

[Release notes] Access to Data Connect from the Application menu in Experience

In previous releases, users could access Data Connect through cards on the Ellucian Experience dashboard. This release adds the ability to access Data Connect from the Application menu in the Experience navigation area:

- The Data Connect Integration Designer can now be accessed from either the Integration Designer option on the Application menu or from the Data Connect Designer card.
- Data Connect integrations can now be accessed from either the Integration Packages option on the Application menu or from the Data Connect Packages card.

Any users who already have access to the Integration Designer or integration packages through the Experience cards will automatically have access through the application menu. No additional permissions or setup are needed.

For the updated procedures that include granting user access through both the Experience card and the application menu, see [Set up user access to the Data Connect Integration Designer](#) on page 5 and [Set up user access to Data Connect integrations](#) on page 8.

All procedures for using the Integration Designer and managing pipeline jobs have been updated to describe the two access options.

Data Connect overview

Ethos Data Connect is a data transformation framework that provides the ability to connect to different data sources and data formats using Ellucian Ethos. Data Connect provides the ability to define data workflows that include data transformations and mappings to third-party sources and formats.

Delivered Data Connect integrations

Ellucian delivers some integrations that are built on Data Connect. These include, for example:

- An integration with the National Student Clearinghouse Postsecondary Data Partnership (NSC-PDP) initiative in the U.S. This integration extracts data from Banner or Colleague, creates PDP data files in the data file format specified by the NSC, and transmits those files to the NSC.
- An integration that supports the processing of teacher training applications submitted to institutions through the *Apply for teacher training* service of the Department for Education (DfE) Apply service in England. This integration retrieves applications using the DfE's API, sends them to Banner, Quercus, or CRM Recruit for processing, and posts the decisions back to the DfE.

Data Connect Integration Designer

You can build your own integrations using the Data Connect Integration Designer, which is available with Experience Premium.

The Data Connect Integration Designer enables users to create custom integrations with Data Connect's low-code tooling. Users can use the designer to get data from APIs or files, transform and map data, and send to target destinations such as and ERP, S3 bucket, SFTP server, Data Access, or the Insights DataWarehouse

Access to Data Connect through Ellucian Experience

Users access Data Connect through Ellucian Experience. Before setting up Data Connect, you will need to [set up Ellucian Experience](#).

Where to find the documentation

This Data Connect documentation provides general procedures for setting up user access to Data Connect, using the Data Connect Integration Designer to create your integrations, and creating and managing pipeline jobs.

Documentation specific to each Data Connect integration delivered by Ellucian is with the related product documentation.

High-level procedure for implementing Data Connect

These are the high-level steps for a basic implementation of Data Connect.

Step	Comments	Reference
Implement Ellucian Experience.	Users access Data Connect through Ellucian Experience.	Ellucian Experience documentation
(Optional) Give developers at your institution access to the Data Connect Integration Designer.		Set up user access to the Data Connect Integration Designer on page 5
Give users at your institution access to manage Data Connect integrations.	Users will need this access to manage both integrations delivered by Ellucian and integrations that you create with the Integration Designer.	Set up user access to Data Connect integrations on page 8
Use the Data Connect Integration Designer to create your own integrations.	Developers can use the Integration Designer to build custom Data Connect integrations for your institution. The Integration Designer is available with Experience Premium.	Integration Designer overview
Create pipeline jobs, and then run and monitor those pipeline jobs.	Use these procedures to create and manage pipeline jobs for both integrations delivered by Ellucian and integrations that you create with the Integration Designer.	Create and manage pipeline jobs

Set up user access to Data Connect

Set up user access to the Data Connect Integration Designer

Users access the Data Connect Integration Designer through Ellucian Experience, from either the Application menu or the Data Connect Designer card.

Starting point	User experience
Application menu	The user clicks Integration Designer on the Application menu to go to a page listing all of the integration packages for which they have Designer access. The user then selects a package on that page.
Data Connect Designer card	In the card, the user sees a list of all of the integration packages for which they have Designer access. The user can click any integration package to go directly to that package, or click View all results to go to a page listing all of their packages.

To enable a user to access the Integration Designer through both the Application menu and the card, you must grant that user access to both the Integration Designer (in Experience Setup permissions) and the Data Connect Designer card (in Experience Configuration).

If you want to enable access only through the Application menu, rather than supporting both access options, you only need to configure the permissions in Experience Setup. You can skip the card setup.

Set up roles and users for the Integration Designer

To enable users to develop integrations using the Data Connect Integration Designer, you must first set up the users and roles that need access.

About this task

For a user to access the Data Connect Integration Designer, that user must have the following:

- Access to the Integration Designer. You grant that access by assigning permissions to roles or individual users in the Permissions area of Experience Setup.
- Access to the Data Connect Designer card (required only if you want users to be able to access the Integration Designer from the card in addition to the Application menu). You grant card access by assigning roles to the Experience card in the Card Management area of Ellucian Experience.

For a description of the user access options (Application menu or card), see [Set up user access to the Data Connect Integration Designer](#) on page 5.

Procedure

1. Identify all of the people at your institution who need access to the Data Connect Integration Designer.
 2. Decide whether you want to grant Integration Designer permissions to individual users, or grant permissions to roles and then assign those roles to individual users.
 3. Set up the roles that you need for both card access and Integration Designer permissions, and add those roles in Experience Setup.
See [Set up roles for Ellucian Experience](#).
 4. In Experience Setup, add the individual users to whom you want to grant Integration Designer permissions.
See [Add administrative users](#).

Set up the Data Connect Designer card in Experience

If you set up the Data Connect Designer card in Ellucian Experience, users can access the Data Connect Integration Designer through the card.

Before you begin

Before setting up the card, you need to set up the roles that you want to have access to the card. See [Set up roles and users for the Integration Designer](#) on page 5.

About this task

As described in [Set up user access to the Data Connect Integration Designer](#) on page 5, Data Connect supports two options for accessing the Integration Designer through Ellucian Experience: from the Application menu or from the Data Connect Designer card. If you choose to support access only through the Application menu, you can skip this procedure.

Procedure

Set up the Data Connect Designer card in the card setup wizard using the general card setup procedure in [Set up an Experience card](#), with the considerations described below.

- a) When selecting the card in the Card Management table, edit the card with **Data Connect Designer** in the **Card Type** column.
- b) In the **Roles** step of the card setup wizard, select the roles that you set up for access to the Data Connect Designer card.

Grant permissions for the Integration Designer

In Experience Setup, grant the permissions that allow users to access the Data Connect Integration Designer.

Before you begin

Before granting permissions, you need to set up the roles and users that you want to have access to the Integration Designer. See [Set up roles and users for the Integration Designer](#) on page 5.

About this task

The Integration Designer uses a single Experience permission to support targeted user access. For example, this permission will allow the roles or individuals to:

- Create and maintain all of the Integration Designer integrations that your institution has licensed.
- Create, view and maintain Integration Designer crosswalks in the Integration Designer Experience card.
- View all the Integration Designer integrations in the Integration Designer Experience card.

Procedure

1. Access Ellucian Experience Setup:
 - a) In the Ellucian Customer Center, click **Tools** and then select the desired Experience Setup instance under the **Experience** category:
 - Click **Experience Setup (Test)** to access the Test instance of Experience Setup.
 - Click **Experience Setup** to access the Production instance of Experience Setup.
 - b) (If applicable) In Experience Setup, in the **Environments** drop-down, select the desired Ethos environment.
The option to select an environment is available only for multi-institution implementations, or for the Experience Test instance if you have licensed Ethos non-Production environments in addition to Test.
2. In the Experience Setup header, click **Permissions**.
3. On the **Permissions** page, click **Data Connect Designer**.
4. On the **Data Connect Designer Permissions** page, in the left pane, click **Designer**.
5. In the right pane, select the **Develop** check box for each role or user who you want to be able to access the Integration Designer.
6. Click **Save**.
7. Instruct any user whose permissions have changed to log out of Experience and log back in. Experience permissions are cached. Logging out and back in refreshes the cache and ensures that the user has the granted permissions within Experience.

Set up user access to Data Connect integrations

Users manage Data Connect integrations through Ellucian Experience, from either the Application menu or the Data Connect Packages card.

Starting point	User experience
Application menu	The user clicks Integration Packages on the Application menu to go to a page listing all of the integrations for which they have access. The user then selects an integration on that page.
Data Connect Packages card	In the card, the user sees a list of all of the integrations for which they have access. The user can click any integration to go directly to that integration.

To enable a user to manage a Data Connect integration through both the Application menu and the card, you must grant that user access to both the Data Connect integration (in Experience Setup permissions) and the Data Connect Packages card (in Experience Configuration).

If you want to enable access only through the Application menu, rather than supporting both access options, you only need to configure the permissions in Experience Setup. You can skip the card setup.

Set up roles and users for Data Connect integrations

To enable users to manage Data Connect integrations, you must first set up the users and roles that need access.

About this task

For a user to manage a Data Connect integration, that user must have the following:

- Access to the appropriate integration. You grant that access by assigning permissions to roles or individual users in the Permissions area of Experience Setup.
- Access to the Data Connect Packages card (required only if you want users to be able to access Data Connect integrations from the card in addition to the Application menu). You grant card access by assigning roles to the Experience card in the Card Management area of Ellucian Experience.

For a description of the user access options (Application menu or card), see [Set up user access to Data Connect integrations](#) on page 8.

For example, there might be a few people at your institution who should be able to manage all Data Connect settings and integrations, others who should be able to manage just one integration, and others who should be able to view, but not modify, an integration. You could grant all of those users access to the Experience card and then assign appropriate permissions to limit their access within Data Connect.

Procedure

1. Identify all of the people at your institution who need access to Data Connect.
2. Review the list of permissions in [Data Connect permissions](#) on page 11, and identify the people who should have each type of access within Data Connect.
3. Decide whether you want to grant Data Connect permissions to individual users, or grant permissions to roles and then assign those roles to individual users.
4. Set up the roles that you need for both card access and Data Connect permissions, and add those roles in Experience Setup. See [Set up roles for Ellucian Experience](#).
5. In Experience Setup, add the individual users to whom you want to grant Data Connect permissions. See [Add administrative users](#).

Set up the Data Connect Packages card in Experience

If you set up the Data Connect Packages card in Ellucian Experience, users can access Data Connect integrations through the card.

Before you begin

Before setting up the card, you need to set up the roles that you want to have access to the card. See [Set up roles and users for Data Connect integrations](#) on page 8.

About this task

As described in [Set up user access to the Data Connect Integration Designer](#) on page 5, Data Connect supports two options for accessing integration packages through Ellucian Experience: from the Application menu or from the Data Connect Packages card. If you choose to support access only through the Application menu, you can skip this procedure.

Procedure

Set up the Data Connect Packages card in the card setup wizard using the general card setup procedure in [Set up an Experience card](#), with the considerations described below.

- a) When selecting the card in the Card Management table, edit the card with **Data Connect Packages** in the **Card Type** column.
- b) In the **Roles** step of the card setup wizard, select the roles that you set up for access to the Data Connect Packages card.

Grant permissions for Data Connect integrations

Grant the permissions that allow users to view and manage Data Connect integrations.

Before you begin

Before granting permissions, you need to set up the roles and users that you want to have different permissions. See [Set up roles and users for Data Connect integrations](#) on page 8.

About this task

Data Connect leverages Experience permissions to support targeted user access. For example, you can specify different users and roles who can:

- Specify pipeline-level parameters for one or all of the Data Connect integrations that your institution has licensed.
- Create, maintain, and run pipeline jobs for one or all of the Data Connect integrations that your institution has licensed.
- View, but not modify, those pipeline jobs; and view job run results.
- Create and maintain Data Connect crosswalks.
- View, but not modify, those crosswalks.
- Manage global Data Connect settings that apply to all integrations.

For general information about Experience permissions, and the detailed procedure for granting permissions, see [Experience application permissions](#).

Procedure

1. Access Ellucian Experience Setup:
 - a) In the Ellucian Customer Center, click **Tools** and then select the desired Experience Setup instance under the **Experience** category:
 - Click **Experience Setup (Test)** to access the Test instance of Experience Setup.
 - Click **Experience Setup** to access the Production instance of Experience Setup.
 - b) (If applicable) In Experience Setup, in the **Environments** drop-down, select the desired Ethos environment.
The option to select an environment is available only for multi-institution implementations, or for the Experience Test instance if you have licensed Ethos non-Production environments in addition to Test.
2. In the Experience Setup header, click **Permissions**.
3. On the **Permissions** page, click **Data Connect**.
4. On the **Data Connect Permissions** page, assign permissions by selecting a feature in the left pane and then assigning the desired permissions to roles and individual users in the right pane.
See [Data Connect permissions](#) on page 11 for details about Data Connect features and the access granted by each permission.
5. Click **Save**.
6. Instruct any user whose permissions have changed to log out of Experience and log back in.
Experience permissions are cached. Logging out and back in refreshes the cache and ensures that the user has the granted permissions within Experience.

Data Connect permissions

To access a Data Connect integration through Ellucian Experience, a user must be granted permissions to manage or view Data Connect features.

Feature	Permission	Available functions
Global Configuration	View	View global Data Connect settings.
	Edit	Modify global Data Connect settings.
Crosswalks	View	View Data Connect crosswalks.
	Edit	Create and modify Data Connect crosswalks.

Feature	Permission	Available functions
Integration Packages <ul style="list-style-type: none">• <integration package 1>• <integration package 2> Select an integration package to grant permissions for that integration package. (Granting permissions at the "Integration Packages" level has no effect.)	View	See this integration package listed in the Experience card, and click the link to access the Experience page with detailed information. View pipeline job information: <ul style="list-style-type: none">• View job parameters.• View job run information, including job run history and errors.
	Manage	Same functions listed above for the View permission, plus the ability to manage pipeline jobs: <ul style="list-style-type: none">• Create a new job.• Schedule recurring job runs.• Run an existing job.• Enter and modify job-level parameters.• Upload a supplemental file.• Download a job run file.• Disable or enable a job.• Terminate a job run.• Delete a job.
Note: A user who has been granted the Develop permission for the Data Connect Integration Designer will be able to view the list of all of your institution's integration packages in the Data Connect integration packages card. However, to view or manage an integration package, that user will also need to have the View or Manage permission on the integration package.	Setup	Enter and modify pipeline-level parameters. The Setup column is displayed only if at least one integration package includes pipeline-level parameters. Not all integration packages include pipeline-level parameters. For integrations that do not include such parameters, you do not need to assign the Setup permission to any users.

Example: Set up access for NSC-PDP integration

This example provides a high-level procedure for setting up users to access the NSC-PDP integration in Data Connect Integration Designer and Ellucian Experience. You can reference this example as you follow the detailed procedures.

This example assumes:

- You have identified the following types of users who need access to Data Connect Integration Designer and the NSC-PDP integration:
 - Administrators who can edit global Data Connect Integration Designer parameters.
 - Users who can manage the NSC-PDP integration, including creating and managing NSC-PDP pipeline jobs and crosswalks.
 - Users who can view, but not modify, information about NSC-PDP pipelines and crosswalks.
- You choose to use roles for all access (rather than assigning permissions to individual users).

Table 1: High-level procedure example: NSC-PDP

Step	Reference
<p>In your identity provider or ERP, create the roles for each group of users described above (the role names are examples):</p> <ul style="list-style-type: none"> • data-connect-manage • data-connect-nscpdp-manage • data-connect-nscpdp-view 	Set up roles for Ellucian Experience
<p>In your identity provider or ERP, assign those roles to the appropriate people.</p> <p>Note that, in this example, you might give some users both the data-connect-manage and data-connect-nscpdp-manage roles.</p>	
<p>In Experience Setup, add the following roles:</p> <ul style="list-style-type: none"> • data-connect-manage • data-connect-nscpdp-manage • data-connect-nscpdp-view 	Add the roles in Ellucian Experience Setup

Step	Reference
<p>From the Permissions area of Experience Setup, assign the appropriate permissions to each role as shown in Table 2: Permissions example: NSC-PDP Integration on page 14</p>	Grant permissions for Data Connect integrations on page 9
<p>Note: If you choose to support access only through the Application menu, and not through the card, you can skip this step.</p> <p>In the Configuration area of the Experience site, set up the Data Connect integration packages card using the card setup wizard. In the Roles step of the wizard, select the following roles:</p> <ul style="list-style-type: none"> • data-connect-manage • data-connect-nscpdp-manage • data-connect-nscpdp-view 	Set up an Experience card

Table 2: Permissions example: NSC-PDP Integration

Feature	Role	Permission
Global Configuration	data-connect-manage	Edit
Crosswalks	data-connect-nscpdp-manage	Edit
	data-connect-nscpdp-view	View
Integration Packages > National Student Clearinghouse Postsecondary Partnership	data-connect-nscpdp-manage	Manage
	data-connect-nscpdp-view	View

Specify global Data Connect settings

Specify the file retention period

Specify the time after which files created by pipeline jobs are deleted.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- **Edit** permissions on Data Connect global configuration.
- **View or Manage** permissions on at least one integration package, to access the Integration Packages page where the Settings link is located.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

About this task

Some pipeline jobs generate files, such as `.csv` or `.json` files, that might be used by another pipeline or available for you to download. The generated files are stored with Data Connect, and are automatically deleted after a specified file retention period. The default is 180 days. If you want to specify a shorter period, use the procedure below.

Procedure

1. From the Experience dashboard, use either of these methods to access the Integration Packages page:
 - Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - On the Data Connect integration packages card on the Experience dashboard, click any integration package.
The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is Integration Packages.
2. Click the **Settings** tab.
3. On the **Settings** page, select the desired retention period.
Files generated by pipeline jobs will be automatically deleted after the specified time has elapsed.
4. Click **Save** to save the new value, or click **Reset** to cancel the change.

Use the Data Connect Integration Designer to create integrations

First Integration Pipeline: Hello World

You can create an easy-to-follow first pipeline from start to finish.

Before you begin

The user must have Develop permission.

Procedure

Below is a sample payload in JSON format of a call to the persons API:

```
[  
  {"name": "Viktor", "lastName": "Frankenstein", "age": 30 },  
  {"name": "Agatha", "lastName": "De Lacey", "age": 20 },  
  {"name": "Elizabeth", "lastName": "Lavenza", "age": 22 },  
  {"name": "Henry", "lastName": "Clerval", "age": 29 },  
  {"name": "Creature", "age": 2 }  
]
```

Given this input, you can:

- Transform it into a CSV file with headers.
 - Extrapolate data, such as counting the number of records received and the average age.
 - Redact some sensitive data, such as the age of the persons.
 - Enable downloadable output.
1. From the Experience dashboard, use either of these methods to access the Integration Designer page:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Designer**.
 - b. On the **Packages** page, in the left pane, click the **+** button to create a new integration package.
 - From the Integration Designer card (if supported at your institution):
 - a. Click the **Integration Designer** card.
 - b. On the **Packages** page, in the left pane, click the **+** button to create a new integration package.

A package can have any number of related pipelines. The pop-up requires a package name. A package description is optional.

2. Select your newly-created package and click **+PIPELINE** to add a pipeline.
 3. Add a pipeline name.
A pipeline description is optional.
 4. Click **Save**.
The **Pipeline Designer** displays. A list of available fittings display on the left side of the page. A fitting is a pipeline step. A pipeline contains many of these steps, which are executed in the order they are added.
 5. Expand the Transformations fitting category and select the fitting named **Delimited Formatter**.
Result: After you click it, the step is added to the pipeline and that step uses the selected fitting. A warning icon ! next to the **TEST** button indicates the fitting is not configured yet.
 6. Click the fitting to open the configuration section on the right side of the page.
You can change the name to be more descriptive, such as Convert to CSV, and add an appropriate description if you want.
Click the question mark tooltip at the right of each configuration field to learn more about its functionality.
 7. The Delimited Formatter fitting takes a JSON payload and can use a simple JSON path to extract data from said payload. Scroll all the way to the **Detail** section in the configuration dialog.
 8. Enable the **Column Headers** so that your output includes the name of the columns. Enter `name` to specify the path to get the name, and enter `Person's Name` as the label.
Result: The fitting evaluates the input like this, and extracts the value for name:
`{ "name": "Agatha", "lastName": "De Lacey", "age": 20 }`
 9. Even though the pipeline build is not complete, you can run a test at this point. Click **TEST** at the top of the page.
Result: The test displays a form where you can execute the pipeline. Most of the pipelines retrieve their initial data from REST endpoints, files, or other data sources; however, you can pass initial data by enabling the **Enter JSON Input Data** option.
 10. Enable **Enter JSON Input Data**.
 11. Copy and paste the sample payload at the beginning of this page.
 12. Click **RUN TEST**.
- Note:** This does not apply in this example; however, when testing, be advised that the pipeline may only execute for 60 seconds. Limit your data to a small number of records using filters or other parameters so that the pipeline can complete.
- Result:** A **Results** section displays below your JSON input data. By default the **Raw** tab result displays, but you might find the **Payloads** tab easier to read.
13. Click the **Payloads** tab to see data formatted as CSV, such as the following:

```
[  
  "Person's Name",  
  "Viktor",
```

```

    "Agatha",
    "Elizabeth",
    "Henry",
    "Creature"
]
```

14. Click **CANCEL** to go back to the configuration view.
15. Add two more columns by clicking on **ADD COLUMN** button twice and fill the fields with the next information:
Column1 - (Path: "lastName", Label: "Last Name") Column2 - (Path: "age", Label: "Age") And the test result, for reference:

```

[
  "Person's Name,Last Name,Age",
  "Viktor,,30",
  "Agatha,,20",
  "Elizabeth,,22",
  "Henry,,29",
  "Creature,,2"
]
```

You now have a working transformation from JSON to CSV.

16. On the Configuration page, scroll to the **Accumulators** section and click **ADD ACCUMULATOR**.
Accumulators are custom properties that store values to be used in the footer row. You can input a descriptive name (in this case use **ageAvg**) and then select the operation you want to execute (in this case **Average**) for parameter **age**.
17. Add a footer to see the accumulated result by scrolling down to the footer section, and clicking on **ADD FOOTER**.
18. You need to add a footer that is a literal type. This footer can have interpolation values. Use [mustache.js](#) to interpolate values.
You can use this example in the **Value** field: Average Age: {{accumulators.ageAvg}}

19. Run a test to validate that the data now includes a footer row with the average age.

Result:

```

[
  "Person's Name,Last Name,Age",
  "Viktor,,30",
  "Agatha,,20",
  "Elizabeth,,22",
  "Henry,,29",
  "Creature,,2",
  "Average Age:20.6"
]
```

You must redact age, as it is sensitive data.

20. Scroll to the **Redaction Rules** section below **Accumulators**.
Similar to Columns, redact can use a JSON path to analyze data from the incoming message.
21. Redact the age.

- a) Select the type **Path** to indicate that you will provide the path in the JSON.
- b) Add age to the list by typing it in the **Enter Columns** field and clicking the **+** button.
- c) To show that you have the age but are masking it, use "****" as the mask.

Result: The result below shows the age redacted with the specified mask.

```
[  
    "Person's Name,Last Name,Age",  
    "Viktor,,****",  
    "Agatha,,****",  
    "Elizabeth,,****",  
    "Henry,,****",  
    "Creature,,****",  
    "Average Age:"  
]
```

Your first pipeline is complete.

22. Save your work for use during the exercises.

Create a serverless API

The following documentation provides step-by-step instructions on how to create a serverless API.

Procedure

1. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, select the package you want to create the pipeline on.
 - From the Integration Packages card (if supported at your institution):
 - a. Click the **Integration Designer** card.
 - b. On the Data Connect integration packages card on the Experience dashboard, select the package you want to create the pipeline on.
2. Click the **+** **PIPELINE** button.
Result: A dialog box displays with several fields to configure the pipeline.
3. By default, the **Integration Pipeline Type** is selected. In order to create a serverless API, select **API** from the **Pipeline Type** drop-down.
4. Enter a unique name for your pipeline.

Note: A warning displays if the same name already exists in the system. Because the pipeline will work as an API resource, it should not contain spaces.

5. Choose the appropriate HTTP method (GET, POST, PUT, DELETE) based on the actions you plan to perform in your pipeline.

Note: GET requests cannot receive a body.

6. Select the desired authentication type (User token or Ethos token) based on your pipeline's authentication requirements.
 - a) Select **User token** if the pipeline will be called from an Experience card.
 - b) Select **Ethos token** if the pipeline will be called through the Ethos Integration proxy by an external application.
 - c) See [Authorization](#) for more details on authorization requirements and setup.
7. **Optional:** You can provide a description for the pipeline to clarify the purpose or functionality of the pipeline.
8. Click **Save** to create a draft of the pipeline within the package.

You can now proceed with further configurations, such as defining input and output schema and building the pipeline using the fittings and pipeline parameters.

Exercise III: HTML Formatter fitting example

You can use the HTML Formatter fitting to create HTML output that includes data gathered from one or more sources associated to the institution.

Before you begin

This example requires you to provide a JSON file as input when the pipeline is run, and that JSON file is to have the data that will be parsed by the HTML template Mustache expressions.

Under other use case scenarios, it is possible the data will come from GET API calls in the pipeline, made before running the HTML fitting, so the file as input is referenced here for example purposes.

About this task

When the pipeline is run, it uses the information provided as part of the HTML template, processes any Mustache tags, replaces them with the provided data, and produces HTML output that can be saved as a target file.

See [HTML Formatter fitting](#) for a description of the HTML Formatter fitting.

For more information on Mustache tag expressions, see <https://mustache.github.io/mustache.5.html>.

Procedure

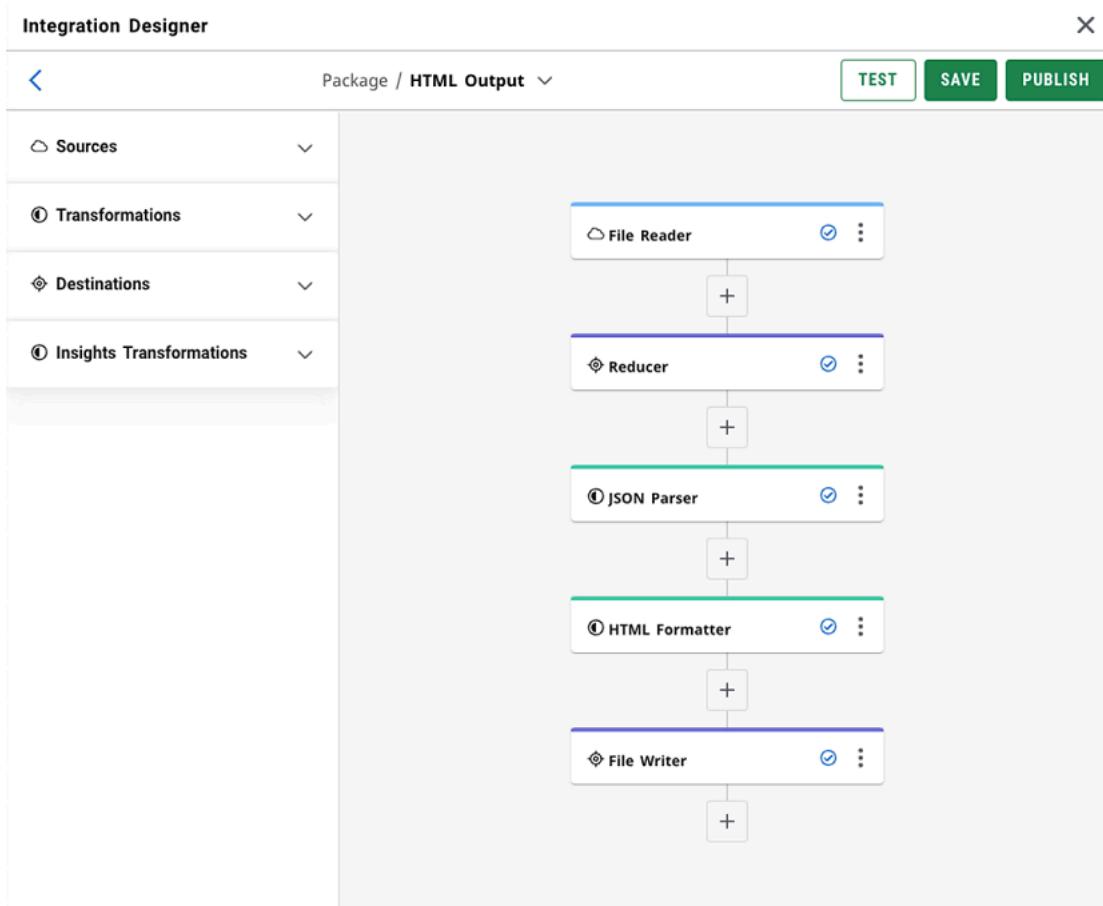
1. From the Experience dashboard, use either of these methods to access the Integration Designer page:

- From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Designer**.
 - b. On the Packages page, in the left pane, click the integration package this new pipeline will be in.
 - From the Integration Designer card (if supported at your institution):
 - a. Click the **Integration Designer** card.
 - b. On the Integration Designer card on the Experience dashboard, click the integration package this new pipeline will be in.
2. An Integration Designer package should contain pipelines that relate to each other. If necessary, create a new package.
 - a) To create a new package, click **+** in the Packages section of the Integration Designer.
 - b) Create a unique name for the package.
 - c) **Optional:** Add a description of the package contents.
 - d) Click **Save**.
 - e) Select the package you just created in the list of packages to continue.
 3. In the package, create a new pipeline.
 - a) In the **Pipelines** section of the Integration Designer, click **+ PIPELINE** to create a new pipeline.
 - b) Enter a unique name for the pipeline.
 - c) **Optional:** Add a description for this pipeline.
 - d) Click **Save** to save the pipeline.
 4. In the Integration Designer for your new pipeline, click **More** next to the pipeline name.
 5. Select **Edit Pipeline Settings**.
 6. Click **+ PARAMETER** to add the parameter to allow you to upload a JSON data file each time the pipeline is run.
 7. Define the new parameter to upload the file.
 - a) Enter a unique name for this parameter.
The parameter name must be a single word starting with a letter, dollar sign, or underscore, and cannot have any special characters.
 - b) Set **Label** and **Default** to **None** (default).
 - c) Enable **Required**.
 - d) Disable **Sensitive** (default).
 - e) Change **Type** to **File**.
 - f) Click **Add Parameter**.
Next, you will add the necessary fittings to the pipeline: File Reader, Reducer, JSON Parser, HTML Formatter, and File Writer.
 8. Add a File Reader fitting.

This will retrieve the contents of the file that will be provided when the pipeline is run.

- a) In the side menu, click **Sources** to open the list of fittings that consume data.
 - b) Click **File Reader** to add a File Reader fitting to the pipeline.
For additional information about this fitting, refer to [File Reader fitting](#).
 - c) Click the new **File Reader** fitting to open the details pane.
 - d) **Optional:** Replace the default fitting name (File Reader) with a descriptive name.
 - e) **Optional:** Add a description for this fitting.
 - f) Enter the file name in the **Key** field.
The file name must be all lowercase letters and should match the name of the file that will be provided when the pipeline runs.
 - g) If uploading a local file, do not select any values for **Bucket**, **Access Key ID**, or **Secret Access Key**.
 - h) Click **Save** to save the segment.
9. Add a Reducer fitting.
- This will ensure the full contents of the file are accumulated and passed along as a single message to the rest of the pipeline fittings.
- a) In the side menu, click **Destinations** to open the list of fittings that send data to an end state.
 - b) Click **Reducer** to add a Reducer fitting to the pipeline.
As part of the reducer, you can specify which property will include the captured data and pass it along to the next fitting. You can specify the default payload property as the accumulator See [Reducer fitting](#).
 - c) Click the new **Reducer** fitting to open the details pane.
 - d) **Optional:** Replace the default fitting name (Reducer) with a descriptive name.
 - e) **Optional:** Add a description for this fitting.
 - f) **Required:** Enter a value in the **accumulator** field.
This is the property in the new payload upon which to set the accumulated array of payloads.
For this example, save this back to the `payload` property. See the reference in the [HTML Formatter fitting](#) to the `message.payload` in Mustache.
 - g) Click **Save** to save the segment.
10. Add a JSON Parser fitting.
- At this moment, the JSON file contents are in string format, so the JSON object needs to be restored. To achieve this, include a JSON Parser fitting.
- a) In the side menu, click **Transformations** to open the list of fittings that transform data.
 - b) Click **JSON Parser** to add a JSON Parser fitting to the pipeline.
For additional information about this fitting, refer to [JSON Parser fitting](#).
 - c) Click the new **JSON Parser** fitting to open the details pane.
 - d) **Optional:** Replace the default fitting name with a descriptive name.
 - e) **Optional:** Add a description for this fitting.

- f) The fitting accepts any type of incoming message, but will only parse one that has a JSON string payload.
 - g) Click **Save** to save the segment.
11. Add a HTML Formatter fitting.
- As part of the template property, include any HTML content you want the fitting to process, including Mustache tag references to the data that is being passed along.
- a) In the side menu, click **Transformations** to open the list of fittings that transform data.
 - b) Click **HTML Formatter** to add a HTML Formatter fitting to the pipeline.
For additional information about this fitting, refer to [HTML Formatter fitting](#).
 - c) Click the new **HTML Formatter** fitting to open the details pane.
 - d) **Optional:** Replace the default fitting name with a descriptive name.
 - e) **Optional:** Add a description for this fitting.
 - f) **Required:** Enter a value in the **Template** field.
This is HTML content with or without Mustache expressions. If payload data is referenced from the Mustache tags, ensure the tags reference the full structure, such as {{message.payload.field}} or the corresponding property where the JSON data objects are stored.
 - g) Click **Save** to save the segment.
- After the pipeline processes the HTML content and replaces any Mustache tag placeholders, a File Writer fitting can capture this output and generate a file for it.
12. Add a File Writer fitting.
- a) In the side menu, click **Destinations** to open the list of fittings that send data to an end state.
 - b) Click **File Writer** to add a File Writer fitting to the pipeline.
For additional information about this fitting, refer to [File Writer fitting](#).
 - c) Click the new **File Writer** fitting to open the details pane.
 - d) **Optional:** Replace the default fitting name with a descriptive name.
 - e) **Optional:** Add a description for this fitting.
 - f) Enter a **File Name** for the output HTML file name.
 - g) **Optional:** For testing purposes, you might want to select **Generate Presigned Url** to configure the File Writer to generate a presigned URL with the output for the file.
 - h) Configure **Bucket**, **Access Key ID**, or **Secret Access Key** information as needed for a target location, or leave this information blank so the file can be downloaded from the job run page as needed.
 - i) Click **Save** to save the segment.
13. Click **Save** to save the pipeline.
- Result:** Your pipeline should look similar to this example.



14. **Optional:** Test the pipeline, providing a JSON file as input that matches the data structure the HTML template is expecting.

- While viewing your new pipeline in the Integration Designer, click **Test**.
- Click **Upload File** and select the input JSON file.
- Optional:** Enable **Enable Diagnostic log** to generate a diagnostic log for this pipeline execution.

The log file will be available after the test completes. Refer to *Enable diagnostics logs in Troubleshooting* for more details.

- Click **RUN TEST**.
- When the test completes, review the results.

The **Raw** tab result displays by default.

Results display for the last segment executed. See the log file for test results for other segments in the pipeline.

If the test is unsuccessful, review your fittings setup and refer to [Troubleshooting](#) for more assistance.

- If you turned on the **Generate Presigned Url** property on the File Writer, the Raw output of the test will include the URL with the location of the HTML file that was generated. Copy

and paste this address (without the quotes) in another window in your browser to see the contents of the file, and verify it is the output that you expected.

For more details about the Test process and overall publishing process, see [Publish integration pipelines](#).

15. Publish the pipeline.
 - a) Click **Publish**.
 - b) Select a release version to publish.
 - c) Click **Publish**.
16. Access the **Integration Packages** card from Data Connect. Ensure permissions have been granted for your user in Experience Setup so that the new pipeline is available. See [Integration Designer overview](#).
17. Select the new pipeline you just published and click **+ New Job** to create a new job.
 - a) Enter a job name.
 - b) Click **Upload File** and provide a JSON file as input that matches the data structure the HTML template is expecting.
 - c) Leave **Run Now** selected (default).
 - d) Click **Save** to run the job.
18. If there is an error while the Data Connect job is running, review the Data Connect logs.
See [Common questions](#).

Create and manage pipeline jobs

Specify pipeline-level parameters

Enter the parameters that apply to all jobs for a pipeline.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The Setup permission on the integration package that includes this pipeline.
- The View or Manage permission on the integration package that includes this pipeline, to access the Pipeline page where the pipeline-level settings are located.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

About this task

Some integration packages include parameters that are defined at the pipeline level. These might be sensitive parameters that should not be exposed to business users who manage pipeline jobs, or they might be parameters whose value is the same for all jobs within a pipeline.

This procedure includes the steps that are common to specifying pipeline-level parameters for all Data Connect pipelines. Information that is specific to a particular pipeline is with the documentation for setting up the Data Connect integration that includes that pipeline.

Procedure

1. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, click your integration package.
 - From the Integration Packages card (if supported at your institution):
 - a. On the Data Connect integration packages card on the Experience dashboard, click your integration package.

The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is Integration Packages.

2. On the **Package** page, in the table of pipelines, click the pipeline for which you want to specify pipeline-level parameters.

3. On the **Pipeline** page, click the **Pipeline Parameters** tab.

If you do not see the **Jobs** and **Pipeline Parameters** tabs, either this pipeline has no pipeline-level parameters or you have not been granted the Setup permission on this integration package.

4. Click the **Edit Pipeline Parameters**  icon.

5. Enter the pipeline-level parameters for this pipeline.

Many parameters are specific to a particular Data Connect integration and pipeline. For guidance, see the documentation for setting up your integration.

Note: Some pipeline-level parameters have a default value. These parameters will always have a value. If you clear the entry, you will be able to save, but any job runs for this pipeline will use the default value.

6. If the pipeline parameters include an **Ethos API Key** parameter, this pipeline uses Ethos Integration for integrations. Perform the steps below to copy the API Key from Ethos Integration and enter it here.

- a) On the Ethos Integration header bar, click **Applications**.

- b) On the **Applications** page, click the name of the Ethos application that you created for this integration.

For example, if you are using NSC-PDP Integration with Colleague, you would have created two Ethos applications: one for NSC-PDP Integration and one for Colleague. In that example, you would select the Ethos application for NSC-PDP Integration.

- c) On the **Application Overview** page, click the **API Keys** tab.

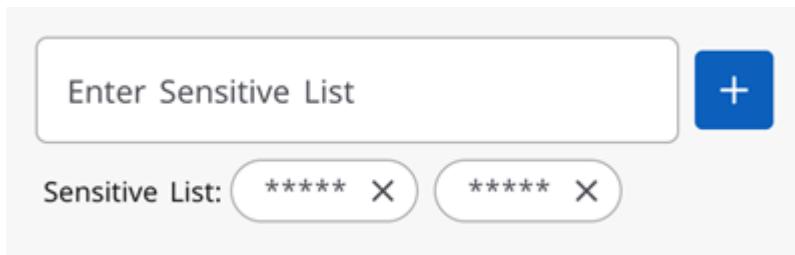
- d) On the **API Keys** page, click **Copy**  to copy the API key.

- e) Back on the Data Connect **Pipeline Parameters** page, paste that API key into the **Ethos API Key** field.

7. If the pipeline parameters include a multi-value list of sensitive parameters, there are special considerations for updating that list. To modify an existing value or add a value, you must first delete all existing values by clicking the X on each oval, and then enter all desired values.

In the example below, there are two existing values.

- If you wanted to modify one of the two values, you would first delete both existing values and then enter both desired values.
- If you wanted to add a third value, you would first delete the two existing values and then enter all three desired values.



8. Click **Save**.

Create a pipeline job

Enter the parameters for a pipeline job, and either run the job immediately or set up a schedule.

Before you begin

If this pipeline includes pipeline-level parameters, those parameters must be specified before you can create the pipeline job. See [Specify pipeline-level parameters](#) on page 26.

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The Manage permission on the integration package that includes this pipeline.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

About this task

This procedure includes the steps that are common to setting up all Data Connect pipeline jobs. Information that is specific to a particular pipeline, such as settings entered in the Job Parameters section of the New Job page, is with the documentation for setting up the Data Connect integration that includes that pipeline.

Procedure

1. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, click your integration package.
 - From the Integration Packages card (if supported at your institution):
 - a. On the Data Connect integration packages card on the Experience dashboard, click your integration package.

The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is Integration Packages.
2. On the **Package** page, in the table of pipelines, click the pipeline for which you want to create a new job.
3. Click **+ NEW JOB** to access the **New Job** page.

If the **+ NEW JOB** button is disabled (grayed out), this pipeline includes pipeline-level parameters that must be configured before you can create the pipeline job. See [Specify pipeline-level parameters](#) on page 26.

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4. In the **Basic Details** section of the page, enter basic settings:

Field	Entry
Job name	Enter a descriptive name for this job. If you create multiple jobs for this pipeline, you can use this name to find this job on the Pipelines page.

5. In the **Job Parameters** section of the page, enter the parameters for this pipeline job. Many job parameters are specific to a particular Data Connect integration and pipeline job. For guidance, see the documentation for setting up your integration.
6. If the **Job Parameters** section includes an **Ethos API Key** parameter, this pipeline uses Ethos Integration for integrations. Perform the steps below to copy the API Key from Ethos Integration and enter it here.
 - a) On the Ethos Integration header bar, click **Applications**.
 - b) On the **Applications** page, click the name of the Ethos application that you created for this integration.

For example, if you are using NSC-PDP Integration with Colleague, you would have created two Ethos applications: one for NSC-PDP Integration and one for Colleague. In that example, you would select the Ethos application for NSC-PDP Integration.
 - c) On the **Application Overview** page, click the **API Keys** tab.
 - d) On the **API Keys** page, click **Copy**  to copy the API key.
 - e) Back on the Data Connect **New Job** page, paste that API key into the **Ethos API Key** field.
7. In the **Job Run Details** section of the page, specify when you want the job to run. See the examples below.

Example job schedule	Steps
Run the job immediately.	<p>Click Run now.</p> <p>You can also run this job later from the job runs page for the job.</p>
Run the job daily at noon.	<ol style="list-style-type: none"> a. Click Schedule job. b. In the Repeats field, select Daily. c. In the Hours field, enter 12. d. In the Minutes field, enter 0.
Run the job every 6 hours	<ol style="list-style-type: none"> a. Click Schedule job. b. In the Repeats field, select Daily. c. In the Hours field, enter 6 and select Use as interval. d. In the Minutes field, enter 0.

8. If you set up a schedule for the job, and you want the schedule to end at a certain date and time, do the following:
 - a) Enable the **Setup Job Stop Date/Time?** toggle switch.

- b) Select the desired stop date.
 - c) Enter the desired stop time in the *HH:MM AM/PM* format. If you leave this field blank, the stop time defaults to 11:59 PM.
9. In the **Advanced Options** section of the page, modify the default settings if needed:
- a) In the **Maximum Concurrency** setting, specify the number of concurrent threads for this job.

Some pipeline jobs use multiple concurrent threads for processing. Increasing the number of concurrent threads can improve processing time, but too many simultaneous threads might overwhelm the target system for the job.

You can accept the default of 10 threads unless you are seeing performance issues. If the pipeline job is taking a long time to run, try increasing the number of threads. If you are seeing performance issues in the target system, try decreasing the number of threads.
 - b) In the **HTTP Request Timeout** setting, specify how long this pipeline job should wait for HTTP requests to complete (in minutes).

You can accept the default of three minutes unless a job run fails with the following error message: The request exceeded the maximum timeout of <#> minutes and was aborted. In that case, increase the timeout and run the job again.
10. Enable the **Enable Diagnostic Log** toggle switch if you want diagnostic logs to be created for this job run.
- After the job run completes, you can view the diagnostic logs from the Actions column on the job runs page.
- If you enable this setting, diagnostic logging is enabled only for the current job run. If you run the job again and want to generate diagnostic logs, you will need to edit the job parameters and enable the diagnostic log again. Similarly, for a scheduled job, diagnostic logging is enabled only for the first scheduled run. If you want to enable diagnostic logging for subsequent runs, you will need to edit the job parameters.
11. Click **Save**.
- The job runs page for this job is displayed. Click **Refresh Content**  to update the information as the job run progresses. See [Monitor a running pipeline job](#) for how to get additional information about a running job.

Run an existing pipeline job

After defining a pipeline job, you can run it again later.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The Manage permission on the integration package that includes this pipeline.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

Procedure

1. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, click your integration package.
 - From the Integration Packages card (if supported at your institution):
 - a. On the Data Connect integration packages card on the Experience dashboard, click your integration package.
The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is **Integration Packages**.
2. On the **Package** page, in the table of pipelines, click the pipeline for which you want to run the job.
3. On the **Pipeline** page, in the table of jobs, click the job that you want to run.
4. On the **Job** page, click **Run Job**.
The **Run Job** button is disabled if the job is currently running or if the job has been disabled.
5. In the **Job Parameters** dialog box, confirm that these are the settings for the job you want to run, and then click **Run Job**.
6. On the **Job** page, in the table of job runs, view the progress of the job.
Click **Refresh Content**  to update the information as the job run progresses. See [Monitor a running pipeline job](#) for how to get additional information about a running job.

Monitor a running pipeline job

After initiating a run of a pipeline job, you can monitor the progress of the run and evaluate any errors encountered.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The View or Manage permission on the integration that includes this pipeline.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

Procedure

1. If you are already on the **Job** page for the job run that you want to monitor, skip to Step 5 on page 32.
2. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, click your integration package.
 - From the Integration Packages card (if supported at your institution):
 - a. On the Data Connect integration packages card on the Experience dashboard, click your integration package.

The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is **Integration Packages**.
3. On the **Package** page, in the table of pipelines, click the pipeline for the job you want to monitor.
4. On the **Pipeline** page, in the table of jobs, click the job that you want to monitor.
5. On the **Job** page, in the table of job runs, locate the job run you want to monitor and view the summary information in that row. Click **Refresh Content**  to update the information as the job run progresses.

Key information includes:

Column	Description
Progress Summary	<p>Indicator of how the job run is progressing. To view progress details, click the link and then review the details as described in Step 6 on page 32.</p> <p>If the job has just started and is not yet initialized, this column will display Progress details not available instead of a clickable link. Click Refresh Content  until the value changes to a clickable link.</p> <p>Note: The message Progress details not available also appears if the progress details have been deleted, which occurs automatically two weeks after the job run completes.</p>
Status	Overall status of the job run.
Errors	If there are errors in the job run, a View Errors link is displayed. Click the link to see the error details.

6. Click the link in the **Progress Summary** column to view details of the progress of the job run. The display automatically refreshes periodically, or you can click **Refresh Content**  to update the information as the run progresses.

This page displays information about each phase of the job run, including records processed during that phase. (Integration pipeline jobs are automatically broken up into phases, depending

on which parts of the job can be run in parallel.) The message **Progress details not available** is displayed for a phase that is currently in progress.

If an error is encountered during any phase of the job, the **View Errors** link appears in the header. Click that link to see the error details.

Troubleshoot a pipeline job

If a job run fails, or if you are not seeing the expected results, you can access troubleshooting information from the job runs page.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The View or Manage permission on the integration that includes this pipeline.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

Procedure

1. If you are already on the **Job** page for the job run that you want to troubleshoot, skip to Step 5 on page 33.
2. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, click your integration package.
 - From the Integration Packages card (if supported at your institution):
 - a. On the Data Connect integration packages card on the Experience dashboard, click your integration package.
The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is **Integration Packages**.
3. On the **Package** page, in the table of pipelines, click the pipeline for the job you want to troubleshoot.
4. On the **Pipeline** page, in the table of jobs, click the job that you want to troubleshoot.
5. On the **Job** page, in the table of job runs, locate the job run you want to troubleshoot and view the summary information in that row.

Note: Data Connect retains only the most recent 1,000 runs for a job.

Key information for troubleshooting includes:

Column	Description
Status	Overall status of the job run.
Errors	If there are errors in the job run, a View Errors link is displayed. Click the link to see the error details.
Actions	<p>If you enabled diagnostic logs for this job run when you set up the job, a diagnostic log zip file is generated after the job runs to completion. Click View Files  in the Action column, and then download the diagnostic logs zip file from the Job Run Files dialog box.</p> <p>Ellucian might request access to the diagnostic log files to troubleshoot an issue with a pipeline job. Note that these files could contain sensitive information and should be handled accordingly.</p> <p>The zip file contains:</p> <ul style="list-style-type: none"> • A <code>plan.json</code> file that describes the structure of the job run. • One or more execution log files with details about what happened during the job run. The execution logs have filenames like <code><job_run_id>_n_n.json</code> <p>In some cases, for example if the pipeline execution fails validation, the zip file will contain only the <code>plan.json</code> file, with no execution logs.</p> <p>A complex job run might generate a large number of execution log files. The zip file is capped at a maximum of 1,000 files. If the zip file from a job run contains 1,000 files, this indicates that some data from the job run is not included in the log files.</p> <p>The diagnostic logs zip file is automatically deleted seven days after the job run.</p>

Terminate a run of a pipeline job

You can terminate a running pipeline job. For example, you might want to terminate a job that has been running for a long time and appears not to be progressing, or if you realize after starting the job that the job parameters are incorrect.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The Manage permission on the integration package that includes this pipeline.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

Procedure

1. If you are already on the **Job** page for the job run that you want to terminate, skip to Step 5 on page 35.
2. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, click your integration package.
 - From the Integration Packages card (if supported at your institution):
 - a. On the Data Connect integration packages card on the Experience dashboard, click your integration package.
3. On the **Package** page, in the table of pipelines, click the pipeline for which you want to terminate the job run.
4. On the **Pipeline** page, in the table of jobs, click the job for which you want to terminate the job run.
5. On the **Job** page, click **Terminate Job**.

You can terminate a job only if it is currently running, as indicated by a status of **Created** or **Running** in the **Status** column.

Click **Refresh Content**  to update the information as the job run progresses. A status of **Terminated** indicates that the job has successfully terminated.

Note: Depending on the type of job and when it is interrupted, some data may have already been processed.

Modify pipeline job parameters

After defining a pipeline job, you can modify the job parameters.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The Manage permission on the integration package that includes this pipeline.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

About this task

If you originally set up this job to run on a schedule, you can use this procedure to change the schedule. However, you cannot use this procedure to either create a schedule for the job if you didn't create one originally or to switch from a scheduled job to "Run now." If you want to run the job now, use the procedure in [Run an existing pipeline job](#) on page 30 instead.

Procedure

1. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, click your integration package.
 - From the Integration Packages card (if supported at your institution):
 - a. On the Data Connect integration packages card on the Experience dashboard, click your integration package.
The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is **Integration Packages**.
2. On the **Package** page, in the table of pipelines, click the pipeline that contains the job whose parameters you want to modify.
3. On the **Pipeline** page, in the table of jobs, click the job whose parameters you want to modify.
4. On the **Job** page, next to **Job Parameters** in the left pane, click **Edit Job Parameters** .
5. Modify the parameters as desired and then click **Save**.

For a description of each parameter, see the procedure for creating a new job for this pipeline.

Note: After you modify the job parameters, you can see the parameters that were used for earlier runs. In the table of job runs, locate the job run that you are interested in and click **View Run Parameters** .

Disable or enable a pipeline job

When you create a pipeline job, the job is initially enabled. After creating the job, you can temporarily disable it.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The Manage permission on the integration package that includes this pipeline.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

About this task

Disabling prevents any future scheduled runs if you have set up a recurring schedule for the job, and also prevents you from manually running the job. If you re-enable a disabled job, scheduled runs will resume and you can again run it manually.

You cannot disable a job that is currently running.

Procedure

1. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, click your integration package.
 - From the Integration Packages card (if supported at your institution):
 - a. On the Data Connect integration packages card on the Experience dashboard, click your integration package.
The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is Integration Packages.
2. On the **Package** page, in the table of pipelines, click the pipeline for which you want to disable or enable a job.
3. On the **Pipeline** page, in the table of jobs, click the job that you want to disable or enable.

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4. On the **Job** page, toggle the **Enabled/Disabled** switch to enable or disable the job.

Delete a pipeline job

You can delete a pipeline job that you have defined. Deleting a job also deletes information about any runs of that job.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The Manage permission on the integration package that includes this pipeline.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

Procedure

1. From the Experience dashboard, use either of these methods to access your integration package:
 - From the Application menu:
 - a. Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - b. On the **Integration Packages** page, in the left pane, click your integration package.
 - From the Integration Packages card (if supported at your institution):
 - a. On the Data Connect integration packages card on the Experience dashboard, click your integration package.
The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is Integration Packages.
2. On the **Package** page, in the table of pipelines, click the pipeline that contains the job you want to delete.
3. On the **Pipeline** page, in the table of jobs, locate the job that you want to delete.
4. In the row for that job, click **More :** in the **Actions** column and then click **Delete this job**.

Create a crosswalk

Create a crosswalk that maps values between the applications that you are integrating with Data Connect.

Before you begin

The user performing this procedure must have the following access:

- A role that has been assigned to the Experience card. (Required only if your institution supports access through the card in addition to the Application menu.)
- The Edit permission on Data Connect crosswalks.
- The View or Manage permission on at least one integration package, to access the Integration Packages page where the Crosswalks link is located.

That access is granted by an administrator as described in [Set up user access to Data Connect integrations](#) on page 8.

About this task

This procedure provides the steps for accessing the crosswalk creation page. Information that is specific to a particular crosswalk, such as the required crosswalk name and the mappings, is with the documentation for setting up the Data Connect integration that includes that crosswalk.

Procedure

1. From the Experience dashboard, use either of these methods to access the Integration Packages page:
 - Click **Applications**  in the Experience navigation area and then click **Integration Packages**.
 - On the Data Connect integration packages card on the Experience dashboard, click any integration package.The title of the card on your dashboard is the name specified during card configuration by an administrator at your institution. The default title is Integration Packages.
2. Click the **Crosswalks** tab.
3. Click **Add a new Crosswalk**  to create a new crosswalk.
4. In the **Add new Crosswalk** dialog box, enter a name for the crosswalk and then click **Create**.
5. Enter the mappings for your crosswalk.
Mappings are specific to each Data Connect integration. For guidance in setting up the mappings, see the documentation for your integration.