# Table of Contents

1 ECA and Investigation ................................................................. 4  
   1.1 Special considerations - creating an ECA template .......................... 4  
   1.2 Requirements for using ECA and Investigation ............................... 4  
   1.3 Security permissions .................................................................. 5  
      1.3.1 Permission conflict scenarios ................................................. 6  
   1.4 Basic ECA and Investigation workflow .......................................... 7  
2 Importing the ECA and Investigation application .............................. 9  
   2.0.1 Special considerations - ECA and Field Catalog app syncing ......... 11  
3 Publishing data for ECA ................................................................. 13  
   3.1 Selecting the ECA-optimized processing profile ............................. 13  
   3.2 Running the deduplication script ............................................... 15  
4 Tagging documents for ECA ............................................................ 16  
   4.1 Tagging based on date range ..................................................... 16  
   4.2 Tagging based on file type ....................................................... 18  
   4.3 Tagging based on custodian keywords ....................................... 20  
   4.4 Tagging based on custodian emails ........................................... 23  
   4.5 Tagging documents with cluster visualization ............................... 25  
5 Working with the ECA dashboard ................................................... 29  
   5.1 Viewing destination workspaces ............................................... 32  
6 Promoting data with Integration Points .......................................... 34  
   6.1 Instance-to-instance considerations ........................................... 34  
   6.2 Special considerations - job batches for large sync workflows .............. 34  
   6.3 Creating an ECA integration point ............................................. 35  
      6.3.1 Stopping a job .................................................................. 49  
   6.4 Integration point agent considerations ....................................... 51  
   6.5 Working with promoted documents .......................................... 51  
      6.5.1 Reusing coding decisions ................................................... 52  
   6.6 Performance baselines ............................................................. 53  
   6.7 Handling errors ....................................................................... 54
1 ECA and Investigation

Relativity ECA and Investigation is a solution designed to help legal and investigative teams assess risk and make decisions at the earliest stage of a case or investigation. With analytics and data visualizations built in, you can understand the context of your data and start uncovering the facts while culling what’s irrelevant. Use the centralized dashboard to gain real-time insight as to how your analysis is progressing and a pre-built template to guide your workflow. Relativity ECA and Investigation lets you spend more time on a focused set of data, reducing costs, gaining insights sooner, and ultimately honing your strategy.

1.1 Special considerations - creating an ECA template

You have the option of using the ECA and Investigation application to create an ECA case template. To create an ECA case template:

1. Create a blank workspace using the New Case Template. For more information, see the Workspaces section of the Admin Guide.
2. Install the Processing, Analytics, and Relativity Integration Points applications already required for ECA.
3. Import the ECA and Investigation application. Doing this creates an ECA case template, which means that you no longer have to use the application unless there are any updates to it, as provided to you in monthly product update or major release.

Beginning in Relativity 9.5.196.102, the ECA and Investigation application has been simplified to no longer include fields, views, layouts, or choices. It now only includes those items that are relevant to the ECA dashboard. This prevents the conflicts you previously encountered when you wanted to edit any locked application components, which vastly limited your ability to use the application in workspaces on which it was already installed. Now, you can more easily use the ECA application with your ECA or custom workspace template, as there are few or no conflicts.

1.2 Requirements for using ECA and Investigation

To use ECA and Investigation in your Relativity environment, you need the following:

- RelativityOne OR Relativity 9.4 and above
- The Processing application installed
- The Worker Manager Server configured on the Resource Pool associated with your workspace.

![Image of Worker Manager Server](image-url)
The Analytics application installed
The Integration Points application installed
The WebAPIPath instance setting in the kCura.IntegrationPoints section configured correctly

![Instance Setting Information](image)

The ECA and Investigation Agent and Integration Points Agent(s) added and enabled

![Agent Configuration](image)

Note: Data Grid is not required to run ECA and Investigation.

1.3 Security permissions

The following table provides the minimum workspace security permissions required to use ECA and Investigation in both the source and destination workspaces.

Note: You also need to configure the minimum workspace security permissions for all other applications required for ECA, specifically Analytics, Integration Points, and Processing.
<table>
<thead>
<tr>
<th>Workspace</th>
<th>Object Security</th>
<th>Tab Visibility</th>
<th>Browsers</th>
<th>Admin Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECA (source)</td>
<td><strong>Integration Point</strong> - Add, Edit, View</td>
<td><strong>Documents</strong></td>
<td>Advanced &amp; Saved Searches</td>
<td>Allow Import</td>
</tr>
<tr>
<td></td>
<td><strong>Job History</strong> - Add, View</td>
<td><strong>Integration Points</strong> (parent)</td>
<td></td>
<td>Allow Export</td>
</tr>
<tr>
<td></td>
<td><strong>Job History Error</strong> - Add, Edit</td>
<td>✨ Integration Points (child)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Search</strong> - Edit, View, Create</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Document</strong> - Add, View, Edit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review (destination)</td>
<td><strong>Document</strong> - Add, View</td>
<td>None</td>
<td>None</td>
<td>Allow Import</td>
</tr>
</tbody>
</table>

**Note:** Integration points is tenant-aware. This means that workspace admins within a tenancy receive an error if they attempt to push to a workspace that their user group doesn't have permissions to access. This error occurs when they click Run Now on the integration point they create to push documents to review.

### 1.3.1 Permission conflict scenarios

Note the following integration point permission conflicts and subsequent behavior:

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any of the following permissions are removed while you're on the Integration Point layout:</td>
<td>You get an error stating, &quot;Failed to submit integration job. Unable to retrieve Integration Point.&quot;</td>
</tr>
<tr>
<td>- Source workspace access permission</td>
<td></td>
</tr>
<tr>
<td>- Integration Point - View</td>
<td></td>
</tr>
<tr>
<td>- Integration Point object security</td>
<td></td>
</tr>
<tr>
<td>A saved search is secured from the user who last created or edited the integration point's scheduled job</td>
<td>The scheduled job fails and a job-level Job History Error is created with a message stating, &quot;Job failed to due to insufficient permissions. Please ensure that you have valid export and saved search permissions.&quot;</td>
</tr>
<tr>
<td>If</td>
<td>Then</td>
</tr>
<tr>
<td>-------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>A saved search is made private and the user who last created or</td>
<td>The job fails and a job-level Job History Error is created with a message that states, &quot;Job failed due to insufficient permissions. Please ensure that you have valid export and saved search permissions.&quot;</td>
</tr>
<tr>
<td>edited the integration point's scheduled job is not the owner of</td>
<td></td>
</tr>
<tr>
<td>the save search</td>
<td></td>
</tr>
<tr>
<td>A saved search is made private and the user who last created or</td>
<td>There is no conflict, and the integration point job proceeds as normal.</td>
</tr>
<tr>
<td>edited the integration point's scheduled job is the owner</td>
<td></td>
</tr>
<tr>
<td>The export permission in the source workspace is removed from</td>
<td>The job fails and a job-level Job History Error is created with a message that states, &quot;Job failed due to insufficient permissions. Please ensure that you have valid export and saved search permissions.&quot;</td>
</tr>
<tr>
<td>the last user who last created or edited the integration point's</td>
<td></td>
</tr>
<tr>
<td>scheduled job</td>
<td></td>
</tr>
<tr>
<td>You save an Integration Point with the Enable Scheduler field set</td>
<td>During the job, the documents being pushed aren't tagged with the Destination Workspace/Job History in the ECA (source) workspace. In this case, if you need an audit trail of the documents being pushed, you need to go to the destination workspace, filter the Documents list, and identify the scheduled job from which those documents came.</td>
</tr>
<tr>
<td>set to Yes, and before Relativity starts the scheduled Integration</td>
<td></td>
</tr>
<tr>
<td>Point job, your Edit permission on the Document object is</td>
<td></td>
</tr>
<tr>
<td>accidentally revoked by a system admin.</td>
<td></td>
</tr>
</tbody>
</table>

### 1.4 Basic ECA and Investigation workflow

The following steps depict a standard ECA and Investigation workflow:

1. Import the ECA and Investigation application into an ECA workspace.
2. Discover and publish data into the ECA workspace.
3. Run deduplication on your processed data through the Update Duplicate Status script.
4. Include and/or exclude pieces of your data in the Documents tab based on any of the following common parameters:
   - File type
   - Date range
   - Entity keywords
   - Entity emails
5. Use the ECA Dashboard to see what your data looks like with files tagged for inclusion and exclusion.
6. Use Integration Points to push your refined data to review workspaces and a load file via the RDC.

The following graphic depicts the basic cycle of an ECA and Investigation project.
Note: It's recommended that you not delete your ECA (source) workspace, as doing so could cause data syncing issues.
2 Importing the ECA and Investigation application

To gain access to the ECA dashboard, you need to first import the ECA and Investigation application into a new workspace that you've created specifically for this workflow.

**Note:** If you are a current RelativityOne user, and you want to install or upgrade this application, you must contact the Client Services team.

Before importing the ECA and Investigation application, you need to also install the following applications:

- Processing
- Analytics
- Integration Points

To import the ECA and Investigation application, perform the following steps:

1. Navigate to the Relativity Applications tab.
2. Click New Relativity Application in the upper left corner of the All Relativity Applications view.
3. In the Application Type field, select the radio button for Select from Application Library.
4. In the Choose from Application Library field, click ![...].
5. Select the ECA and Investigation application from the list of available applications, and then click Ok.
6. Once Relativity loads the application, click **Import** to install it to your workspace.
Note: It's recommended that you don't uninstall the ECA and Investigation application from your workspace, as doing so also permanently removes all of the metadata fields that were installed with it.

Once the import is complete, you're able to access the following ECA and Investigation components:

- The ECA home dashboard
- Document dashboards
- Destination and Source workspaces
- Pivot profiles
- The Update Duplicate Status script
- An ECA-optimized processing profile

### 2.0.1 Special considerations - ECA and Field Catalog app syncing

Note the following details:

- A number of processing fields were renamed in the Field Catalog. Renamed fields will cause naming conflicts. You can address these conflicts through the standard application framework, which is to either rename the fields or modify their mapping. If you previously processed data into a field that was renamed, you will have the same data in two different fields. You can address this through a
Mass Replace operation on the affected fields.

- The All Custodians field was renamed to All Custodians_Script in the ECA and Investigation application. The All Custodians_Script field is a long text field and acts as another piece of metadata for de-duplicated documents. You should select the new All Custodians_Script field when running the Update Duplicate Status script, as this will ensure that no de-duplicated documents make it into review.
3 Publishing data for ECA

Before using the ECA Dashboard and Integration Points to promote culled data to a review workspace, you need to discover and publish the source data into your ECA workspace through Relativity Processing. For details on discovering and publishing data outside of the ECA workflow, see the Processing User Guide.

3.1 Selecting the ECA-optimized processing profile

When processing data specifically for the ECA workflow, you need to use an ECA-optimized processing profile called ECA - Processing. This profile is automatically installed when you import the ECA & Investigation application. You can select this profile from the corresponding field on the Processing Set layout.

Among the settings that make the ECA - Processing profile optimized for this specific workflow is the Deduplication method field, which is set to None. This is because you perform deduplication through the Update Duplicate Status script that is installed automatically to your workspace when you install the ECA and Investigation application.
Note: If you intend to use both the RDC and Relativity Processing to bring data into the same workspace, note that if you select Custodial or Global as the deduplication method on your processing profile(s), the processing engine won’t deduplicate against files brought in through the RDC. This is because the processing engine doesn’t recognize RDC-imported data. In addition, you could see general performance degradation in these cases, as well as possible Bates numbering collisions.
3.2 Running the deduplication script

After you publish files to your ECA workspace, you need to run the Update Duplicate Status script to deduplicate those files.

Performing this workflow is required because you published data to your source workspace using a processing profile with a deduplication method of None.

**Note:** The All Custodians_Script field is a long text field and acts as another piece of metadata for de-duplicated documents. You should select the new All Custodians_Script field when running the Update Duplicate Status script, as this will ensure that no de-duplicated documents make it into review.

For more information on the processing duplication solution, see Processing duplication workflow.
4 Tagging documents for ECA

Once you've published data to your ECA workspace, you can use a number of document views and widgets within the UI framework to visualize your data.

You can then tag documents for inclusion in and exclusion from the data that you eventually promote to the review workspace with Integration Points.

4.1 Tagging based on date range

See how to tag documents based on date range

The following sample workflow depicts how you can tag documents for exclusion from the review data set based on date range.

1. Navigate to the Documents tab and remain in the default General Dashboard.
2. Select the Untagged Documents view in the view drop-down.
3. In the **Count of Sort Date** widget, identify any documents that you know you don't want to include in the data you promote to review.

4. Click and drag the set of documents to select them. When you do this, you automatically set a condition that then appears in the conditions pane on the left side of your view.

5. In the mass operations drop-down menu, select all documents and click **Edit**.

6. In the edit documents window, select the following fields and choices:
a. **Promote Designation** - select the checkbox for this field and select the **Exclude** choice.

b. **Designation Reason** - select the checkbox for this field, select the **Date Range** choice, and leave all other reason choices unselected.

7. Click **Save**.

8. When you return to the Documents tab, clear your conditions to update the document view. Note that the date range widget is now cleaner, as it no longer includes the irrelevant documents you just tagged for exclusion.

If you go to the ECA Dashboard now, you'll see that the files you just tagged are listed as excluded.

### 4.2 Tagging based on file type

See how to tag documents based on file type.

The following sample workflow depicts how you can tag documents for exclusion from the review data set based on file type.

1. In the Documents tab, remain in the Untagged Documents view and select **File Information** from the widget drop-down list.
2. In the **Count of Document Type** widget, simplify the document list by doing the following:

![Count of Document Type widget](image)

- a. De-select the **Email** category.
- b. Select **Other** and **System**.
- c. Click **Apply**.

3. In the updated document list, go to the **Count of File Type** widget and note the different file types that you’ve isolated. If necessary, click on an individual file type in the pie chart and/or expand the List view at the bottom to confirm that the files identified are actually system files and should be excluded from the review data.

![Count of File Type widget](image)

4. In the mass operations drop-down menu, select all of the documents and click **Edit**.
5. In the edit documents window, select the following fields and choices:

- **Promote Designation** - select the checkbox for this field and select the *Exclude* choice.
- **Designation Reason** - select the checkbox for this field, select the *File Type* choice, and leave all other reason choices unselected.

6. Click **Save**.

7. When you return to the Documents tab, clear your conditions to update the document view and note that the file type widget is now cleaner, as it no longer includes the documents you just tagged for exclusion. If you go to the ECA Dashboard now, you'll see that the files you just tagged are listed as excluded.

**4.3 Tagging based on custodian keywords**

See how to tag documents based on custodian keywords

The following sample workflow depicts how you can tag documents for inclusion in the review data set based on custodian keywords.

1. In the Documents tab, remain in the Untagged Documents view and select **Custodian Analysis** from the widget drop-down list.
2. In the **Count of Custodian** widget, select a custodian and click **Apply**. In the example below, we’ve selected the custodian containing the most files, as he also contains the keywords we’d like to include.

![Count of Custodian widget](image)

3. Once the document list is updated, navigate to the **Count of STRC-Initial Search Terms** widget and note the different terms that were returned for the custodian you selected. Perform the following steps within this widget:

![Count of STRC-Initial Search Terms widget](image)
a. De-select the term(s) from the list that you believe are over-inclusive. In this example, Tech* appears over-inclusive and therefore something that you want to exclude from the review data.

b. Select the remaining terms in the list. All of these terms have more potential for relevance during review and are therefore worthy of inclusion.

c. Click **Apply**.

4. In the mass operations drop-down menu, select all of the documents and click **Edit**.
5. In the edit documents window, select the following fields and choices:

- **Promote Designation** - select the checkbox for this field and select the **Include** choice.
- **Designation Reason** - select the checkbox for this field, select the **Search Terms** choice, and leave all other reason choices unselected.

6. Click **Save**.

If you go to the ECA Dashboard now, you see that the files you just tagged are listed as included.

### 4.4 Tagging based on custodian emails

See how to tag documents based on custodian emails.

The following sample workflow depicts how you can tag documents for exclusion from the review data set based on custodian emails.

1. In the Documents tab, remain in the Untagged Documents view and select **Custodian Analysis** from the widget drop-down list.
2. In the **Count of Custodian** widget, select a custodian and click **Apply**.
3. Once the document list is updated, navigate to the **Count of STRC-Initial Search Terms** widget and note the different terms that were returned for the custodian you selected. In this case, only one search term is included and it contains a large number of hits. This leads you to believe that there is
a lot of irrelevant information here. Select this term.

4. From the widget drop-down list, select Email Conversations.

5. In the Email Conversations dashboard, refer to the Count of Document Email From and Count of Document Email To widgets and select those entries that you know contain irrelevant emails.
6. In the mass operations drop-down menu, select all of the documents and click **Edit**.

7. In the edit documents window, select the following fields and choices:

   ![Edit Documents Window](image)

   **Promote Designation** - select the checkbox for this field and select the **Exclude** choice.

   **Designation Reason** - select the checkbox for this field, select the **Search Terms** choice, and leave all other reason choices unselected.

8. Click **Save**.

   If you go to the ECA Dashboard now, you see that the emails you just tagged are listed as excluded.

### 4.5 Tagging documents with cluster visualization

See how to tag documents with cluster visualization. Cluster visualization is another method for identifying documents that you want to tag for inclusion or exclusion.

The following sample workflow depicts how you can tag documents for inclusion based on keywords that you locate through cluster visualization.

1. Navigate to the **Documents** tab, select the **Untagged Documents** view, and select the **Custodian Analysis** dashboard.
2. Within the **Count of Custodian** dashboard, hold the **CTRL** key and click the blue bars representing the custodians whose keywords you want to include.

3. Click **Apply** to narrow the document set down to just these custodians.

4. Within the **Count of Inclusive Email** dashboard, click the pie slice for **Yes** to narrow the document set to all-inclusive emails for your selected custodians.

5. In the mass operations bar at lower left, select **All #4##** in the first drop-down list, and then click **Edit**.

6. Within the **Edit** pop-up window, enter or select the following:
   - ECA Designation: **Include**
   - ECA Designation Reason: **Other**
   - ECA Designation notes: **Inclusive emails from key custodians**
   - Ensure the check boxes to the left of each of these fields are checked.
   - Click **Save**.

7. Clear the search conditions by clicking **Clear All Conditions** in the search panel.

8. Using the Dashboards drop-down list at upper right, switch to the **General Dashboard**.

9. Click **Add Widget** to the left of the Dashboards drop-down list and select **Cluster Visualization**.

10. In the Cluster Visualization Settings window, select **All Documents** from the Cluster Set drop-down list.

11. Click **Apply**. The Cluster::All Documents widget appears.

12. Minimize the **Count of Sort Date/Time** widget by clicking the Toggle icon in the widget header.

13. Scroll down to the **STR – Priority Keywords** dashboard, hold **CTRL** and click the appropriate pie slices.

14. Click **Apply**. This will update the Cluster Visualization widget. This widget provides an easy way to visualize other documents related to any documents containing a high concentration of these selected terms.

15. Hold the **CTRL** key and click on the appropriate clusters to select them together. For example:
   - **Agreement, short, change, buy**
   - **traders, meeting, short, weekly**
   - **Gas, month, week, storage**
16. Click **Apply**. You may need to scroll up to see the Apply button if still focused on the STR - Priority Keywords widget.

17. In the mass operations bar at lower left, select **All #**** in the first drop-down list and click **Edit**.

18. Within the Edit pop-up window, enter or select the following:
   a. **ECA Designation**: *Include*
   b. **ECA Designation Reason**: *Search Terms*
   c. **ECA Designation notes**: *Documents contain priority key terms*
   d. Ensure the check boxes to the left of each of these fields are checked.
   e. Click **Save**.

19. Clear the search conditions by clicking **Clear All Conditions** in the search panel.

20. Navigate to the **ECA Dashboard** tab and take note of the **Current Snapshot** widget. Hover over the bar chart to see the documents marked for exclusion and inclusion.
5 Working with the ECA dashboard

In the ECA Dashboard, you use a variety of widgets to visualize the files that you’ve already tagged for inclusion and/or exclusion and determine if your data is ready to promote to review.

To access these data visualization tools, click the new **ECA Dashboard** tab in your workspace, which shows up shortly after you finish importing the ECA and Investigation application.

**Note:** The ECA Dashboard doesn’t display import jobs run through the Relativity Desktop Client (RDC). It only displays data imported through processing sets.

Use any of the following widgets to manipulate your source data:

- **Document Volume** - shows the growth of an ECA workspace over time as data is continuously processed into and documents are tagged for inclusion and exclusion. This graph includes the following data:
  - **Include** - the documents tagged for inclusion in the data that is to be promoted to review.
  - **Exclude** - the documents tagged for exclusion from the data that is to be promoted to review.
  - **UnTagged** - the documents not yet tagged for either inclusion in or exclusion from the data that is to be promoted to review.

- **Current Snapshot** - a graph that shows the current document volume of the ECA workspace, along with tagging designations, and the documents that have already been promoted to review. This graph includes the following data:
  - **Promoted to Review** - the volume of documents already promoted to the review workspace through an integration point.
- **Include** - the volume of documents tagged for inclusion in the data that is to be promoted to review.
- **Exclude** - the volume of documents tagged for exclusion from the data that is to be promoted to review.
- **Untagged** - the volume of documents not yet tagged for either inclusion in or exclusion from the data that is to be promoted to review.

**Percentage Promoted to Review** - a graph showing the percentage of documents out of the entire document volume that has been promoted to the review workspace. This graph includes the following data:
- **Documents Promoted to Review** - the percentage of documents promoted to review, along with the total count of those documents.
- **Total Documents** - the entire document volume of the ECA workspace, including documents that have or haven’t yet been tagged for either inclusion in or exclusion from the data that is to be promoted to review.

**Incoming Documents** - a document view that displays the documents that have been published into the ECA workspace. This view includes the following fields:
- **Processing Set** - the processing set containing the files that were published into the ECA workspace. If you don't have permission to a processing set, you won't be able to view that processing set in this view.
- **Date** - the date on which that processing set was published to the ECA workspace.
- **Size** - the combined number of GB of all the data sources associated with the processing set. This value refers to data that was captured at the time of publish.
- **Documents** - the combined number of all documents found in all the data sources associated with each processing set. This value refers to data that was captured at the time of publish.

**Promoted to Review** - a document view that displays all documents that have been promoted from the ECA workspace to the review workspace. This view includes the following fields:
- **Workspace** - the destination workspace to which the documents were promoted.
- **Date** - the date on which the documents were promoted from the ECA workspace to the review workspace.
- **Documents** - the total number of documents that were promoted to the review workspace. This value refers to data that was captured at the time of publish.
- **Size** - the combined number of GB of all the files promoted to the review workspace. This value refers to data that was captured at the time of promotion.
- **Overwrite** - the overwrite setting you selected when creating the integration point. This will be either Append Only, Overlay Only, or Append/Overlay.

Once you determine that your tagged documents are ready for promotion, you can promote them to a destination workspace.

To do this, click **Promote** in the upper right corner of the dashboard.
When you click Promote, you’re presented with a drop-down menu containing two types of Integration Points, specifically those designated for export and those meant to transfer to another workspace. Here, you can choose to promote your documents to a load file or to a destination workspace, by selecting either **Load File: <Name>** or **Workspace <Name>**.
**Note:** Beginning in Relativity 9.5.133.118, the only integration points that appear in the promote list are those that have the Include in ECA Promote List field set to Yes on the setup layout.

To submit your promotion as a job, click **Run Now** in the subsequent Promote to Review window.

Clicking Run Now submits the job. You can monitor the progress of the job in the Integration Points tab.

### 5.1 Viewing destination workspaces

You can go to the Destination Workspace tab to view all of the workspaces that are designated as destinations for documents that you promote through an integration point.

The default All Destination Workspaces view provides the following fields:
- **Name** - the name given to the workspace, plus the artifact ID of the actual destination workspace.
- **Destination Workspace Name** - the name given to the destination workspace.
- **Destination Workspace Artifact ID** - the identifier of the destination workspace.
- **Job History** - a list of all the Job History entries associated with the destination workspace.
6 Promoting data with Integration Points

Once you've tagged documents for inclusion in and/or exclusion from the data you want to promote for review, you can access Integration Points to start the job or jobs that will send those documents to the review workspace.

This topic provides details on Relativity Integration Points as it is used in an ECA and Investigation workflow only. For information, see the Relativity Integration Points Guide.

**Note:** For information on how to develop with Relativity Integration Points, visit the [Developers documentation site](#).

**Note:** For workspace-to-workspace integration points, Relativity supports transfers across the Document object only and not other RDO's.

6.1 Instance-to-instance considerations

**Note:** The instance-to-instance functionality is available as a preview release only, so that you can evaluate it and provide us with feedback. Note that it will continue to undergo minor contract changes and further enhancements.

You can use the Relativity Instance field on the integration point layout to export data from one Relativity instance to another. Note the following details regarding this functionality:

- Both the source and destination instances must be visible over the network. For details about configuring this through the Federated Instances tab, see the Authentication Guide.
- You aren't required to have Integration Points installed on the destination instance.
- If you intend to use an integration point to export data to another Relativity Instance, make sure to copy the required Client ID and Client Secret values of the OAuth2 client to a text file before you begin creating the integration point. This way you can easily paste those values into the Authenticate window described below without having to exit the integration point layout to navigate to the OAuth2 client to get them.
- You currently aren't able to transfer data from one RelativityOne instance another RelativityOne instance.

6.2 Special considerations - job batches for large sync workflows

We recommend configuring integration point jobs into batches for large sync workflows. The following are recommendations when creating job batches:

- Document count should be no more than 500k documents in a single batch.
- When including extracted text as a mapped field in the integration point job, the sum of the extracted text in the batch should not exceed 25 GBs.
- The recommended number of fields to be mapped should be no greater than 100, but it is best to map as few long text fields as possible.

- When using the append/overlay or overlay only configuration, the batch size recommendations should be half the amount described above, specifically:
  - 250k document count
  - 12.5 GBs extracted text sum

### 6.3 Creating an ECA integration point

To promote documents to the review workspace with Integration Points, perform the following steps.

**Note:** All Integration Points jobs are fully editable after run.

1. Navigate to the **Integration Points** tab and click **New Integration Point**.
2. Complete the following fields in the **Setup** layout.

![Integration Points setup](image.png)
- **Name** - the name of your integration for reference purposes.

- **Type** - the type of job you're attempting to run. The options here are:
  - **Import** - designates the job as a data import. When you select this option, you're then able to select FTP (CSV File) or LDAP from the Source field below.
  - **Export** - designates the job as a data export. When you select this option, the Source field below defaults to **Relativity** and becomes uneditable. This is because you can only export data out of Relativity.

- **Source** - this defaults to **Relativity** since you selected Export as the type above.

- **Destination** - select **Relativity** since you'll be exporting data to another workspace within Relativity.

- **Transferred Object** - the specific Relativity Dynamic object to which you want to import the data. **Document** is automatically populated here and can't be modified.

- **Profile** - allows you to complete the remaining Integration Points settings based on the settings of a saved profile. This includes all of the fields in the Connect to Source layout, as well as field mappings. If no profiles exist in the workspace, you don't have the option of selecting them. For more information on profiles, see the Relativity Integration Points Guide.

- **Include in ECA Promote List** - determines whether or not this integration point is available for selection in the list of destinations when you click the Promote button on the ECA Dashboard. Select **Yes** to make this integration point available. Select **No** to keep the integration point off the promote list. For more details on the ECA Dashboard, see [Working with the ECA Dashboard](#).

- **Email notifications** - the email address(es) to which Integration Points sends a notification detailing whether the sync succeeded or failed. Use semicolons between addresses.

- **Log Errors** - select **Yes** or **No** to denote whether Integration Points tracks item level errors.
  - If you select **Yes**, each job also logs any item level errors. For example, a fixed length text field not being large enough to contain an imported value.
  - If you select **No**, Integration Points doesn't log these item level errors.
  - Regardless of your selection, job-level errors are always recorded in Relativity. For example, the import aborts due to a connection failure.

- **Enable Scheduler** - select **Yes** to enable the scheduling functionality for this integration. Select **No** if you don't need to schedule the import and you want the option to do so ad hoc. For ECA, this determines the start of the promote-to-review job. Specifically, this determines when the documents that you've tagged and added to a saved search are promoted to the integration point.

3. Click **Next** to continue to the Connect to Source layout.

4. Complete the following fields on the **Connect to Source** layout.
- **Source** - select either **Saved Search** or **Production** from this drop-down list, depending on what you want to act as the source of the export.

- **Saved Search** - select the saved search designated to pull documents that were tagged for inclusion.
  - This field is only available if you selected Saved Search in the Source field above. If you selected Production as the source, then the Production Set field is available here.
  - Either select the saved search from the drop-down list or click to open a folder tree view of all saved searches in the source workspace. Then select the search and click
This drop-down list contains only public saved searches in the source workspace.  
- If your environment contains many saved searches, you can use the search bar at the top of the list to search for your saved search instead of scrolling down through the list.

**Production Set** - select the production set from the list of all available sets in the source workspace.

- This field is only available if you selected Production in the Source field above. If you selected Saved Search as the source, then the Saved Search field is available here.
- This drop-down list contains all production sets in the workspace.
- When you select a production set as the source, then the Copy Images field on the Map Fields layout is automatically set to Yes and is uneditable.
- When you use this option, then this integration point is listed as the data source on the production set's layout in the destination workspace.
- You can't reproduce production sets into which you've pushed documents through an integration point.
- If your environment contains many production sets, you can use the search bar at the top of the list to search for your production set instead of scrolling down through the list.
To create a new production set in the destination workspace, click +, provide a name in the **New Production Set Name**, and click **Create**. Once Relativity creates the set, you'll see a message stating that the new set will act as the destination production set. The new set has all default values populated; you can edit those values before running the set, if need be. The Production Set field is updated to display the new set.

- **Saved Search** - the saved search designated to pull documents that were tagged for inclusion. Select the saved search you created to promote documents to review. This drop-down list contains only public saved searches in the source workspace. If your environment contains many saved searches, you can use the search bar at the top of the list to search for your saved search instead of scrolling down through the list.

- **Relativity Instance** - the federated instance to which you want to promote data from your source workspace. You must have a federated instance created in the source instance in order to see this field and have any option other than the default of **This Instance** to select here. See [instance-to-instance considerations on page 34](#) for details. For more information, see the Authentication Guide. If you select another instance for this field, Relativity presents you with an **Authenticate** window in which you enter the Oauth client credentials associated with the federated instance to which you want to export data. Specifically, you need to enter the following information:

  - **Client ID** - enter the value listed for the ID field on the Oauth 2 client associated with the federated instance to which you’re exporting. To get this, navigate to the
destination instance, select the Authentication tab, select the Oauth2 Client tab, select the client associated with the instance you selected, copy the Client Id value, and paste it into the Client Id field on the Authenticate window. For more information, see the Authentication Guide.

- **Client Secret** - enter the value listed for the Client Secret field on the Oauth 2 client associated with the federated instance to which you’re exporting. To get this, navigate to the destination instance, select the Authentication tab, select the Oauth2 Client tab, select the client associated with the instance you selected, copy the Client Secret value, and paste it into the Client Secret field on the Authenticate window. For more information, see the Authentication Guide.

**Note:** If you select something other than This Instance for the Relativity Instance field, you can't save the Integration Point as a profile.

- **Destination Workspace** - the workspace to which you want to promote the data that you tagged for inclusion.
  - As a system admin, you can see all workspaces in the environment in this drop-down list.
  - If your environment contains many workspaces, you can use the search bar at the top of the workspace list to search for your destination workspace instead of scrolling down through the list.
  - If you selected another instance as the destination of this export, then this field will provide all available workspaces in that instance.
  - Integration points uses the following delimiters to configure the Import API for the destination workspace. Other delimiters typically configured with the Import API, for example via the RDC, are not utilized:
    - Multi-value delimiter: ASCII 029
    - Nested-value delimiter: ASCII 030

- **Location** - choose whether to export your files to a Folder or a Production Set in the destination workspace.
  - **Folder** - the top/parent folder inside the destination workspace into which you want to export the files.
    - This is the same folder structure found in the Documents tab of the destination workspace.
    - When you select the value for the **Folder Path Information** option on the Map Fields layout, the desired folder structure is created in that location.
    - If you selected another instance as the destination of this export, then this field will provide all available folders in the instance and workspace you selected for each respective field above.
    - This folder tree is ordered alpha-numerically instead of by Artifact ID.
- **Production Set** - the production set in the destination workspace to which you want to transfer images.
  - Only production sets that have not yet been run are available for selection here.
  - Use this field in conjunction with the Copy Images, Image Precedence, and Production Precedence fields on the Map Fields layout to determine how the images are transferred.

- **Create Saved Search** - determines whether or not a saved search automatically appears in the destination workspace when you run the export job. The default value is No. The options are:
  - **Yes** - select this to automatically create a saved search in the destination workspace. This allows you to more easily identify the saved search conditions that were specified for the export and eliminates the need to manually create a saved search in the destination workspace to pull back the documents that were exported.
    - When you create a saved search here, it is placed in the "Integration Points" folder of the Saved Search browser in the destination workspace with a name that includes the job name and job ID; for example, **My Push - 00242342**.
    - The conditions for the saved search you create here are "Relativity Source Job" and "Relativity Source Case."
  - **No** - select this if you don't want to create a saved search in the destination workspace. Selecting No will result in all of the exported documents being placed in the root folder of the destination workspace.

5. Click **Next** to continue to the Map Fields layout.

6. Map the fields so that Integration Points imports the targeted data into specific Relativity fields. The Map Fields wizard contains a list of Relativity fields from the destination RDO, as well as fields from the source provider. Use the Shift + click and Ctrl + click method to select multiple fields at a time, similar to field mapping in the Relativity Desktop Client. Use the single and double arrows or double-click a field to move selected fields between columns. If you have Destination fields that are mapped to Fields in the Field Catalog, Relativity tries to find name matches between these Catalog Fields, as well. You have the option of automatically mapping the fields for the integration point you're creating by clicking the **Map Fields** button between the Source and Destination fields. When you click this, Relativity maps all fields with matching names by bringing them to the two center columns. If the Source and Destination field names don't match, then they remain in their respective columns.
Note: If the WebAPIPath instance setting in the kCur.IntegrationPoints section isn't configured correctly after upgrade or installation, the Source field list is empty because it can't return any attributes, and you aren’t able to map fields.

7. Complete the following fields on the **Map Fields** layout:
   - **Field mappings** - map the Destination fields on the left to the Source fields on the right.
     - You must map at least the Object Identifier field for only the Relativity source provider.
     - The field types must match. For example, you aren't able to map a single-choice field to a multi-object field.
     - You must map the Extracted Text field in order to populate this data in the target workspace.
     - When mapping single or multi-object fields in your integration point, note that you'll receive an error during export if the destination workspace doesn't contain the associated child objects found in the source workspace. The error states, "An object field ref-
You use the Merge Replace Multi-When Append/Overlay Copy Select Overwrite

The field names in the Destination column include the type of each field listed.

- **Overwrite** - determines how the system overwrites records once you promote data to the review workspace. This field provides the following choices:
  - **Append Only** - promote only new records into the review workspace.
  - **Overlay Only** - update existing records only in the review workspace. Any documents with the same workspace identifier are overlaid. This field acts as a link indicating to Relativity where to import the data. When you select this or Append/Overlay, you must complete the Multi-Select Field Overlay Behavior field described below.
  - **Append/Overlay** - adds new records to the review workspace and overlays data on existing records. When you select this or Overlay Only, you must complete the Multi-Select Field Overlay Behavior field described below.

- **Multi-Select Field Overlay Behavior** - determines how the system overlays records when you promote documents to the review workspace. This field is only available if you've selected either Overlay Only or Append/Overlay above. This field provides the following choices:
  - **Merge Values** - merges all values for multi-choice and multi-object fields in the source data with corresponding multi-choice and multi-option fields in the workspace, regardless of the overlay behavior settings in the environment.
  - **Replace Values** - replaces all values for multi-choice and multi-object fields in the source data with corresponding multi-choice and multi-option fields in the workspace, regardless of the overlay behavior settings in the environment.
  - **Use Field Settings** - merges or replaces all values for multi-choice and multi-object fields in the source data with corresponding multi-choice and multi-option fields in the workspace according to the overlay behavior settings in the environment.

- **Copy Images** - determines whether Integration Points copies images while syncing data between the source and destination workspaces. If you set this to No, then you make the option to copy native files available below. This is because you can't transfer a document's metadata or natives along with an image at the same time.
  - Select **Yes** to include only image links, and no documents, in the data that you promote to the destination workspace. When you select Yes here and on the Copy Files to Repository field below, the integration point will transfer physical TIFF image files to the file share of the destination workspace. If you select Yes here but No for Copy Files to Repository, then the integration point will transfer only a link to the image and not the physical TIFF file.
  - When you select Yes for this field, the Image Precedence becomes available for selection. This is where you'll decide between Original Images and Produced Images as the precedence method.
  - Select **No** to prevent images from making it into the destination workspace.
  - You aren't able to copy documents and natives (.xls, .doc, etc.) while copying images.
- When you select a production set as the source, then this field is automatically set to Yes and is uneditable.

- **Image Precedence** - determines the precedence of the copied images you’re transferring to the destination workspace. This field is only available if you selected Yes for Copy Images above. The options are:
  - **Original Images** - exports only the original, non-produced images.
  - **Produced Images** - exports a produced version of the images. When you select this, the required Production Precedence field is made available.

- **Production Precedence** - click , select one of the groups of produced documents listed in the Select Production Precedence window, and click OK. This will be the group of documents transfer to the destination workspace instead of the original images.

- **Copy Native Files** - determines whether Integration Points copies any native files while syncing data between the source and destination workspaces. This field is only available if you set the Copy Images field to No. This is because you can't transfer a document's metadata or natives along with an image at the same time.
**Physical files** - select this to transfer physical files to the destination workspace.
- This option makes your destination workspace independent, which is not the case if you select No or Links only. If you transfer physical native files and then delete the source workspace, this deletion will have no bearing on the destination because the actual native files are present in the destination, and not just links to those files.
- Note that selecting this will cause the data transfer to take longer than if you select No or Links only.

**Links only** - select this to transfer only reference links to the destination workspace and set them as the source location of images.
- If you select to transfer links only and then you either delete the workspace or migrate it using ARM, then the links that you added to the destination workspace through this option won’t work anymore, since the source that contains them no longer exists in its expected location.
- The benefit of transferring links only is that you save on storage and speed, as it tells the system to look for a file path in the source workspace.

**No** - select this to not create additional copies of your natives. Doing this maintains a single copy of that data file in the source workspace only.
- The benefit of selecting No for this field is that you save on storage and speed, since only document metadata will be copied.
- You have the option of selecting No for an initial run of an integration point and then Yes for a subsequent run. Doing this saves you time on the initial job while then retaining copies of the native files on the final job.
If you delete the ECA source workspace, you also delete your source files. If you need to eventually delete the ECA source workspace, then select Physical files or Links only for this field.

When you merge back coding information from the review workspace to the ECA source workspace, you should select No here, as this will prevent the overriding or deletion of natives in case natives were removed from review workspace.

### Copy Files to Repository
- determines whether Integration Points copies files to the repository when copying images. This field is only available when you set the Copy Images field above to Yes.
  - When you select Yes here and Yes on the Copy Images field above, integration points transfers physical TIFF image files to the fileshare of the destination workspace.
  - If you select No here and Yes for Copy Images, then the integration point transfers only a link to the image and not the physical TIFF file.

**Note:** When you copy files to the repository, Relativity makes a copy of all the files in the source folder on the hard drive or network share, adds those copies to the EDDS repository, sets the InRepository column on the File database table to 1 (true) to indicate that a copy exists, and updates the Location column on the File table to list the new copied location. Relativity then refers to the new location when facilitating integration points or processing jobs.

### Use Folder Path Information
- allows you to use a metadata field to build the folder structure for the documents that you promote to the review workspace. This is available only if you selected No for the Copy Images field above. The options are:
  - **Read From Field** - select this to use a metadata field to build the folder structure for the documents that you promote to the review workspace. Selecting Yes makes the Folder Path Information and Move Existing Documents fields required below.
  - **Read From Folder Tree** - select this to use the existing folder tree in the Documents tab to build the folder structure for the documents that you promote to the destination/review workspace.
  - **No** - select this if you don't want to build a folder structure based on metadata. In this case, Relativity loads all documents directly into the folder indicated by the promote destination, and you create no new folders in the destination workspace.
  - You have the option of creating folders or re-foldering documents when you select Append/Overlay for the Overwrite field.
  - You have the option of re-foldering documents for the Overwrite field through the Move Existing Documents field below.

**Folder Path Information**
- allows you to specify a metadata field to build the folder structure for the documents that you promote to the review workspace. For the purposes of ECA and Investigation, select the Processing Folder Path option. This field is only available if you selected Read From Field for the Use Folder Path Information field above.
**Move Existing Documents** - allows you to re-folder documents that were previously imported into the destination workspace, but were placed in the root case folder but not in any subfolders. This field is only available if you selected Yes for the Use Folder Path Information field above.

- Select **Yes** to move existing documents into the same folder structure found in the Folder Path Information field. Selecting Yes is useful for situations in which you want to replicate the same folder structure that is found in the source workspace, specifically for when case folders were not available or not created when you originally copied the files, and now you want to create them while overlaying data.
- Select **No** if you don’t want to re-folder existing documents. Selecting No would be useful for the following situation:
  - A new folder structure has been created in the destination workspace since you originally moved documents into it. For example, User A has transferred documents into the destination workspace without a folder structure, then User B creates folders in the destination workspace, then new documents become available in new folders in the source workspace, and now you want to transfer documents with the new folder structure into the destination workspace without relocating the documents already present.

8. Click **Save** to move to the Integration Point Details layout, from which you can run your promote job and start moving documents to the review workspace.

- Relativity performs validation on the integration point you’re attempting to save and reports on such potential mistakes as data type mismatches for mapped fields. When you see a validation message upon saving, click **OK** to proceed with running the integration point or **Cancel** to return to the layout to make edits.

9. Click **Run** to start promoting documents to the review workspace. The Run button turns to red and gives you the option of stopping the job you just kicked off, as long as that job has a status of
Pending or Processing. For more information, see Stopping a job on the next page. Note that you also have the option to save the integration point you just created as a profile to be used later. For more information, See Integration point profiles.

10. Click OK on the run confirmation message, which informs you of where your documents will be placed.

11. If necessary, monitor the progress of the promote job by viewing the Status field in the Status view at the bottom of the layout. You’ll see any of the following status values:

- **Pending** - the job has yet to be picked up by an agent.
- **Validation** - an agent is validating the job to make sure it has the required settings, such as access to the source and destination objects (saved searches, workspaces, etc.). If validation
fails, the status changes to "Validation failed," and Relativity logs an error. If the validation succeeds, the job moves on to a status of "Processing."

- **Validation failed** - the job validation has failed, resulting in an error, the details of which are saved in the Job History Errors tab.
- **Processing** - the agent has picked up the job and is in the process of completing it.
- **Completed** - the job is complete, and no errors occurred.
- **Completed with errors** - the job is complete and errors have occurred.
- **Error - job failed** - a job-level error occurred and the job didn't complete because it failed.
- **Stopping** - you clicked the Stop button, and the stop job has yet to be picked up by an agent.
- **Stopped** - the job has been stopped.

Once you start the promote job, you have the option of stopping the job or viewing the documents that you've just promoted to the review workspace.

### 6.3.1 Stopping a job

Relativity gives you the option of stopping an integration points job from proceeding in the event that you need to re-prioritize it or because you made a mistake when creating it. You can do so when that job has a status of Pending or Processing. To do this, click **Stop** on the console.

![Stopping a job in Relativity](image)

**Note:** The Total of Images value displays the size of only the physically-transferred files, meaning that it doesn’t count document size when only metadata is being transferred.

Relativity then informs you that you won’t be removing any data by stopping the transfer and that you should check to make sure that the overwrite setting you previously entered is still appropriate for the re-run.

Click **Stop Transfer** to proceed.
Once Relativity stops the job, the Job Status field on the Status view reflects this.

Note the following about stopping an Integration Points job:

- You can also stop a scheduled job if it has a status of Pending or Processing.
- A job is unstoppable if it has any status other than Pending or Processing, or the point at which Relativity starts promoting documents with such as information as the user who tagged them and the source workspace.
- When you click Stop, Relativity immediately stops creating new errors for that job.
- When you click Stop on a run-now job, Relativity marks all errors associated with the current job history as Expired.
- When you click Stop on a retry job, Relativity marks all errors associated with the current job history and the previous job as Expired.
- You can start a scheduled job after you've already stopped it.
- The item counts on the Integration Points layout reflect all items promoted before the agent received the signal to stop the job.

To re-start a stopped job, click Run. When you do this, Relativity begins to transfer data again from the beginning but doesn't remove any data already transferred.
6.4 Integration point agent considerations

When you have one agent enabled, a scheduled integration points job is always queued and is always run. When you have more than one agent, however, the scheduled job may get queued or it may result in an error, after which that job is rescheduled. In other words, there is mixed behavior when you have enabled more than one agent.

The following table provides a breakdown of this behavior:

<table>
<thead>
<tr>
<th>If</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You enable a single agent called Agent 1.</td>
<td>1. Agent 1 picks up the Run or Retry Errors job for IP1 and completes it in one hour.</td>
</tr>
<tr>
<td>2. You schedule a job called IP1 to run at 10:00 AM daily.</td>
<td>2. Agent 1 picks up the scheduled job for IP1, creates an error, removes the job history from IP1, and reschedules IP1 to run at the next interval.</td>
</tr>
<tr>
<td>3. You click Run or Retry Errors on IP1 at 9:59:59 AM.</td>
<td></td>
</tr>
</tbody>
</table>

| 1. You enable Agent 1 and Agent 2.                                | 1. Agent 1 picks up the Run or Retry Errors job for IP1 and begins working on it.                                                |
| 2. You schedule IP1 to run at 10:00 AM daily.                    | 2. Agent 2 picks up the scheduled job for IP1, creates an error, removes the job history from IP1, and reschedules IP1 to run at the next interval. |
| 3. You click Run or Retry Errors on IP1 at 9:59:59 AM.            |                                                                                                                                 |
| 4. All other agents are busy, including Agent 2.                 |                                                                                                                                 |

| 1. You enable Agent 1 and Agent 2.                                | 1. Agent 1 picks up the Run or Retry Errors job for IP1 and begins working on it.                                                |
| 2. You schedule IP1 to run at 10:00 AM daily.                    | 2. Agent 1 completes the Run or Retry Errors job for IP1.                                                                       |
| 3. You click Run or Retry Errors on IP1 at 9:59:59 AM.            | 3. Agent 1 picks up the scheduled job for IP1 and completes it.                                                                 |
| 4. All other agents are busy, including Agent 2.                 |                                                                                                                                 |

| 1. You enable Agent 1 and Agent 2.                                | 1. Agent 1 picks up the Run or Retry Errors job for IP1 and begins working on it.                                                |
| 2. You click Run or Retry Errors on IP1.                          | 2. Agent 2 picks up the Run or Retry Errors job for IP2 and begins working on it.                                                |
| 3. You click Run or Retry Errors on IP2.                          |                                                                                                                                 |

6.5 Working with promoted documents

To view the documents you promoted to the review workspace, perform the following steps:

1. Navigate to the destination workspace.
2. Select the Saved Search browser and select the search you created to bring back documents that were promoted from ECA.
3. Note the following ECA-relevant fields on the promoted-from ECA saved search view:
   - **Relativity Source Case** - the name of the workspace in which you tagged documents for inclusion and exclusion and from which you promoted your tagged documents to the review workspace.
   - **Relativity Source Job** - the name of the Integration Point that you used to promote tagged documents to the review workspace.

You can now review these documents and apply coding decisions for responsiveness and/or issues designation.

### 6.5.1 Reusing coding decisions

You can re-use the coding decisions you made on reviewed documents and promote them back into the ECA workspace through another Integration Point. For example, you could run another promote job to conduct a privilege overlay on documents in the source workspace.

To do this, perform the following steps:

1. Select the saved search you created to promote documents back to the ECA (source) workspace.
2. Navigate to the **Integration Points** tab.
3. Create a new integration point that specifies the following values, which differ from those you entered for the promote job you ran previously:
   a. **Destination Workspace** - select the original source workspace, specifically the workspace from which you previously promoted documents to the review workspace.
   b. **Saved Search** - select the saved search you created to promote documents back to the ECA (source) workspace.
   c. **Field Mappings** - map only **Control Number (Object Identifier)** and **Privilege Designation**.
   d. **Overwrite** - select **Overlay Only**.
4. Click **Run**.
5. Navigate to the **ECA Dashboard** and select the promoted-from-review saved search.
6. In the widgets drop-down list, select **Coding Values**. Note that the widgets and document list in this dashboard reflect the coding decisions that were applied to each document in the review workspace.
6.6 Performance baselines

The following table presents performance baselines for using the Relativity provider in Integration Points to promote documents and metadata between workspaces.

The jobs which yielded the following metrics were performed on a basic test environment of Relativity. Due to differences in data, infrastructure, and configuration, these should not be used as a benchmark of what you expect to see in a production environment. The results may not scale linearly.

<table>
<thead>
<tr>
<th>Document Count</th>
<th>Job Size (GB)</th>
<th>Copy Native Setting</th>
<th>Job duration (HH:MM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000 documents</td>
<td>0.85</td>
<td>Copy</td>
<td>00:04</td>
</tr>
<tr>
<td>10,000 documents</td>
<td>0.85</td>
<td>Links Only</td>
<td>00:04</td>
</tr>
<tr>
<td>100,000 documents</td>
<td>9.42</td>
<td>Copy</td>
<td>00:42</td>
</tr>
<tr>
<td>100,000 documents</td>
<td>9.42</td>
<td>Links Only</td>
<td>00:27</td>
</tr>
<tr>
<td>100,000 documents</td>
<td>0</td>
<td>No</td>
<td>00:16</td>
</tr>
<tr>
<td>100,000 documents</td>
<td>22.13</td>
<td>Copy Images</td>
<td>00:57</td>
</tr>
<tr>
<td>100,000 documents</td>
<td>22.13</td>
<td>Link Images</td>
<td>00:43</td>
</tr>
<tr>
<td>500,000 documents</td>
<td>47.5</td>
<td>Copy</td>
<td>02:38</td>
</tr>
<tr>
<td>500,000 documents</td>
<td>47.5</td>
<td>Links Only</td>
<td>02:03</td>
</tr>
</tbody>
</table>

Field information:
### 6.7 Handling errors

Errors can occur at both the item and the job-level when you run your integration point. The following are examples of potential error causes:

- Relativity is unable to retrieve a workspace.
- The user who last created or edited the integration point is deleted before a scheduled job runs.
- You promote documents with the same control numbers from two different source workspaces to the same destination workspace, which causes control number collisions.

**Note**: Any item-level errors that you encounter in your integration point are generated by the Import API.

To view these errors, click the View Errors link on the integration point console.

Clicking the View Errors link takes you to the Job History Errors tab. This link is unavailable if the job has a status of Stopped.
In the Job History Errors tab, you can use the condition lists at the top of the view to find errors based on any error-related metadata fields, such as Artifact ID, Error, Error Status, Error Type, JobHistory, Name, Source Unique ID, Stack Trace, System Created By, System Created On, System Last Modified On, and Timestamp (UTC).

Once you specify your conditions, you can search for the targeted errors by clicking **Search** on the right side of the condition lists.

You can then open any of the individuals errors returned in the list by clicking the **Name** value.

The Job History Error Layout provides the following fields:
- **Name** - the system-generated name of the error.
- **Source Unique ID** - the identifier of the item in which the error occurred.
- **Job History** - the name of the integration point containing the file in which the error occurred.
- **Error** - the error message.
- **Error Status** - the current state of the error. The possible statuses are:
  - **New** - the error is new and no action has been taken.
  - **Expired** - the state assigned to an item level error in either of the following scenarios:
    - You received an item-level error on a job, you didn't retry the error, and the job ran on a schedule, meaning the Enable Scheduler field is set to Yes on the integration point.
    - You received an item-level or a job-level error, you didn't retry the error, and you click Run on the integration point, or it is a scheduled job.
  - **In Progress** - the error is currently in the process of being retried.
  - **Retried** - the item level error in a job has been retried, meaning you clicked Retry Errors on the integration point and the retry job is complete.
- **Error Type** - an indicator of whether the error is item- or job-level.
- **Full Error** - the error message with details, including a stack trace of the error, when available.
- **System Created On** - the date and time when the agent created the error during the integration point job.
- **System Created By** - the agent that created the error during the integration point job.
- **System Last Modified By** - the agent that last updated the status value of the error.

With the information provided in the Job History Errors Layout, you can identify those files on which errors occurred. You can then access those files to manually address the causes of those errors. From there, you can return to the integration points console and retry the errors.

### 6.7.1 Item-level versus job-level errors

Note the following differences in the way Relativity handles item-level and job-level errors.

Relativity handles a mix of item-level and job-level errors in the following way:

- When you click Run on an integration point that contains item- and job-level errors, the entire job is re-run and all errors are marked as Expired.
- When you click Retry Errors on an integration point that contains item- and job-level errors, the entire job is rerun and Relativity assigns a value of Expired to the item-level errors while job-level errors are marked as In Progress and then Retried.

Relativity handles item-level errors in the following way:

- When you click Run, the entire job is re-run, and Relativity assigns a value of Expired to the item-level errors.
- When you click Retry Errors, Relativity assigns a value of Retried to the item-level errors and starts a retry job containing only those error documents.
Note: When you retry errors for a job that contains only item-level errors, Relativity creates a temporary saved search that contains only those item-level error documents, which the Export Service Manager and Export API can refer to. This search is called "Temporary Search" and is public and visible to users in the saved search browser for the duration of the retry errors job. Once Relativity completes the retry errors job, it deletes this temporary search.

Relativity handles job-level errors in the following way:

- It registers only one job-level error for the integration point.
- When you click Run, the entire job is re-run and Relativity assigns a value of Expired to the job-level error.
- The Retry Errors and Run buttons are both available.
- The Retry Error button re-runs the whole job, but the job-level error is marked as In progress and then retried.
- The Run button re-runs the whole job, but the job-level error is marked as Expired.

Scheduled job is not inserted and an error is thrown that shows up in the errors tab in Admin mode that a scheduled job did not run for this integration because the job was already running.

6.7.2 Troubleshooting job history errors

Relativity provides informative and actionable error messages when you attempt to save and run an integration point in any of the following situations:

- The destination workspace is missing.
- The destination field is missing.
- You don't have permissions to a saved search, production, or destination workspace.
- The destination field has missing child object data.
- The production is missing from the destination workspace.
The following table provides some of the errors you could encounter when attempting to run an Integration Points job, along with information on how to resolve them:

<table>
<thead>
<tr>
<th>Error</th>
<th>Likely resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination field(s) mapped has different type. Review the mapping for the following field(s): field_1, field_2</td>
<td>Review the fields listed in the error message, and check if you have the same type as expected. If the reason for changing the type was to delete the file and re-create it, then it will be un-mapped. Correct the mapping saved in the Integration Point job, and run the job again.</td>
</tr>
<tr>
<td>Destination field(s) mapped may no longer be available or has been renamed. Review the mapping for the following field(s) [field name].</td>
<td>Review if the failing field(s) still exist in the destination workspace, correct the mapping saved in the Integration Point job, and run the job again.</td>
</tr>
<tr>
<td>Destination workspace is not available.</td>
<td>Verify if destination workspace exists.</td>
</tr>
<tr>
<td>Destination workspace on federated instance is not available. Check if destination workspace still exists or if a user has a proper permission to access it.</td>
<td>Confirm that you still have access to the destination workspace on the federated instance. It is also required that a System Admin account is present (used by an Integration Points Agent) and has access to the destination workspace.</td>
</tr>
<tr>
<td>Failed to copy source field into destination field due to missing child object. Review the following destination field(s): [field names]</td>
<td>Review the list of failing fields, create the child/parent relation in the destination workspace as it is in the source workspace and try again. If that doesn't work, try to use the RDC export and import functionality to move those missing fields only.</td>
</tr>
<tr>
<td>Saved search is not available or has been secured from this user. Contact your system administrator.</td>
<td>Verify that you have the required permissions for the saved search, or check to see if the saved search has been deleted. If needed, contact your system administrator to verify the saved search configuration.</td>
</tr>
<tr>
<td>Unable to connect to federated instance. Check if destination instance still exists or if a user has a proper permission to access it.</td>
<td>There was a problem connecting to the federated instance, and you need to verify that the federated instance is still available and that the authorization token didn’t expire.</td>
</tr>
<tr>
<td>User does not have sufficient permissions to access destination workspace. Contact your sys-</td>
<td>Confirm that you still have access to the destination workspace. It is also required that a System Admin account is present (used by an Integration Points Agent) and has access to the destination workspace.</td>
</tr>
<tr>
<td>Error</td>
<td>Likely resolution</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>item administrator.</td>
<td></td>
</tr>
<tr>
<td>Verify if a folder in destination workspace selected in the Integration Point exists or if a user has a proper permission to access it.</td>
<td>Verify that the folder used for the integration point still exists. Also, check the permission settings for the folders in destination workspace to confirm that it's not secured for the user's group.</td>
</tr>
<tr>
<td>Verify if a Production Set used as the location in destination workspace exists or if a user has a proper permission to access it.</td>
<td>Verify that the production set used as the location in the destination workspace still exists. Also, check the permission settings for productions in the destination workspace to confirm that it's not secured for the user's group.</td>
</tr>
<tr>
<td>Verify if a Production Set used as the location in destination workspace is in New status.</td>
<td>Verify that the production set used as the location in the destination workspace still has a status of New. Only productions with a status of New can be used as a production set in an integration point. If the production set was already staged or run, it isn't a eligible to be used for the integration point.</td>
</tr>
<tr>
<td>Verify if production, which is the data source of this Integration Point, still exist or if user has required permissions for it.</td>
<td>Check to see if the production used as the data source of the integration point still exists. Also, verify that you have the required permissions for the production used as the data source. If needed, contact your system administrator to verify your production permissions.</td>
</tr>
<tr>
<td>Verify if the user still has permission to create saved search on destination workspace.</td>
<td>Verify that you have the required permissions for creating a saved search in the destination workspace for this integrated point job. If needed, contact your system administrator to verify your production permissions. One of missing permissions could be Search in Object Security and Advanced &amp; Saved Searches in Other Settings, both of which are set in the group permission on destination workspace.</td>
</tr>
</tbody>
</table>

### 6.7.3 Retrying errors

Once you manually address the causes of the item-level errors that occurred in your integration point, you can retry those errors through the integration points console.

To do this, click **Retry Errors**. When you do this, you submit a retry job to the system, and the system starts to import data from the source provider.
After you start the error retry job, you have the option of monitoring its progress through the Status field at the bottom of the layout. The job you just started has a Job Type value of Retry Errors and is listed as the first job in the Status view.

Note the following about retrying errors:

- The Retry Errors button is only be enabled when the previous job had an error to retry.
- You're unable to retry errors for a job with a status of Stopped.
- If you click Retry Errors and then click Stop on the retry job, Relativity marks both the current job’s errors and those from the previous job as Expired.

Note the following overwrite behavior during error retry:

- If the original integration points job had an overwrite mode of Append Only, then when you click Retry Errors, that retry job has an overwrite mode of Append/Overlay.
- If the original integration points job had an overwrite mode of Append/Overlay, then when you click Retry Errors, that retry job keeps the overwrite mode of Append/Overlay.
- If you click Run on an integration point that has errors without resolving those errors, Relativity retains the overwrite mode specified in the original job.

### 6.8 Viewing job history

To view all the audit actions associate with all integration points in your workspace, select the **Job History** tab.
The default All Jobs view in the Job History tab provides the following fields:

- **Start Time (UTC)** - the date and time at which an agent picked up the job.
- **Artifact ID** - the identifier of the job.
- **Name** - the name of the job. Clicking this takes you to the Job Details layout.

- **Integration Point** - the name of the integration point from which you ran the job.
**Job Type** - the type of job you ran. This displays one of the following values:

- **Run** - the job was kicked off via the Run button on the integration point console.
- **Retry Errors** - the job was kicked off via the Retry Errors button on the integration point console.
- **Scheduled Run** - the job was kicked off via the Enable Scheduler field and subsequent time designation on the integration point layout.

**Job Status** - the current status of the job. This will display one of the following values:

- **Pending** - the job has yet to be picked up by an agent.
- **Validation** - an agent is validating the job to make sure it has the required settings, such as access to the source and destination objects (saved searches, workspaces, etc.). If validation fails, the status changes to "Validation failed," and Relativity logs an error. If the validation succeeds, the job moves on to a status of "Processing."
- **Validation failed** - the job validation has failed, resulting in an error, the details of which are saved in the Job History Errors tab.
- **Processing** - the agent has picked up the job and is in the process of completing it.
- **Completed** - the job is complete, and no errors occurred.
- **Completed with errors** - the job is complete and errors have occurred.
- **Error - job failed** - a job-level error occurred and the job didn’t complete because it failed.

**Destination Workspace** - the workspace to which you arranged to have documents promoted.

**Items Imported** - the number of documents successfully imported through the integration point. If errors occurred, this value is lower than the Total Items value and the difference appears in the Items with Errors field.

**Total Items** - the total number of documents included in the integration point. If this value is equal to the Items Imported, then no errors occurred. If errors have occurred, this value is higher than the Items Imported value and the difference between the two appears in the Items with Errors field.

**Items with Errors** - the number of documents that generated errors. If errors have occurred, this value is equal to the difference between the Items Imported and the Total Items fields.
Proprietary Rights

This documentation ("Documentation") and the software to which it relates ("Software") belongs to Relativity ODA LLC and/or Relativity’s third party software vendors. Relativity grants written license agreements which contain restrictions. All parties accessing the Documentation or Software must: respect proprietary rights of Relativity and third parties; comply with your organization’s license agreement, including but not limited to license restrictions on use, copying, modifications, reverse engineering, and derivative products; and refrain from any misuse or misappropriation of this Documentation or Software in whole or in part. The Software and Documentation is protected by the Copyright Act of 1976, as amended, and the Software code is protected by the Illinois Trade Secrets Act. Violations can involve substantial civil liabilities, exemplary damages, and criminal penalties, including fines and possible imprisonment.

©2020. Relativity ODA LLC. All rights reserved. Relativity® is a registered trademark of Relativity ODA LLC.