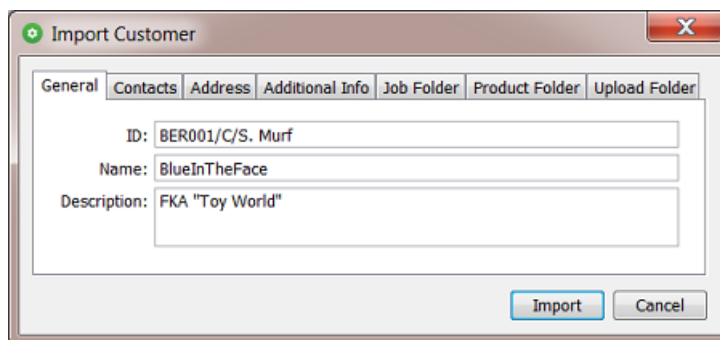
> ⚠️ **Caution:** If you change the ID in this panel, for example by removing the initial part `'BER001/C/'`, you then risk creating a double or conflicting customer name. Maybe not today, but for example when your MIS later also creates such a local customer with (accidentally) that same name.

- The customer now also appears in the list of local customers. And the ☁ icon shows that it is linked with the one you selected in the cloud.
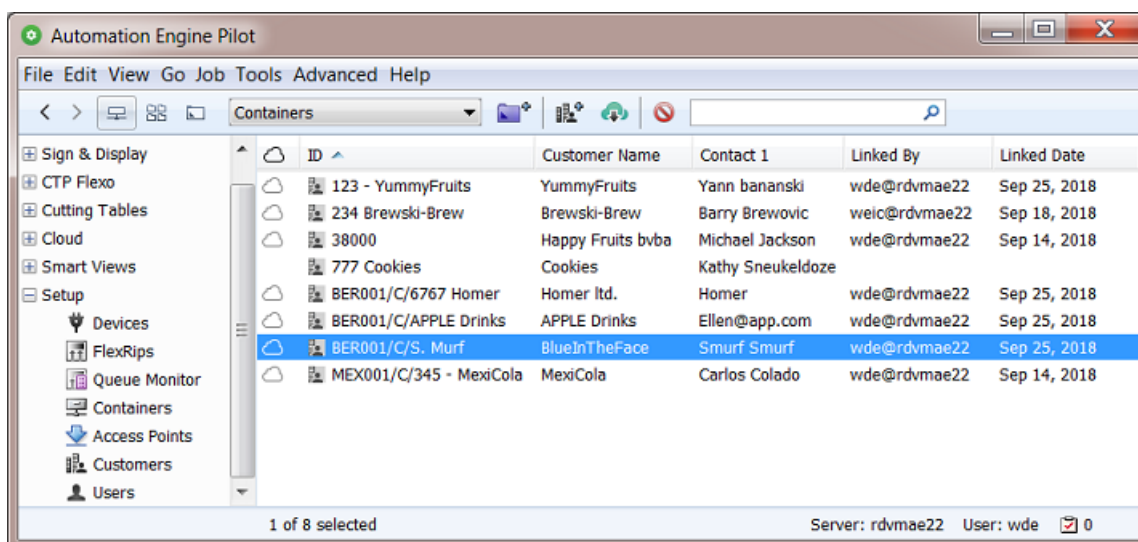
> **Note:** In above picture, notice how the customer `'Cookies'` is the only one that is not linked to one on Esko Cloud.

4.1.5. Import All Esko Cloud Customers

In the view '**Customers**'. right-click anywhere in the list and select **Import All Esko Cloud Customers**.

For each cloud customer that is not yet linked to a local customer, a local customer is created and linked to that corresponding cloud customer.

You will be asked to confirm.

This tool launches the task "**Download Customers from Esko Cloud**". See the task's **Details** pane for more information on what it did.

This task has no options.

> **Note:** This tool is typically useful in the beginning, when Esko Cloud is being set up in your organization, or when you set up a new location.

4.1.6. Upload All Local Customers

In the view '**Customers**'. right-click anywhere in the list and select **Upload All Local Customers**.

You will be asked to confirm.

For each local customer that is not yet linked to a cloud customer, a customer is created on Esko Cloud. And these two are then linked.

This tool launches the task "**Upload Customers to Esko Cloud**". See the task's **Details** pane for more information on what it did.

This task has no options.

4.2. On Files in Jobs

4.2.1. Upload Files to Esko Cloud Job Folder

This task uploads the selected file(s) to the matching job folder on Esko Cloud.

The input files need to be in an active (blue) Job.

When this Job does not exist yet on Esko Cloud, it will be created.

The files are placed in a folder matching the folder structure of the local job folder.

When same files are already in that same folder, they will be overwritten.

On Esko Cloud, a file's (modification) date is its time of arrival on Esko Cloud.

Special characters in names of files are supported.

This task has no options.

About Task Status

- The task ends in success if all files were uploaded successfully.
- The task ends in warning if at least one file uploaded successfully and at least one could not be uploaded.
- The task ends in error if no file was uploaded successfully.

The **Details** pane shows the path on Esko Cloud where the files arrive.

4.2.2. Download Files from Esko Cloud

The tool 'Download to Job Folder' in the View "Esko Cloud"

This launches the task on the files you selected in the view **Esko Cloud** to the local job folder.

The files on Esko Cloud are not removed.

Local same files will be overwritten.

The Task "Download Files from Esko Cloud"

- **Task Options**:
  - **Delete files from Esko Cloud after downloading**: Select this to also delete the files on Esko Cloud that were successfully downloaded.

- This task is by default used in the *Esko Cloud Access Point*. You can there define an extra workflow to launch on the files once they arrived locally.

4.2.3. Select Files on Esko Cloud Job Folder

Concept

This task selects files that are on an Esko Cloud job folder, or the folder itself.

This task is typically used in a workflow ticket, where the selected files serve as input for next steps like a *Download from Job Cloud Folder task* or the *Start Approval Cycle on Share & Approve task*.

Note: The output file of this is a temporary .json file that contains a list of references to the files in the Job cloud folder.

Settings

- **Names**:

  Learn more in the pages about *Using Regular Expressions*, *JSONPath Expressions*, or *SmartNames*.

  Note: When using SmartNames, the resolved values should **not** already be encoded (to avoid double encoding).

- **Path**: The task will search for the files with the here above defined names in this folder.
  - **Include subfolders**

4.3. On Jobs

4.3.1. Sharing Jobs

Concept

Sharing an Automation Engine Job to Esko Cloud creates that Job on Esko Cloud. You can go a step further by also inviting other locations in your group to collaborate on this job.

Important: Sharing a job does not upload files. It creates the job on Esko Cloud: the folder and the job's metadata (inks, barcodes, etc.).

You can choose to:

- Share it with one or multiple locations in your group (those that were defined for your group on Esko Cloud).
- Share it with no one, i.e. without defining any locations. Also then the job is created on Esko Cloud, but only you, the location that shared it, can see it. You could for example choose this to first collect all the job's data on the cloud, and only once you uploaded the right files, only then share it with that other location.

Important: Only jobs of which the customer was linked to a cloud customer can be shared to Esko Cloud.

The Tool 'Sharing...'

The 'Sharing' tool

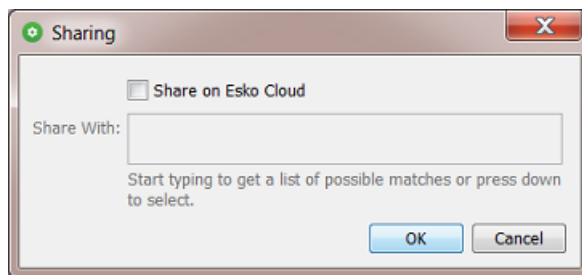When you right-click the name of an open Job, or one or multiple jobs in the **Jobs Overview**, choose **Sharing...** to share or unshare them.

We will illustrate the possibilities through some examples:

#### The 'Sharing' tool when you Selected One Jobs

The **Sharing** dialog opens:

- When the setting '**Share on Esko Cloud**' is not selected, this means that this job is currently not shared:

> **Important:** This is also the setting to unshare a job: When you click **OK** when **Share on Esko Cloud** is not selected, you are confirming that this is what you want: The job is (no longer) shared.

• When '**Share on Esko Cloud**' is selected, the field '**Share With**' is enabled where you can define who you want to share this job with.
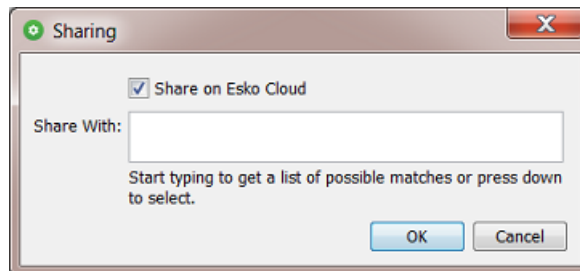
• If you leave this field empty and click **OK**, you are only sharing this job on Esko Cloud and only you as '**Owner Location**' will be able to see it and have access to it.

• If you type in one or multiple names of locations (or pick them from the list that appears), then the Pilot users in those locations will see this job on Esko Cloud and have access to it.
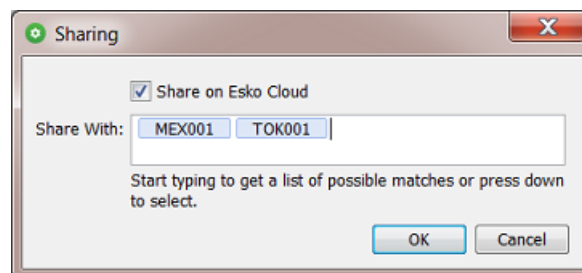
Click **OK** to confirm.

The 'Sharing' tool when you Selected Multiple Jobs

In the **Jobs Overview**, select multiple jobs, right-click and choose **Sharing...**. The dialog now shows the sharing attributes that these jobs have **in common**.

Some examples:

• When your selection contains a mix of jobs that are shared and not shared, the **Share on Esko Cloud** setting will be set to '–':
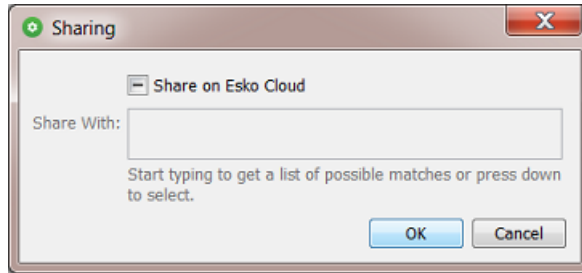
Change any setting and click **OK** to define a common behavior for all selected jobs.

Change nothing and click **OK** or click **Cancel** to not make any changes.

• In this example, all selected jobs are shared on Esko Cloud and there with 'MEX001' (and no other location):

• When the selected jobs are all shared, but *not all* of them are shared to MEX001, then the name of that location is shown in a gray color:
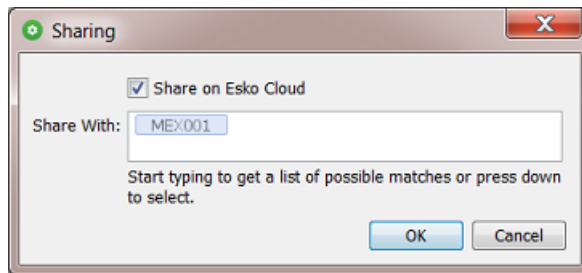
• This example shows 3 jobs with different settings in their column **Shared With**:

When we select all 3 of them and choose **Sharing**, this is what the dialog shows:
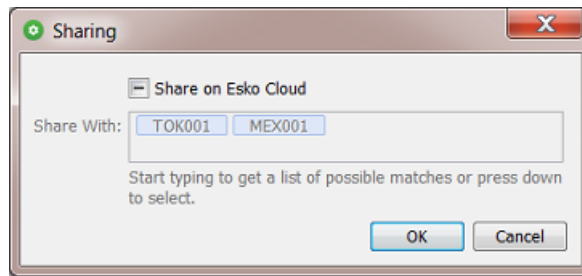
This means that:

- some of these jobs are shared on Esko Cloud, but not all (the '-' setting),
- `TOK001` is shown but in gray, so at least one job is shared to `TOK001`, but not all,

- `MEX001` is shown but in gray, so at least one job is shared to `MEX001`, but not all.

- We use the same jobs but now we only select the '2017' and the '2018' job:

No the **Sharing** dialog shows this:

This means that:

- All job in our selection are shared on Esko Cloud ('`v`').

- `TOK001` is shown in gray, so at least one job is shared to `TOK001`, but not all.

- `MEX001` is shown but in black, so all jobs in our selection are shared to `MEX001`.

The Share Job task

This task is only available as a step in a workflow. When you want to share a job that you have selected in the Pilot, this task type will not be offered. In that case, use the interactive tool '*Sharing…*'.

- **Replace existing locations**: When not selected, the changes you make in this task will be added to the current way that job is shared. When selected, and when for example the field **Add Locations** is left empty, the job will be unshared from all locations.

- **Remove Locations**: Click on the list icon or use a SmartName.

> **Note:** This field is case-sensitive. When defining multiple, it should contain a comma separated list of location names.

- **Add Locations**: Click on the list icon or use a SmartName. When defining multiple locations, it should contain a comma separated list of their names.

> **Note:** This field is case-sensitive. When defining multiple, it should contain a comma separated list of location names.

> **Note:** You can still share with a location that shows a red status when checking the *Network* (**Server Admin Web Page** > **Server Checks**). Once that location becomes available again to Esko Cloud, the sharing will be done.

> **Note:** The task first executes the **Remove Locations**, and afterwards the **Add Locations**.

The Unshare Job task

This task unshares the job or jobs that were selected or, in a workflow, that were specified as input files.

The job will be removed from Esko Cloud, including the files it stored there.

This task has no options.

4.3.2. Synchronize Job - All Jobs

This function is available when you select a Job that was already shared on Esko Cloud. It synchronizes all fields of the Job setup of this Job. For example: a change in the list of inks or barcodes.

Normally, all changes in a job setup between the local and the cloud job (aka 'events') are automatically exchanged.

However, this automatic synchronization between AE servers and Esko Cloud will (temporarily) fail:

- When your Automation Engine server is unavailable (due to a software update, computer reboot, etc.).

  - In this case, the Automation Engine software will also repair this automatically: As soon as the Automation Engine software re-starts, the server automatically launches a task that does this synchronization and so makes up for any lost 'events'. There is an *upload-* and a *download version of this synchronization task*.

- When there is no internet access for a while. This could be your own link to Esko Cloud or it could be another location that lost its connection. During that network problem, this of course prevents that location to send or pick up any changes in jobs on Esko Cloud.

- This is the case where you use the 'Synchronize Job' tools. You can either right-click a job and choose **Synchronize Job**. Or you select **Synchronize All Jobs** from the menu **Job**.

The Synchronize with Esko Cloud (Upload) task

When your Automation Engine server restores its connection to the internet, this task will make sure that the changes you made locally are uploaded to Esko Cloud.

This task is started automatically by Automation Engine.

You can also trigger it yourself by using the **Synchronize** tools in the **Job** menu. Learn more in *Synchronize Job - All Jobs* on page 30.

> **Note:** When you open this task after it has been started, you will see task options. These are only there for the use by Esko support staff. This enables them to test the effect of these options in case something went wrong.

The Synchronize with Esko Cloud (Download) task

When your Automation Engine server restores its connection to the internet, this task will re-download all Esko Cloud jobs on which your location is collaborating, to make sure you have the latest job info, parameters and inks.

This task is started automatically by Automation Engine.

You can also trigger it yourself by using the **Synchronize** tools in the **Job** menu. Learn more in *Synchronize Job - All Jobs* on page 30.

> **Note:** When you open this task after it has been started, you will see task options. These are only there for the use by Esko support staff. This enables them to test the effect of these options in case something went wrong.

4.3.3. Pilot View 'Shared Files'

A new Pilot View mode to see a Job's Shared Files on Esko Cloud

In the '**Last used Job**' mode of the Pilot (when you opened a Job), the extra view '**Shared Files**' becomes available in the category '**General**'.
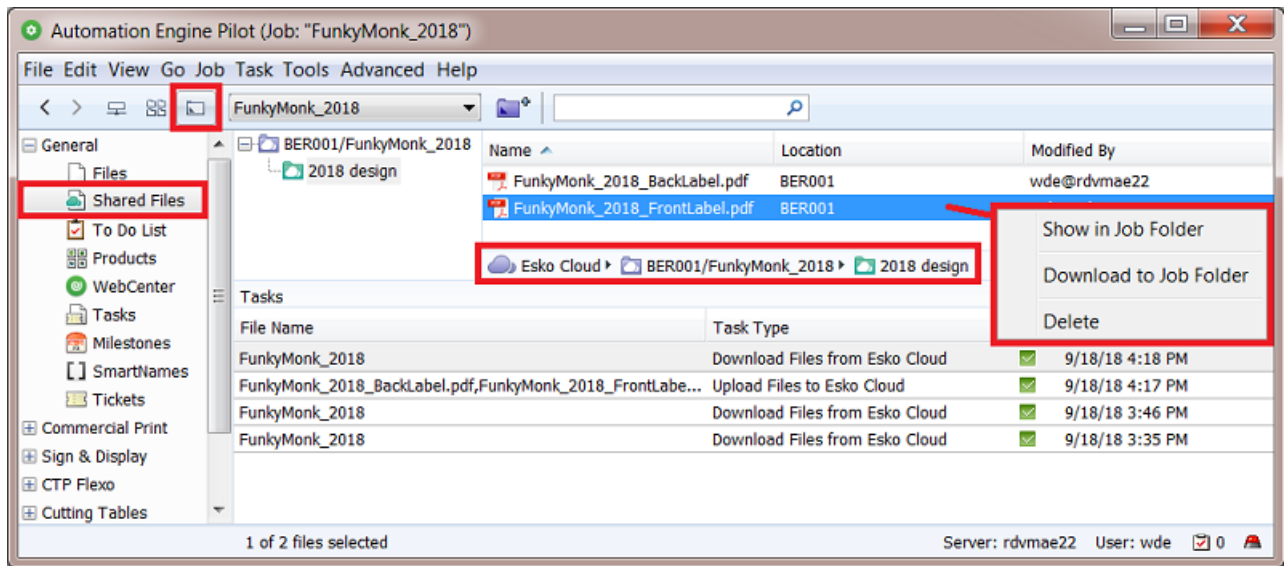
This view shows this job's folder on Esko Cloud and the files it contains. These files can be put there by all who have access to this job on Esko Cloud.

Tools in this View

Right-click a folder or a file to choose from these functions:

- **Show in Job Folder**: This takes you to the **Files** view of the local job folder and there selects the local version of the file you selected on Esko Cloud.
- **Download to Job Folder**: This downloads the folder or file(s) to the local job folder, in a same subfolder. It overwrites files with a same name.
- **Delete**: This removes the selected folder or file(s) from Esko Cloud.

Note: If you want to remove the whole job from Esko Cloud, then use the **Sharing...** panel. There, de-select the option **Share on Esko Cloud** and click **OK**. This will not only unshare it but also remove the job and its files from Esko Cloud.

4.3.4. Smart Views on Sharing Status of Jobs

In the **Job Overview**, any job you can see there is a local job, a job on this AE server, on this location.

Important: This view does not show any jobs that are on Esko Cloud. It shows local jobs of which some could have been created because they came in from Esko Cloud.

The Jobs overview offers extra columns that provide such information:

- **Cloud Status**: A cloud icon means that this local job was shared to Esko Cloud.
- **Owner Location**: Where this shared job originates.
- **Shared By**: The user in the remote location that shared this job.
- **Shared With**: With which locations this job was shared with.

See this example of the Jobs in the location `BER001`.

These are all the (live) jobs on the Automation Engine server in `BER001`:

Smart Views offered when using Esko Cloud

You automatically get a few Smart Views that help filtering jobs in relation to Esko Cloud.

Note: These extra views only appear after you have set up an Esko Cloud configuration in the **Configure** tool and after a restart of the Pilot.

Double click the name of a **Smart View** to see how its filter is built up:

- **Not Shared**:

    These are our jobs that are not shared on Esko Cloud.

- **Shared**:

    These are all the jobs that our location has access to on Esko Cloud.

    See how the filter uses '**None**' to get a reverse effect:
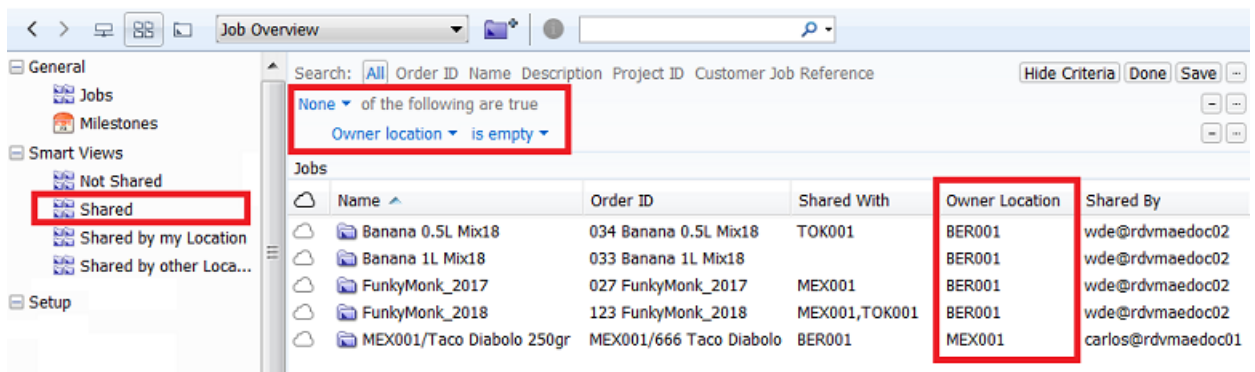
These jobs job are either:

- our own jobs **that we shared** on Esko Cloud (4 from BER001),

- or jobs **that were shared to us**. We were invited to see them, which then automatically created this local version of that job (1 was shared to us by MEX001).

- **Shared by My Location**:

  These are all the jobs that our location has shared on Esko Cloud.
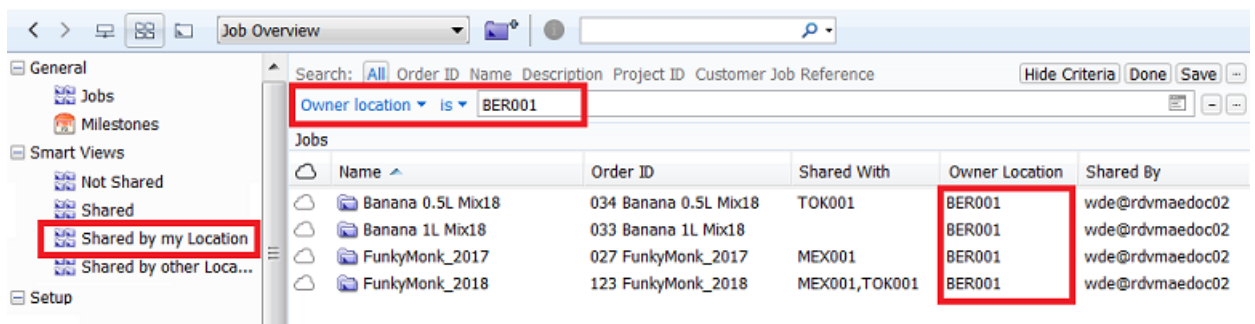
- **Shared by Other Locations**:

  These are all the jobs that were shared to us by another location.
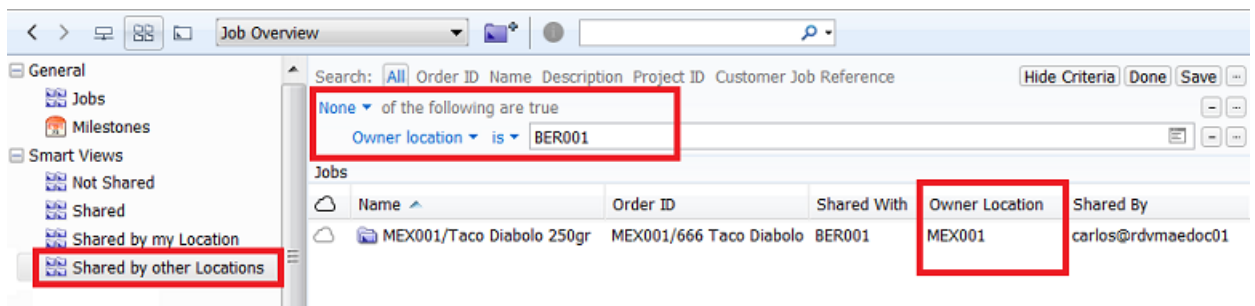
Note: If you don't want to use or see these Smart Views, just de-select them in **Manage Job Filters** from the **Job** menu.

4.3.5. Smart Views on Cloud related Tasks

The first time a Pilot open after adding an Esko Cloud site in the Configure tool, some extra **Smart Views** will be added that help you filtering cloud related tasks.

- The Smart View **CloudJob-Import-failures** shows the **Create Job** tasks that, after an invitation to collaborate on a cloud job, failed to create a local job.

- The other Smart Views are about Tickets. Learn more in

If you don't want these Smart Views, just de-select them in **Define Task Filters** in the **Task** menu.

4.4. On (Workflow) Tickets

Concept

You can submit (workflow) tickets to Esko Cloud. Only global (yellow) tickets, not (blue) Job tickets.

The main use case is to make them available to other locations, to streamline ways of working.

By uploading these tickets to Esko Cloud, workflow administrators (in headquarters?) can so make a catalogue of interesting workflow tickets available for all locations within the organization.

A ticket on Esko Cloud also contains all its dependencies, like SmartNames, template files, etc.

Tickets on Esko Cloud are not related to any customer of job. They are there to be seen and picked up by any other of your locations (not specific ones).

Mind that all steps are manual, i.e. there is no automatic synchronisation of versions of tickets. This is because updating tickets on another location while they could be in use is not secure at all.

However, the system does automatically keep track of any changes and show this with an icon (see below). But it will not make any decisions itself.

You decide which tickets you want to submit to Esko Cloud and when. The receiving locations decide when and what they want get.

There are no tasks doing this, only manual tools.

There is no record of history nor versioning of tickets.

The 'Cloud Status' in the Tickets View

The **Tickets** view in the Pilot is where you see the '**Cloud Status**' of a ticket. This is the status related to its counterpart on Esko Cloud.

This '**Cloud Status**' is now also a category you can search or filter on.

Select the columns **Cloud Status** and **Owner Location**.

These are the possible states that a ticket can have:

- ⌀ **Unlinked**: This ticket is not on Esko Cloud. . In this filter, select this icon to see unlinked tickets.

> **Note:** In their cloud status column, unlinked tickets do not show this icon but show no icon at all.

- ☁ **Synced**: The ticket on Esko Cloud is in sync with this local ticket.

- ⌂ **Updated**: Your location updated the ticket which is now newer than the one on Esko Cloud. You need to consider submitting this newer version to Esko Cloud.

- ⌂ **Outdated**: Your local ticket is outdated. Another location updated the ticket on Esko Cloud.

- ⌂ **Needs Linking**: In this case there are 2 problems:

  - The ticket on Esko Cloud shows changes that are not present in the local one
  - And there are changes in the local ticket that are not present in the one on Esko Cloud.

  There is no easy way to solve this. The only option would be to save a copy of your ticket locally, then download the latest version from the cloud and then apply your changes again to that latest version.

- ⌂ **Removed**: This ticket has been on Esko Cloud but is now no longer there. It has been removed.

> **Important:** Only **direct changes** to the ticket are seen as modifications that will change the cloud status to '**Updated**'. Changes to a SmartName or to a referred ticket will not have an impact on the cloud status of the main (workflow) ticket.

Importance of Time Synchronisation

> **Attention:** To know if a ticket is outdated or in sync, Automation Engine compares modification dates. For this to work , the clock in the Automation Engine server should differ no more than 20 seconds from the clock on Esko Cloud.

4.4.1. Submit to Esko Cloud...

Select one or multiple tickets, of any type.

The system 'ZIP's the ticket together with all its dependencies and then uploads this set to Esko Cloud.

At each submit of a new "version", a change-log can be attached. This information is available as a column in the dialog *Import Ticket from Esko Cloud*.

4.4.2. Get Latest Revision from Esko Cloud

To update a local ticket with the latest version of the cloud ticket, go to the **Tickets** view, make a selection, right-click and choose the entry **Get Latest Revision from Esko Cloud**.

4.4.3. Import Ticket from Esko Cloud...

From the **Tickets** menu, select **Import Ticket from Esko Cloud...** to import a ticket from Esko Cloud.

In case this import action would overwrite a local resource (a ticket, a referenced file, a SmartName...), then you will be shown some details and asked to confirm.

4.4.4. Remove from Esko Cloud

In the **Tickets** view, select one or more tickets, right-click and choose **Remove from Esko Cloud**.

You will be asked to confirm.

Only the **Owner Location** can remove a ticket from Esko Cloud. This is the location that submitted it to Esko Cloud.
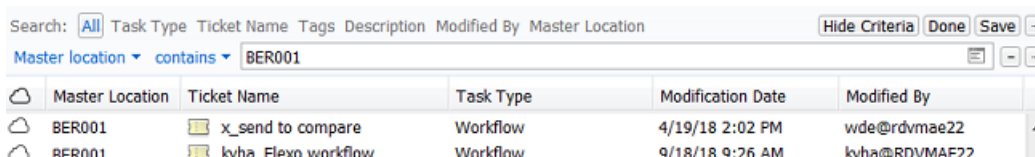
At any other location where this ticket had already been downloaded, the ticket is kept as a local ticket. The cloud status of the local ticket will change to ⛅⊗ **Removed**.

4.4.5. Smart Views on Cloud Tickets

Some Examples

Some examples of how you can filter your local tickets based on their cloud status:

• Your local tickets that this location ('`BER001`') has submitted to Esko Cloud:

• Your local tickets that have a counterpart on Esko Cloud:

• Your local tickets that were downloaded from Esko Cloud, but who are out-of-sync because their cloud version was updated:

• Your local tickets that were downloaded from Esko Cloud, but who are out-of-sync because their local version was updated:

Search: [All] Task Type Ticket Name Tags Description Modified By Master Location   [Hide Criteria] [Done] [Save] [..]
Cloud status ▾ is ⬕ ☁ ⬆ ⬇ ⬀ ⬀⊗   [-] [..]

Smart Views offered at installation

Just like with Jobs, you are presented a few example Smart Views.

• The Smart View **CloudJob-Import-failures** shows the **Create Job** tasks that, after an invitation to collaborate on a cloud job, failed to create a local job.
• The Smart View **CloudTickets-All** shows ...
• The Smart View **CloudTickets-inSync** shows ...
• The Smart View **CloudTickets-locallyAdapted** shows ...
• The Smart View **CloudTickets-OutOfSync** shows ...

Double click them to see how they are constructed.

4.5. Esko Cloud Access Point

Concept

On this page, we assume you already understand the main principles of **Access Points** as described in the chapter *Integrating with External Systems*. Here's a *direct link*.

The most typical aspect of an Esko Cloud access point, and its main difference with the other types of access points, is that the folder that will be scanned is not one specific folder but each folder with that name in **every** job on Esko Cloud.

Setting up an Esko Cloud Access Point

**Note:** We advise that you first establish the link between your Automation Engine and your Esko Cloud site. Do this in the **Configure** tool.

Follow these steps to set up an Esko Cloud access point:

• In the Pilot, go to the view **Access Points** (part of the category '**Setup**').
• In the toolbar, click to create a new access point.
• In the dialog, choose the type "**Esko Cloud**" and click **OK**.
• Add a logic and clear **Name**. Optionally, add a **Description** of what this access point will do.
• In the tab **Esko Cloud Settings**:
    • **Account**: This is the name of your configuration. When you still need to create one or just see its details, click **Configure**.
    • **Folder**: This is the name of the folder that will be monitored in **every** Esko Cloud job folder that is accessible to this location. An example:
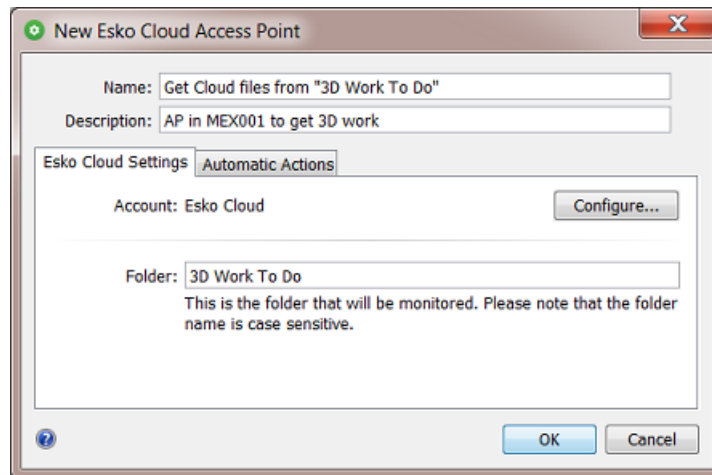
> **Attention:** The name of this folder is case sensitive.

> **Note:** There is no need to start this field with a "/" .

> **Note:** When the folder is a subfolder of another one, use a "/" in between. For example: `Outsource/3D work`.

- In the tab **Automatic Actions**:
  - **Move Files To**: The files that are found in such a folder are moved to the corresponding local job folder (which was created automatically).
  - **Action**:
    - **None**. Choose this option when you only want to use this **Access Point** to *move* the files.
    - **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.

    - **Priority**: Choose the priority for this workflow: Low, Normal or High. The default priority is 'Normal'.

Folders which are named after one of your Esko Cloud locations

An Esko Cloud access point will not download files from a folder name that is the name of a location, except when it is the name of its own location. In other words: It will consider and download all files, except in subfolders named after other locations.

This setup enables an easy way of distributing files over several locations.

An example:

This local job folder has a sub folder `'External Work'` that is being scanned by an access point in each of 3 other locations, named `'MEX001'`, `'SYD001'` and `'TOK001'`.
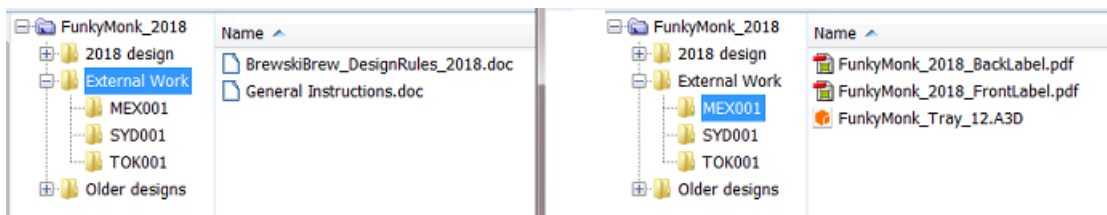
- The access point at each other location will download the 2 *.doc files in the folder `'External Work'`.

- The location `'MEX001'`

  - will not download anything from the folders `'SYD001'` or `'TOK001'`

  - but will download anything else in `'External Work'`, which in this case is all the files in the folder `'MEX001'`: the 2 PDFs and the A3D file.

- The location `'SYD001'`

  - will not download anything from the folders `'MEX001'` or `'TOK001'`

  - but will download anything else in `'External Work'`, which in this case is all the files in the folder `'SYD001'`.

- The location `'TOK001'`

  - will not download anything from the folders `'MEX001'` or `'SYD001'`

  - but will download anything else in `'External Work'`, which in this case is all the files in the folder `'TOK001'`.

4.6. Esko Cloud related SmartNames

This workflow introduces these new SmartNames:

- **Esko Cloud Location**: This is the name in the Esko Cloud configuration for this location with Automation Engine.

- **Job Owner Location**: The location that has ownership of the job. In case it was shared, then this is the location where the job was first shared to Esko Cloud.

5. FAQs on Technical Setup

Which AE user executes these AE tasks?

Any AE user that uploads a file or shares a job to Esko Cloud will trigger a task run on behalf of that user.

The *Synchronize with Esko Cloud* tasks however start automatically and are launched by a user (aka 'operator') named `auto@<name-of-location>`.

All access to Esko Cloud is done through the use of the token. The Esko Cloud site so also get confirmation on which 'equipment' is connecting to it.

Which communication lines are needed to enable collaboration between Automation Engines in different locations?

In each location, the (master) Automation Engine server (AE 18.0.1 or higher) needs to **be connected to the internet**.

With the necessary authorization and permissions, this allows one location to put data in a particular place on Esko Cloud and another location to retrieve the data from that place in the cloud. The communication between these locations always passes over Esko Cloud. In other words, it is never peer-to-peer. So, per location, 1 line to the internet is sufficient.

For security reasons, all communication happens over HTTPS.

Can one group or organization have multiple 'Sites' on Esko Cloud?

Yes, this is possible. You might for instance still want to split all data from pharmaceutical jobs away from any other data.

What to do when my Automation Engine server is moved to new hardware?

Esko advises to, create a new equipment entry on Esko Cloud for that new hardware.

What do I Need to have Access to Esko Cloud?

Per organization (a group that owns the several locations with an AE server), 1 administrative account is needed, being a user and password (*Okta*). With this account, the data structures for the organization can be set up in Esko Cloud. These data structures can also be referred to as the 'Share & Approve' site for this organization.

Why should I ask my IT department to make sure Time Synchronization is set up on my Automation Engine?

Time information is stored locally in each location and also when data is put in Esko Cloud. To verify whether certain information is in sync, the time information (coming from different sources) is compared. To avoid problems with this time comparison, you need to make sure

that the time as reported by your Automation Engine server is quite accurate (i.e.: being the same as respected official Time Servers).

When Cloud Jobs are automatically Created Locally, Where are they Created?

When your location is invited to collaborate on a job, a local job is created automatically on your Automation Engine (somewhere in an AE 'Container').

This is possible by making sure that the **Create Job** task uses the tool **Smart Job Location** to determine the local folder for this job.

Important: In this context, where Automation Engine servers exchange Jobs, the setup of this **Smart Job Location** in very important.

Note: The **Create Job** tasks that ended successfully are automatically removed from the Tasks view or panel.

Learn all about this tool in *Smart Job Location*.

An example: You could set up rules that organize job folders on a specific Container, in alphabetical groups of customers, and per year. In the **Smart Job Location** tool, in the tab **Rules**, click **Add**, and specify this:

- **Condition**
    - **If Job Field**: (SmartName) *<Job Customer name>*

    - **Matches**: *(?i)[a-e].** (click 'Edit' to get help creating this regular expression)
        - and add additional rules for *[f-k]* and so on...

- **Then** use as **Job folder**:
    - **Container**: Select the one where you want these Job data from Esko Cloud.

    - **Folder**: *<Job Customer Name for path>* /a-e/jobs/2019/*<Order Id for path>* .
        - These <...*for path*> SmartNames are based on the standard SmartName with the same name but these have an extra formatting that replaces each '/' by a '-'. This way, the folder names are supported by Windows.

            Note: Learn how to do this in *SmartNames* > *String Extract* > *Formatting Options* > *Text* > *Custom Encoding* > *Edit*.

6. FAQs and Tips on Customer Consolidation

How do I best Start Organizing these Customers?

In the beginning, when an Esko Cloud site is available and configured for your organization, there will be no cloud customers yet.

> **Note:** On Esko Cloud, customers are called **Partners**.

1. Your first step is to start uploading all the customers from 1 specific Automation Engine location to Esko Cloud, maybe from the one in your group's headquarter. This will also create a link between each local customer and its cloud version. This tool is named *Upload All Local Customers*.

   As soon as such a customer is linked, you can start sharing jobs and uploading some of their files to Esko Cloud..

   So yes, in that first (headquarters?) location, all local customers can be uploaded in 1 go.

2. For each other AE location in the group, the situation is different:

   You can only start uploading files or sharing jobs once this customer link exists.

   When uploading a job (sharing) for a customer that is not yet linked to a cloud customer, you must verify whether the customer already exists in the cloud.

   • If so, you must manually link that local customer to that cloud customer.
   • If not so, then you must first manually create a cloud customer of that local customer and then link these 2.

How can I see if a local customer is linked to a cloud customer?

When you view the list of customers in the Pilot, make sure to add the column '**Esko Cloud Status**' to the list of visible columns (**Views** > **Columns**).

The cloud icon indicates if that customer is linked to one on Esko Cloud.

Some info fields of a customer differ between the several locations. What should I do?

Standardize! At least make some efforts on the path of standardization, in working in the same way in all locations.

> **Note:** A customer's name, ID and many other attributes typically originate in a business system. Standardizing on one business system for the whole organisation will of course help to avoid that different locations have same customers with (slightly) different names or settings.

This setup does not support actual 'mappings' of customers port mappings (for 'n' locations within an organization, that would mean we need to defining `(n * (n - 1)) / 2` mappings).

Is there any Automatic Synchronisation of Customer Information?

No.

This is because we don't know which system has the latest and correct customer specification. This could be the business system. But what if locations use different business systems? It could be the local one on Automation Engine. It could be the one on Esko Cloud.

Therefor, there is no automatic synchronization of customer information.

However, an AE user can always manually sync information of local customers with their cloud counterparts, or vice versa.

To upload a local customer's info to Esko Cloud, choose the task or tool *Upload Changes to Esko Cloud* on page 21.

To download info from a Esko Cloud customer to the local customer, choose the tool *Download Changes from Esko Cloud* on page 21.

What happens if a 2nd (etc..) location also decides to Upload All Local Customers ?

Upload All Local Customers will, for each local customer, try to create a cloud customer. It tries this without already trying to automatically link a local customer to a cloud customer.

- **Success**: If such an attempt succeeds for a local customer, then there is a new cloud customer.

- However, it's possible that this customer now has 2 representations in the cloud: one that was made by the first location ("headquarter") and one that was made by this 2nd location.

  Here's the problem: When you now want to share a job from this customer, it's possible that you must share 2 jobs: one based on the name given by the headquarter location and one based on the name given by this 2nd location.

  Of course, the above scenario can occur for every location that decides to click on **Upload All Local Customers**. This can so end up in the worst case where you have as many representations for 1 customer as there are locations...

- **Fail**: If the attempt to create a cloud customer from the information of a local customer fails, then this most likely means that there is already a cloud customer with information that is too similar. You now have to decide yourself, manually, what to do in this case.

  You then use the tool that shows both their information side by side, and based on that you decide to link them or not (*example*).

Our group installs a new AE. Should I First Import All Cloud Customers?

When a new (master) Automation Engine is installed in some location, it will not have any local customers yet. Here are some guidelines in the event that the new AE also needs to be linked to Esko Cloud:

- As an alternative to building that list of local customers based on those in your local business system, you could choose to **Import All Cloud Customers**. For every cloud customer, this tool creates a local customer and also links them.

  So yes, on a brand new Automation Engine, you could choose to import all cloud customers.

- However, when you download a job from Esko Cloud (you accept a job invitation), then the system checks if there is already a local customer that links to the customer of the job.

- When yes, then of course that local customer is used as customer for the imported job.

- When not, a new local customer is created on Automation Engine and a link is made between these 2 customers.

Important: This means that there is a kind of auto-import of cloud customers (= creating local customers) when jobs are shared with your location.

This also illustrates the risk that a customer can get 2 representations on your local Automation Engine: one possibly made by your business system and one made by accepting a shared job to collaborate with another location.

However, there is still no real harm done. To avoid the above situation, you must do the manual effort to iterate over all the local customers to establish a link with a cloud counterpart.

7. FAQs on Collaboration Workflow

Where can I see which other locations in my organization are also connected to Esko Cloud?

With a web-browser, go to the *AE Server web page* and choose **Server Checks** > **Network**.

In the section **Esko Cloud locations**, you get a list of the other locations in your organization and an indication whether these are actively connected to Esko Cloud.

Also, when you share a job with another location, you see a list of the other configured locations, so one can choose who to share with.

How can I make files available to other locations?

When a location shares a job, a node is created in the data structures on Esko Cloud. The node contains meta-data about the job (parameters/inks/barcodes) but it also provides for storing files on Esko Cloud.

You can see which files of a job were uploaded to Esko Cloud right in the Pilot. Open the Job and choose the dedicated view "*Shared Files*".

To upload a file into the **Cloud Folder of the Job**, open a job, select local file(s) and launch the task *Upload Files to Esko Cloud*. This task can also be part of a workflow ticket.

On Esko Cloud, the uploaded files are automatically placed in a folder with same name, in its same structure as the local job folder.

For example: To upload a file to the cloud in a subfolder `Needs-Image-Retouching`, you must first move the file locally into the folder `Needs-Image-Retouching` and then upload the file to Esko Cloud.

Important: It is very important to *standardize on the folder structure within jobs*. Eventually, all locations that collaborate on a job will see the Cloud Folder of the Job. And as a result of uploading (and downloading) files to (and from) Esko Cloud, many of the subfolders in the cloud will be automatically created mirror versions of the job's subfolders in the *various* locations.

How can I download files from Esko Cloud?

When opening a job in the Pilot, the **Shared Files** view shows all files that were uploaded for that job. In that view, you can select files, right-click and choose **Download to Job Folder**. They will be copied to the local job, in a same subfolder.

Attention: Also in this case, it is very important to standardize on a job's folder structure in all locations of the organization.

You can also download files from Esko Cloud by using the task *Download Files from Esko Cloud*. Add this task in a workflow and you can immediately start processing these files.

How can I see which jobs other locations shared to us?

Learn about extra columns in the Jobs overview and about *Smart Views on Sharing Status of Jobs* on page 32.

How do I know about failures in creating jobs triggered by an invitation from another location?

As mentioned above, when another location invites your location to collaborate on a job, a corresponding local job will be created on your Automation Engine.

This job is created by the **Create Job** task. This task can fail, probably related to linking the customer.

- To easily see which of these job creations went wrong, set these filters in your **Tasks** view: set the **Task Type** to **Create Job**, the **Source Type** on **Esko Cloud** and the **State** to **Failed**.

- **Smart Views** in Tasks view:

  The first time a Pilot connects to Esko Cloud, some extra **Smart Views** will be added that help you filtering cloud related tasks. If you don't want these Smart Views, just de-select them in **Define Task Filters** in the **Task** menu.

  For example: The Smart View **CloudJob-Import-failures** shows the **Create Job** tasks that, after an invitation to collaborate on a cloud job, failed to create a local job.

- An extra tool that can help in this case is to create and use a dedicated **Create Job** ticket that launches an extra workflow in case the **Create Job** task fails. This workflow could for example create a To Do item. This will ask the attention of some user to check what is wrong here.

How can I see which jobs we share with other locations?

First enable these extra columns in the **Jobs** view: **Cloud Status**, **owner location**, **Shared By**, **Shared With**.

To see which jobs your location shares with other locations for collaboration, set these filters in the **Jobs Overview**:

- **owner location** should be set to your own location

- and the **Shared With** field should not be empty.

The first time a Pilot connects to Esko Cloud, some extra **Smart Views** will be created that help you filtering cloud related jobs. If you don't want these Smart Views, just de-select them in **Manage Job Filters** in the **Job** menu.

The Smart View **CloudJobs-MineShared** shows you the jobs your location is sharing with others.

The job's attribute 'categories' are different between the several locations. What should I do?

Also here, the only answer is to work towards standardisation.

Is Job information automatically synchronized?

Yes.

- The location that shares a job with another location in the organization, is known as the **owner location** of the job.

- When a local job is shared, the job's folders and its whole **Setup** is pushed by the owner location into Esko Cloud: job parameters, job inks, job barcodes, job preview.

- Any other location that is invited to the job (shared with), creates a local job by downloading all this job information from Esko Cloud to become a local job.

- Uploading a job setup to Esko Cloud ('sharing') can only done by the owner location.
- Downloading the setup of a job on Esko Cloud onto the local job can done by all locations that were invited to collaborate on the job.
- When, in the owner location, the job is being changed (parameters / inks / barcodes / preview), then

  - these changes will immediately be updated on Esko Cloud.
  - and from there they will also automatically be downloaded (synchronized) to the locations that collaborate on that job (where the job was shared to).

-

> **Attention:** When a location that is not the owner location does modifications to the local job, these modifications will remain local ; they are not propagated/synchronized to Esko Cloud.

> **Note:** In the setup where AE locations collaborate, it is not the intention that the invited locations do modifications to the job information. The invited locations should deliver results by uploading result files into some subfolder of the **Esko Cloud Job Folder**.

Can files automatically be downloaded from Esko Cloud?

Yes, by using an **Access Point** of the type **Esko Cloud**.

This tool allows to monitor a specific subfolder within **each** job to which your location was invited to collaborate.

When it detects a file in such a subfolder, the access point will get triggered:

- It will download the file from Esko Cloud to a folder with same name in the local job. Then, the file is removed from Esko Cloud.

- Typically, a workflow is launched on that downloaded file. This workflow will run in the correct job context (this means it can use job information and job specific SmartNames).

Learn more in *Esko Cloud Access Point*

Are the folders in my job automatically synchronized?

No.

However, Automation Engine offers the tools to automate this if you want:

- Files can be uploaded into subfolders of a job's cloud folder via local workflows. This gives you full control on when to upload which files.
- Files can be downloaded automatically from Esko Cloud into the correct local job by setting up an ***Esko Cloud Access Point***.

What happens when my Automation Engine was offline for a while?

An Automation Engine server can get disconnected from Esko Cloud for several reasons: The internet connection was lost, the server was down to install upgrades or hotfixes or to do some maintenance to its hardware (additional disk space, ...).

This location could therefore have missed some events about job invitations or file uploads in subfolders that are monitored by an **Esko Cloud Access Point**.

To catch up on these events, Automation Engine automatically runs a task each time its software starts up: the *Synchronize with Esko Cloud (Download)* task.This task appears in the Pilot's **Tasks** View after each start-up.

When the task ran successfully, the result should be that, regarding Esko Cloud, nothing seems to be missing (invitations and uploads are in back in sync)

How do I share resources, like DGC curves, CMS information?

This is not yet possible in this version of Automation Engine.

How do I share Products?

This is not yet possible in this version of Automation Engine.

8. FAQs on Tickets on Esko Cloud

How do I share tickets with other locations?

Without Esko Cloud, it is possible to exchange tickets by using the **Export / Import Ticket** tools in the Pilot. This writes a .zip file that can be exchanged via standard tools (E-mail, FTP,...).

It is also possible to upload global (yellow) tickets to the data structures of the Esko Cloud. You can not upload job specific (blue) tickets to Esko Cloud.

Because (workflow) tickets are not linked to a customer, the nodes for uploaded tickets are stored in another data tree as the job information. Any location in the organization can see all the tickets that were uploaded.

To use an uploaded ticket in production, it must be downloaded and stored as a local ticket. Do this by choosing the *Import Ticket From Esko Cloud* entry in the *Ticket* menu.

Many tickets have dependencies. A lot of them like SmartNames, DGC curves and SmartMarks will also be downloaded and placed or installed on the local Automation Engine.

Attention: This will overwrite any already existing items or files with the same name. Also mind that there is no versioning of tickets.

Any AE user can upload and anyone can download Workflow Tickets..

There is no automatic synchronizing of tickets. This is because the impact on production could be too intrusive.

However, there is an indication how your local ticket compares to the one in Esko Cloud:

• Should I download because someone in another location uploaded a modification to the Ticket in the Esko Cloud ?

• Should I upload because someone in our location made a modification to the local Ticket ?

To see this indication on how the local ticket compares to its cloud counterpart, make the column **Cloud Status** visible in the **Tickets** view.

Note: This indication is only meaningful if your Automation Engine is setup with time synchronization.

9. Workflow Examples - Combing the Tools and Tasks

Our Example Group: "SuperPrint"

The group `SuperPrint`, has an Esko Cloud site and there configured its 4 locations that have an Automation Engine server: Mexico City, Berlin, Sydney and Tokyo.
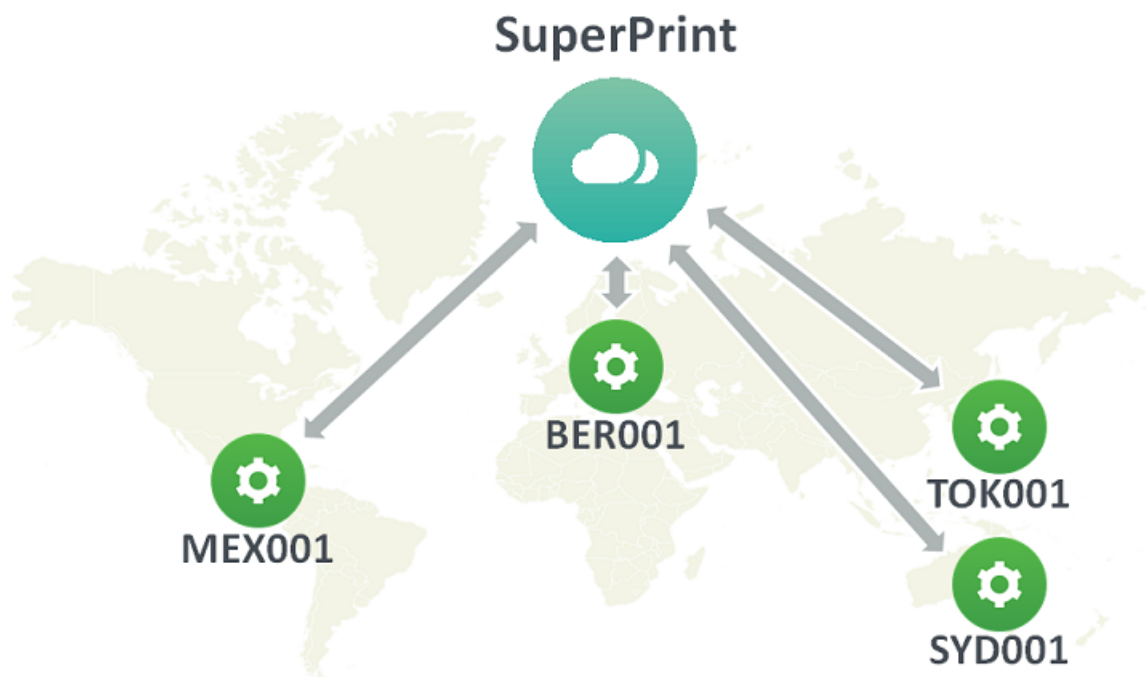
9.1. EXA 1 - Delegating work to an Other Location

Description of this example

The location in Berlin, BER001, regularly needs 3D models to be made of the label jobs that they prepare.

The expertise and tools to do this is only available in MEX001, the location in Mexico City.

This example shows how the users in MEX001 can automatically get the files that they need to work on.

In our case, the job name is '`Funky Monk 2018`' and is for customer '`Brewski-Brew`'.

Step 1 - PREPARE - customer consolidation

As always, nothing in this example will work when the involved customer account has not yet been consolidated.

To do:

- In BER001, upload the local customer `Brewski-Brew` to Esko Cloud or link it with an existing one on Esko Cloud that also represents that same company.

- In MEX001, **Import from Esko Cloud** the cloud customer `Brewski-Brew`.

Step 2 - PREPARE - At the location that should receive Files, create an Access Point

The 3D work needs to be done in MEX001, so they should receive the files.

To do:

- On that Automation Engine in Mexico City, create an Esko Cloud access point.
- Let it scan folders named '`3D - To Do`'.

Step 3 - Share the job on Esko Cloud (only)

To do:

- In BER001, select the job '`Funky Monk 2018`' and share it.

    In our example, we will not share it yet with '`MEX001`'. This way, no other location can see this job until we think it's ready.

    In BER001, in the Pilot, the job now appears in the job's view '**Shared Files**'. Users in BER001 can also use '**Show on Esko Cloud**' to see it on the Esko Cloud site itself.

Step 4 - Start uploading files to Esko Cloud

In BER001:

- Upload the files that you want your colleagues in MEX001 to get to the job's subfolder '`3D - To Do`'.

- You are free to upload other data from other subfolders to Esko Cloud.
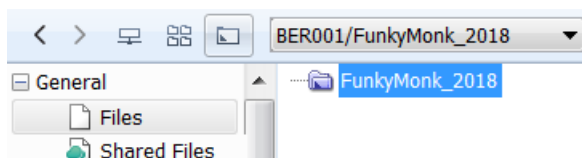
Step 5 - Now share the job with the location MEX001

- In BER001, select the job '`Funky Monk 2018`' and, in the dialog '**Sharing**', in the field **Share with**, add the name `MEX001`. Confirm with **OK**.

- In `MEX001`, this automatically creates a local version of that job. As a reminder and mainly to keep the name unique, the owner location of the job is added as prefix to the local name of the job.

- However, it does not show any files in that local job folder yet:

Step 6 - BER001 starts uploading files to the Esko Cloud job that is also shared to MEX001

- In BER001, you now have all data ready to share with the colleagues in `MEX001`.

  You have put them in a subfolder that has the exact same name as the one that was used for the access point in `MEX001`.
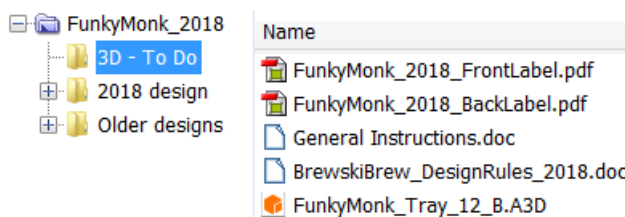
- Select all those files and launch **Upload to Esko Cloud**.

  Note: It is not important if you upload them together or separate in time.

Step - In MEX001, files are automatically downloaded (because of the Access Point)

- In MEX001, the access point monitors the jobs on Esko Cloud that it was invited to.

  It detects that files arrived in the folder '`3D - To Do`' of the job `Funky Monk 2018`.
- The access point downloads the files to the local job folder of '`Funky Monk 2018`', where it creates a subfolder with the same name '`3D - To Do`' and saves them in there.

> **Note:** All of this uploading and downloading happens very fast. It may even be difficult to see the files on Esko Cloud ; they are only there for a split second.

Possible workflow extensions

You could *notify users in MEX001 about the new incoming work*. You can do this by having the access point also launch a workflow.

Once MEX001 is done with the 3D work, you could as well automate the sending of the result files back to the location that requested them.

9.2. EXA 2 - Notify Users about Problems with Jobs arriving from Esko Cloud

This is an extension to the workflow in *EXA 1 - Delegating work to an Other Location* on page 51. We there described how Jobs and files arrive in MEX001. The users in MEX001 can see them arrive when they look a the Jobs overview in their Pilot.

In this example we go a step further. To avoid that the users in MEX001 have to check what happens, we will adapt the workflow so that they also get a To Do message about this incoming work.

Follow these steps:

1. In TOK001, the job 'Yakitori_Maxi' is for customer 'Nippon Foods', a new customer. We select it, right-click and choose **Sharing**. This dialog appears because this customer is not linked yet to one on Esko Cloud:
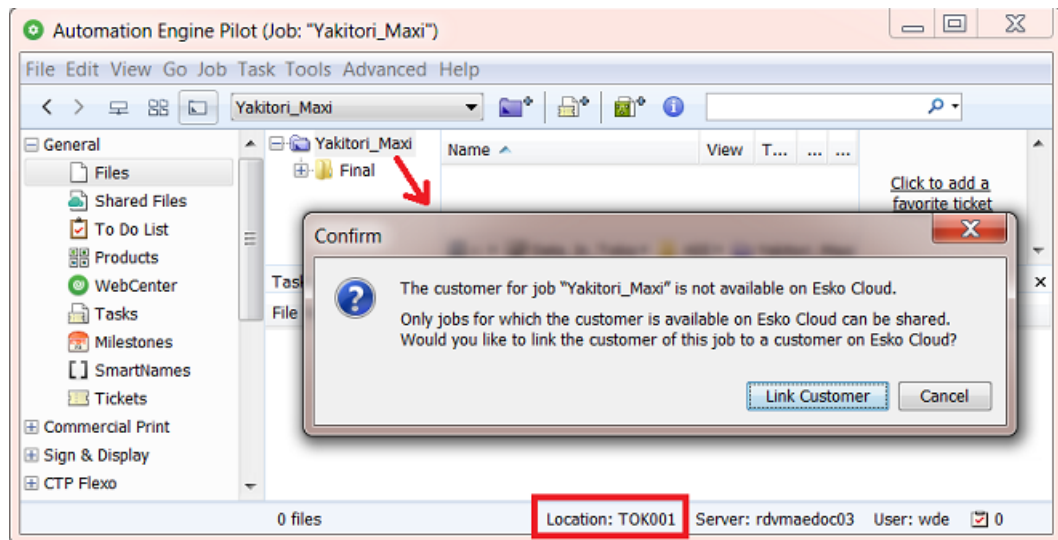
2. This linking dialog can't find a match on Esko Cloud. So we click **No**.
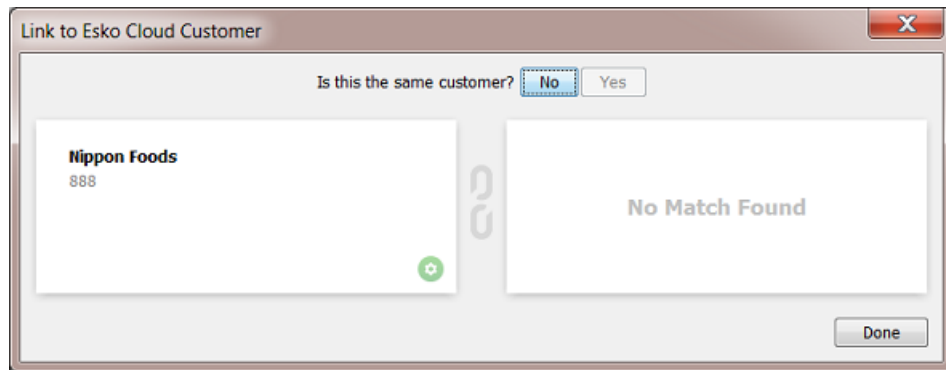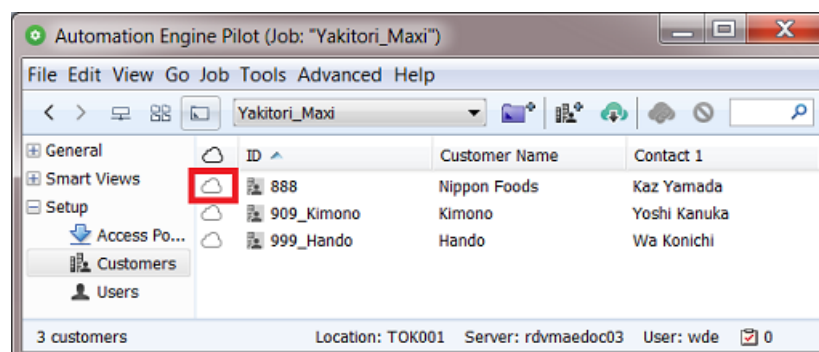
3. We use this dialog to create the Esko Cloud customer and link the local one to it.
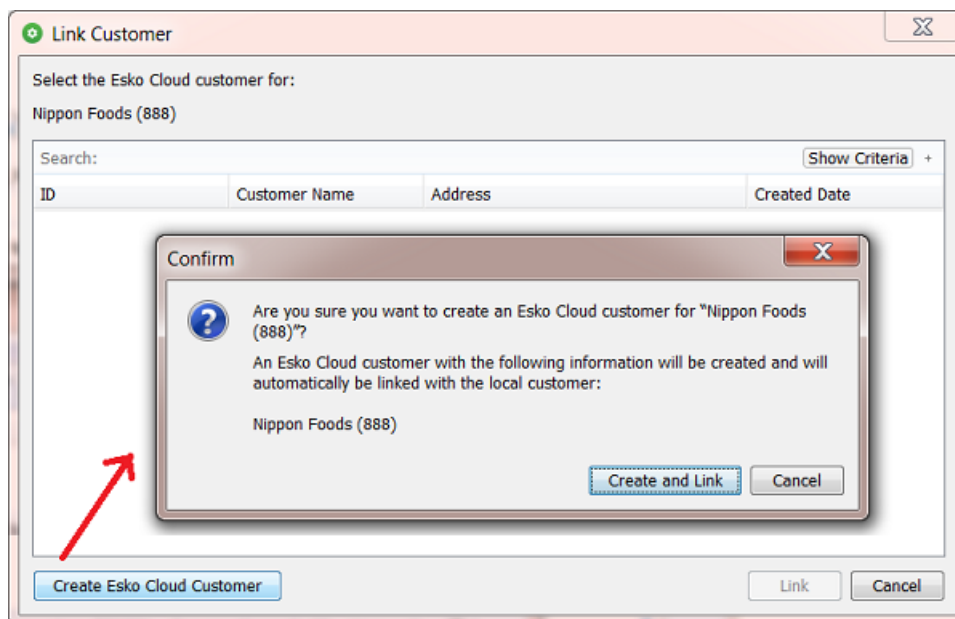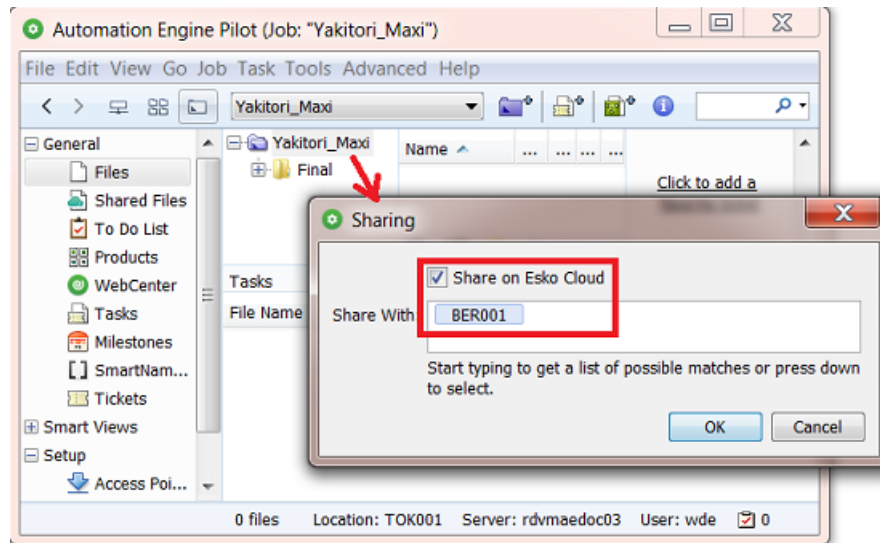

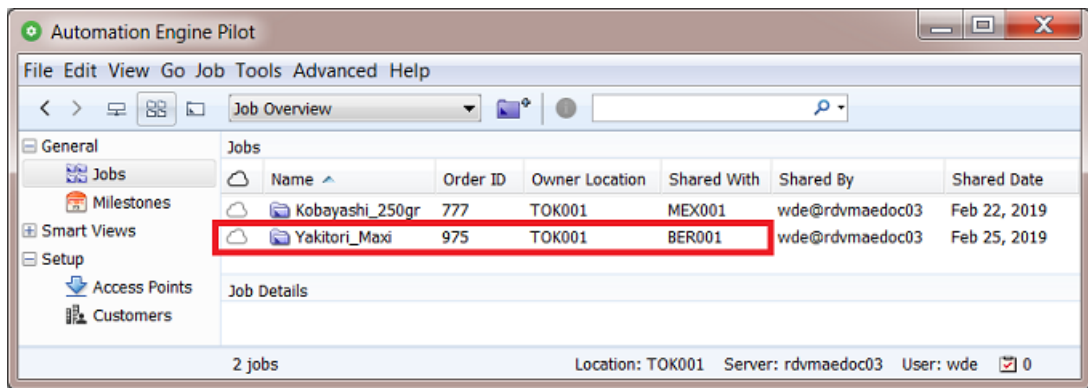Click **Create and Link**. Both dialogs will close.

In the view **Customers**, the customer Nippon Foods will now show with a cloud icon:

4. We now again try to share this job to Esko Cloud. We will also share it to our colleagues in Berlin:
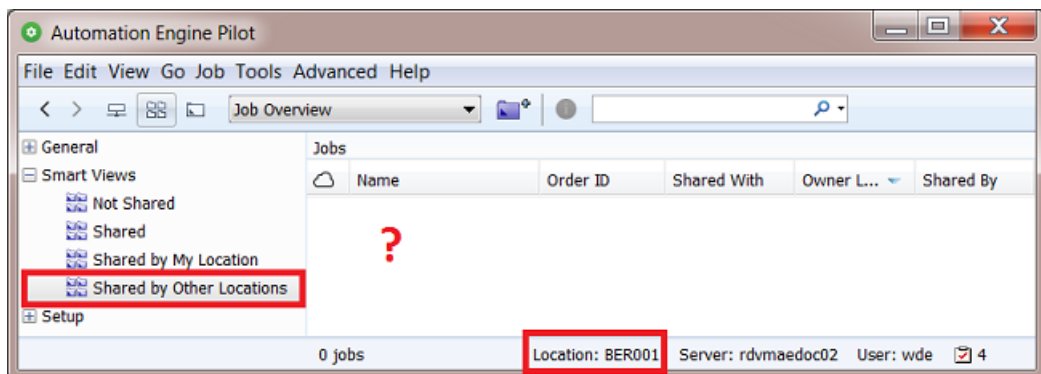
Click **OK** and see the result in the Jobs overview:

In Tokyo office, everything seems fine. We will now check what's happening in Berlin.

5. In Berlin (BER001), we should see this job appear in the Smart View '**Shared by Other Locations**, but it doesn't:


What happened? The people in BER001 could scan the Tasks view and there look for an explanation. But in this example we made it easier for them.

6. The To Do list in BER001 shows a new action to respond to. Its details contain an extra piece of information at the bottom. It offers a link to find out what went wrong.
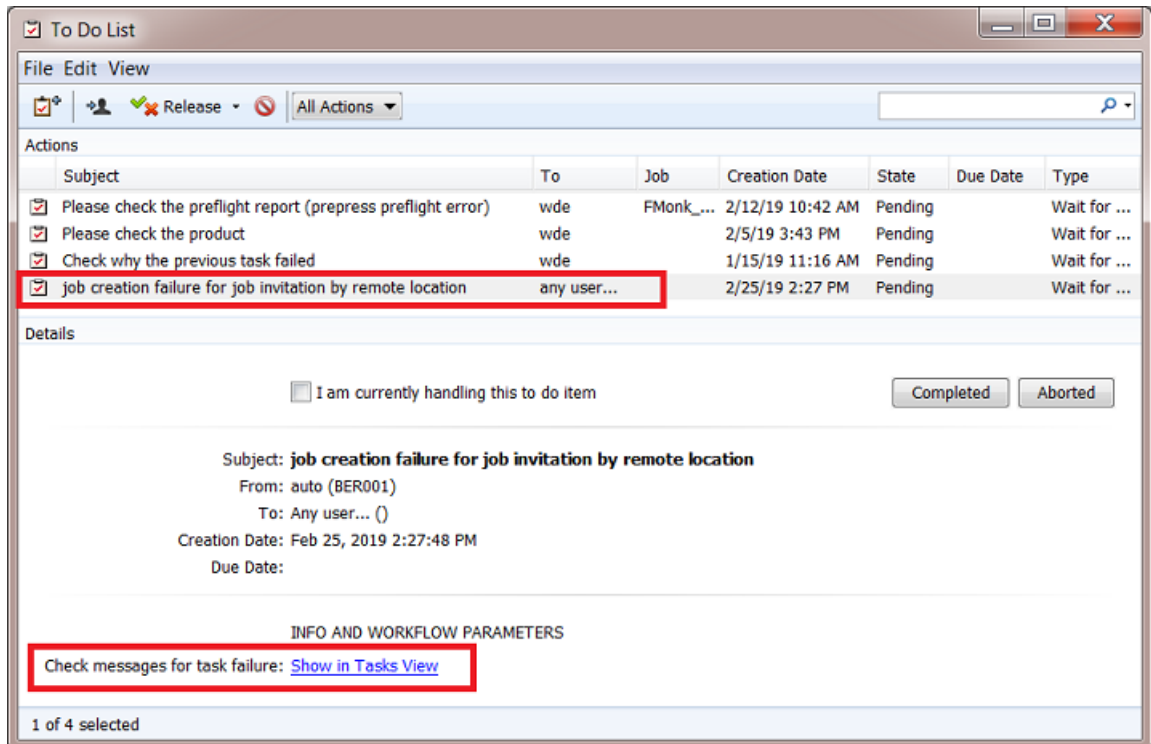
7. Clicking on this link takes the user directly to the Tasks view and selects the **Create Job** task that had a problem to create that shared job here in BER001. The task's **Details** explain why this job could not be created:
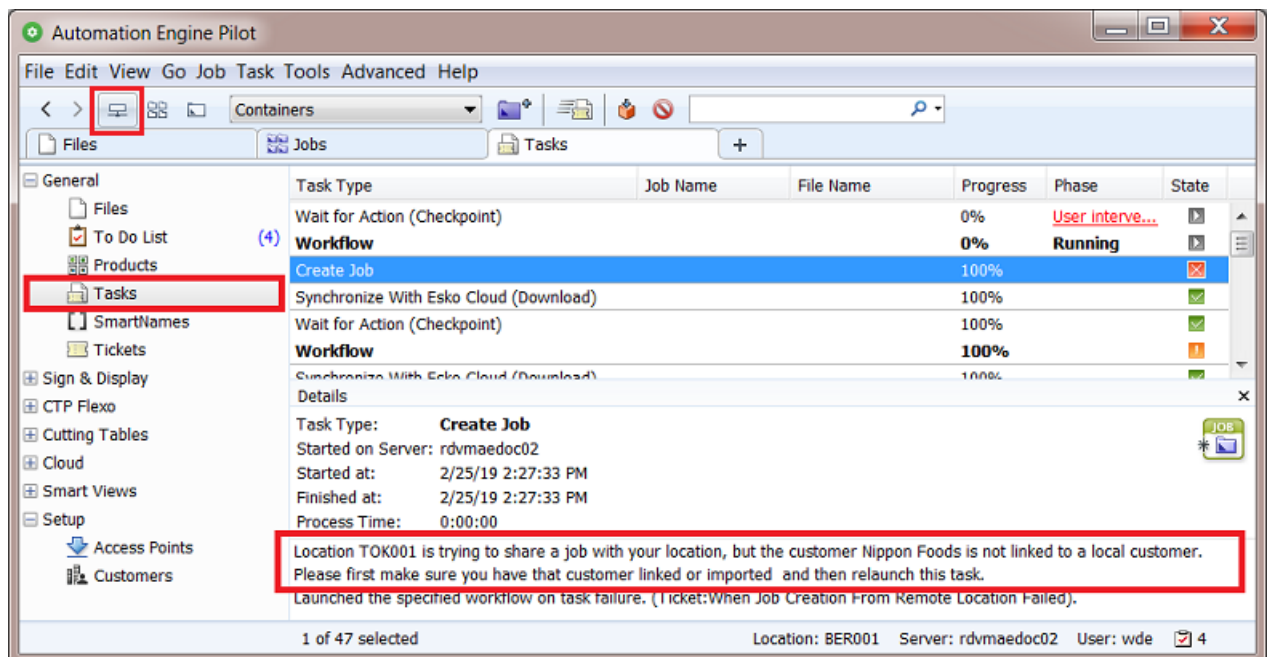
> **Note:** When the To Do list is open as a separate window, and you click the link there, then the Pilot window already needs to be in the 'Containers' mode, which offers the general **Tasks** view.

Two questions now pop up:

- How can you avoid this problem?
- How can you set this up, getting a To Do with that link?

How can you avoid this problem?

This typical problem can be avoid if you allow the **Create Job** task to also create that cloud customer on your local Automation Engine server. This is not an option in the task itself but part of the Esko Cloud configuration:
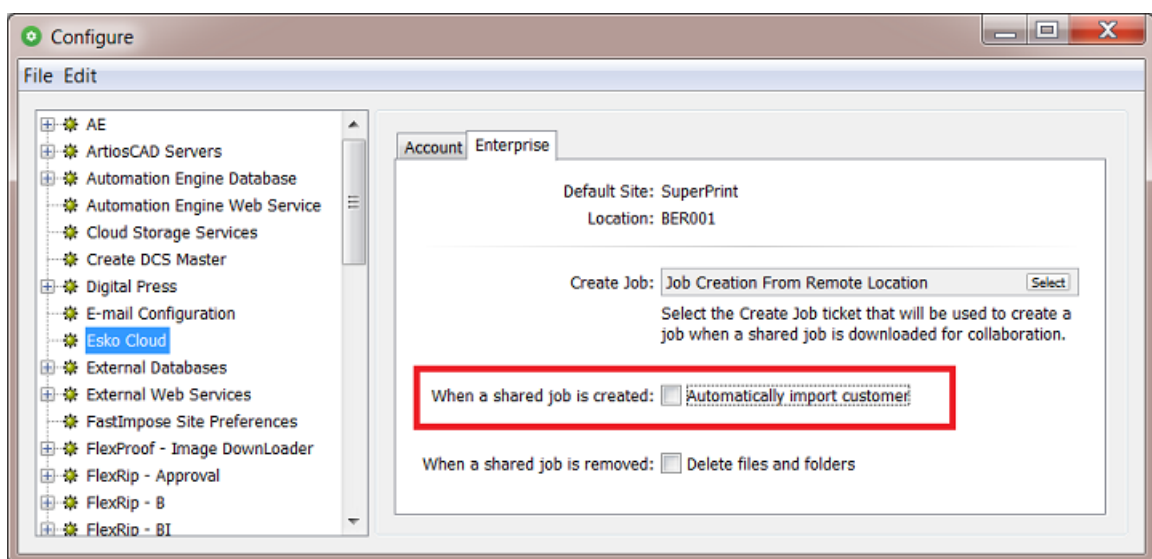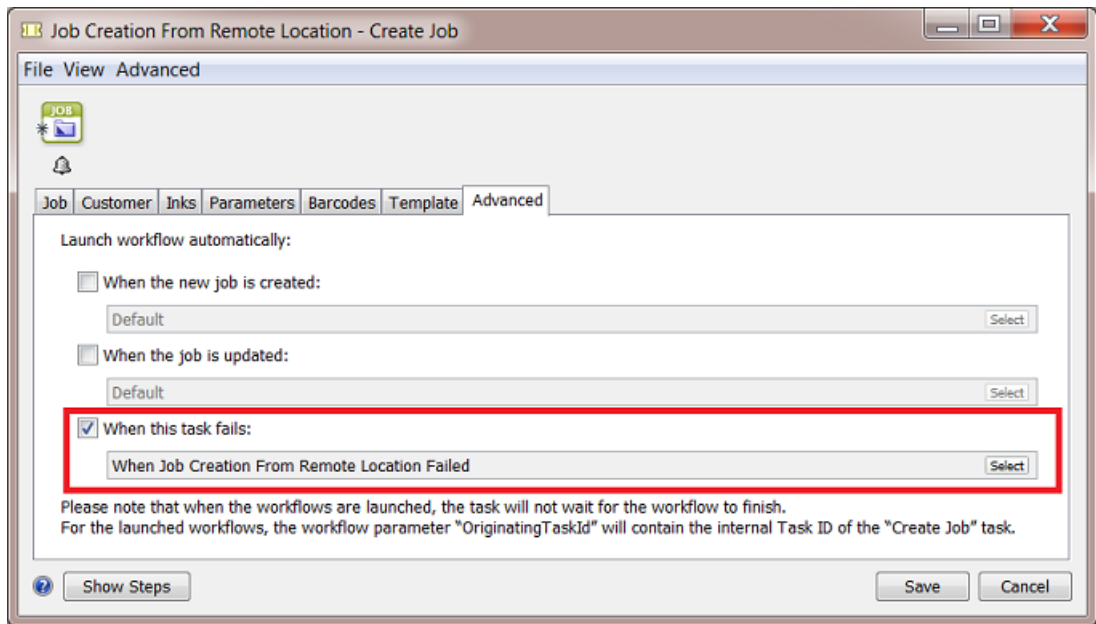

> **Note:** This option is by default not select as it can lead to local customer conflicts. As mentioned earlier, the best way to avoid those is to standardise and consolidate on customer IDs and names.

How can you set this up, getting a To Do with that link?

1. When Esko Cloud is asked to share a job to a location, it will create a local job on that location's AE. The **Create Job** task ticket that is used is the one defined in **Configure** > **Esko Cloud** > **Sharing** (see above).
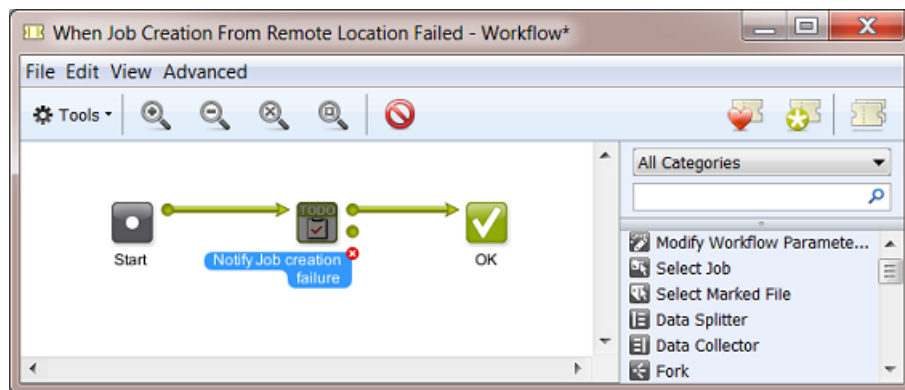
   > **Note:** By default, this ticket is one provided by Esko named **Job Creation From Remote Location**.

2. Open that ticket. In it's tab **Advanced**, see the option **When this task fails**. The ticket that is selected there is the one that we want to create a To Do message.
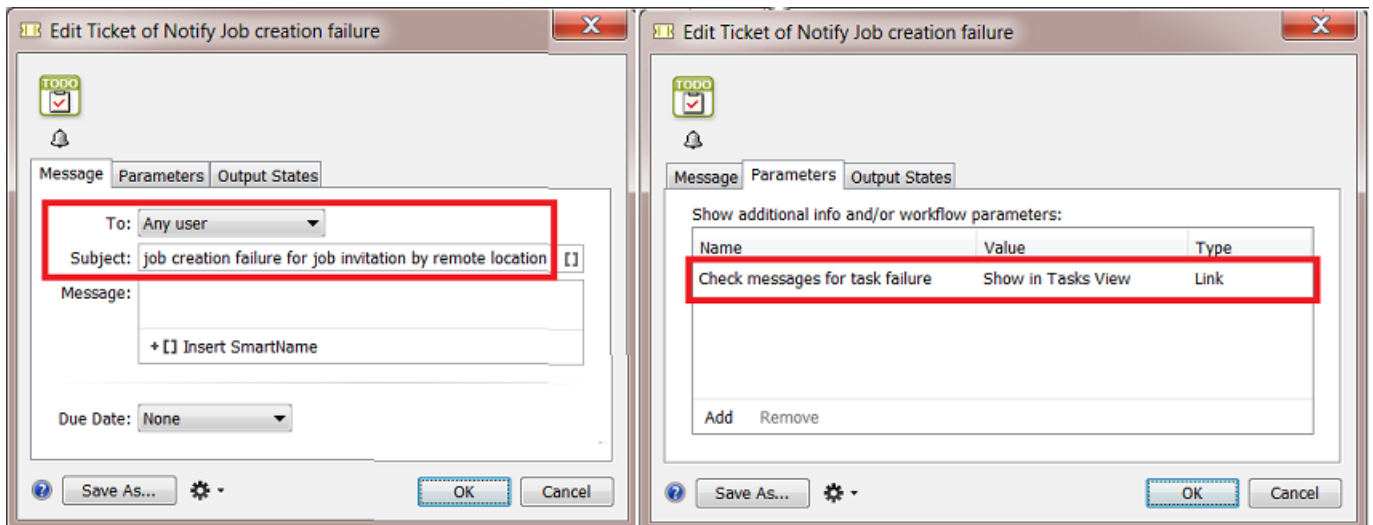
3. Now open that ticket. This default one only contains the task **Wait for Action (Checkpoint)**.

4. Open that ticket and see how the To Do option and that extra message were defined:

9.3. EXA 3 - Notify Users that Files have Arrived from Esko Cloud

In *Example 2*, we learned that, when Esko Cloud wants to share a job to your location, that you can customize the tasks that start automatically. We used that to alert users when job creation from the cloud fails.

In this example we want to automatically notify users when **new files** are arriving in the local jobs that were shared to us from Esko Cloud.

Informing the users already when the job was just created locally might be too soon. In this example we wait until there are any files there to work with.

We can do this by using the Access Point that scan the cloud folder that will bring the files locally. We learned in *Esko Cloud Access Point* that we can also here launch a workflow.

1. Let's first make that custom workflow.

> **Note:** Even when you only need the action of a single task ticket, you have to make it a workflow ticket to be able to select it in the Access Point.
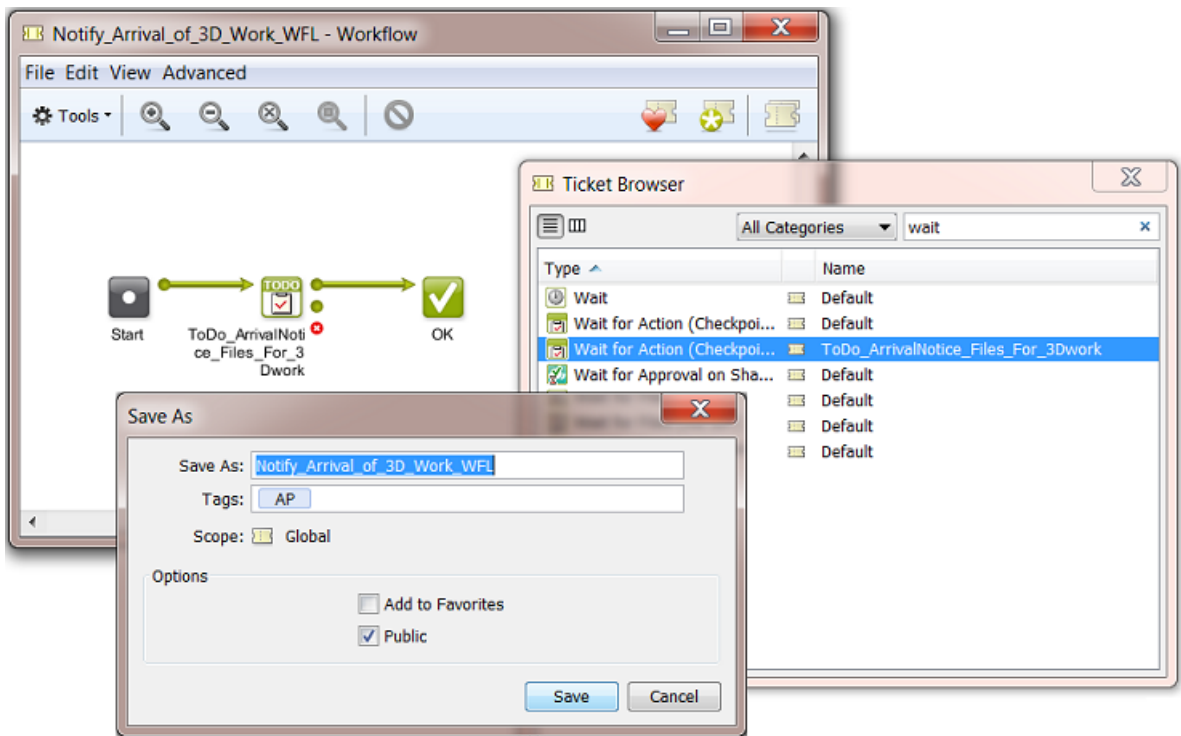
2. Then we select that workflow in the Access Point that was set up to download any such work from Esko Cloud.
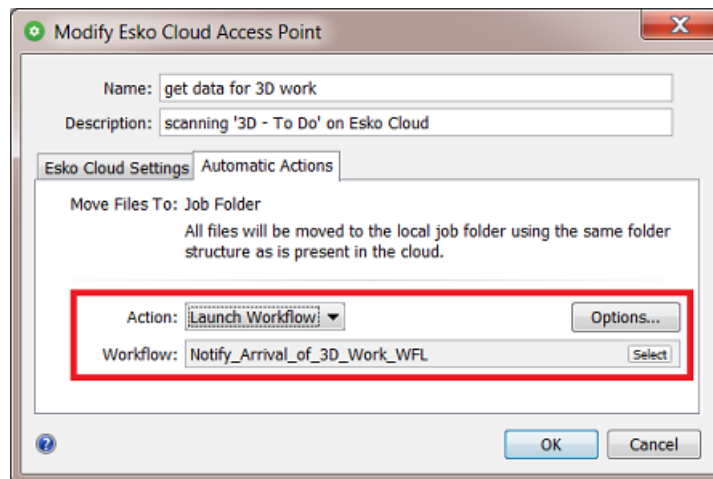
Now, when the access point downloads files, this will also create items in the To Do list (one for each file).

9.4. EXA 4 - (WIP) Automatically sending the result data back to location that requested it

Core message: In MEX001: WFL to copy to a "3D done" folder before Upload 2 Cloud

Description from SVV:

• The 3D specialist processes the files. When finished, he/she places the result files in a local folder '`3D-work-done`'.

• These result files can be uploaded to Esko Cloud, in other words, they should arrive in the `3D-work-done` subfolder of the *Cloud Folder of the job*.

  We can do this by launching a workflow that triggers a **Copy/Move** task followed by a **Upload Files to Esko Cloud**.

• Back in Berlin, the location that requested the 3D work, : an **Esko CloudAccess Point** monitors the subfolder `3D-work-done` in any of the jobs on Esko Cloud.

  When it sees the result files appearing in such a folder, it downloads these result 3D files into the folder `3D-work-done` of the local job, in Berlin.

  Also here, a workflow can be launched that notifies operators of the arrival of these files.

• Finally, at some point, the job can be removed from Esko Cloud: a AE user in Berlin does this by unsharing the job, manually or by running the task **Unshare Job**.

  Automatically, any remaining files on Esko Cloud are removed. Also, in Mexico, the corresponding job is removed.

  All work is done and delivered, all cleanup at remote locations has been performed.

Note: Cleanup in Esko Cloud and other locations also happens when the job is deleted locally (in Berlin) instead of only unsharing it.