

Lab Exercise 3- Data Lake & Data Model (Mapping & Design)

Objective

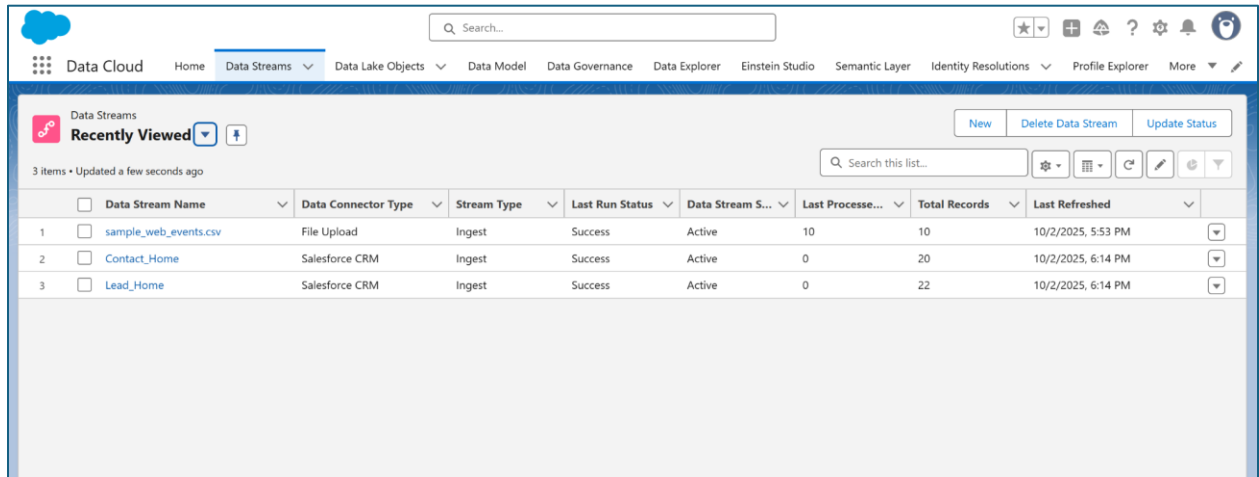
By the end of this hands-on, you will:

- Understand how Data Lake Objects (DLOs) map to Data Model Objects (DMOs).
- Create and map a formula field to enrich your dataset.
- Navigate to Data Model and Map Data.
- Visualize your model in graph view and verify relationships before unification.
- Use Data Model to validate mapped data.

Part 1: Add & Map a Formula Field

1. Open Your Data Stream

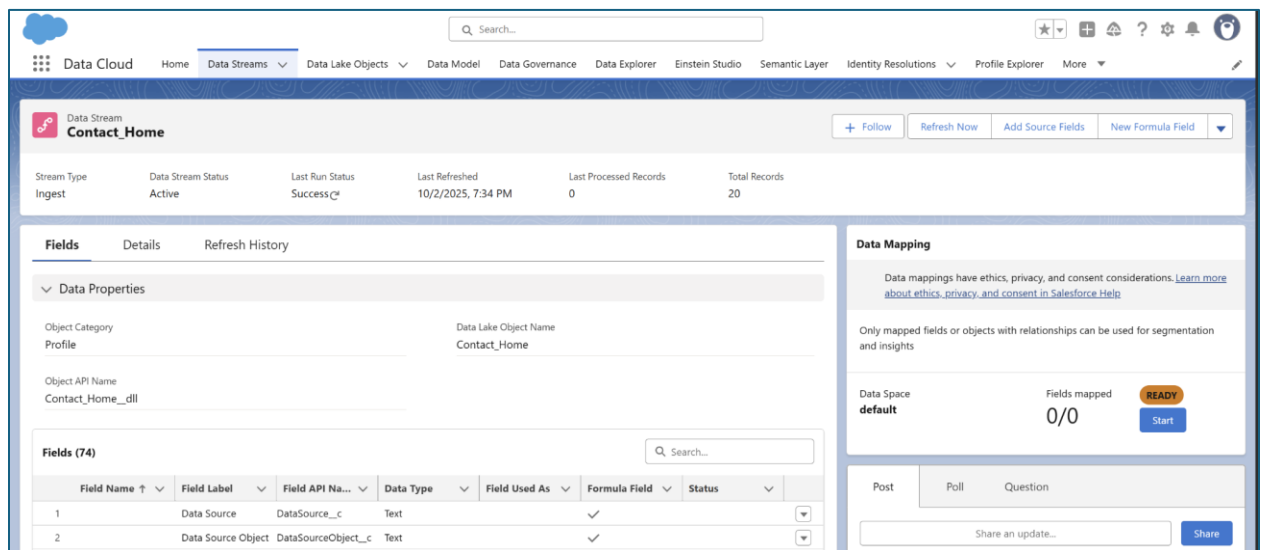
Go to **App Launcher** → **Data Cloud** → **Data Streams**.



The screenshot shows the 'Data Streams' section in the Salesforce Data Cloud interface. It displays a table of 'Recently Viewed' streams. The table has columns for Data Stream Name, Data Connector Type, Stream Type, Last Run Status, Data Stream S..., Last Processe..., Total Records, and Last Refreshed. There are three items listed: 'sample_web_events.csv', 'Contact_Home', and 'Lead_Home'.

	Data Stream Name	Data Connector Type	Stream Type	Last Run Status	Data Stream S...	Last Processe...	Total Records	Last Refreshed
1	sample_web_events.csv	File Upload	Ingest	Success	Active	10	10	10/2/2025, 5:53 PM
2	Contact_Home	Salesforce CRM	Ingest	Success	Active	0	20	10/2/2025, 6:14 PM
3	Lead_Home	Salesforce CRM	Ingest	Success	Active	0	22	10/2/2025, 6:14 PM

Select an existing data stream you ingested in Module 2 (e.g.,
Contact_Home).

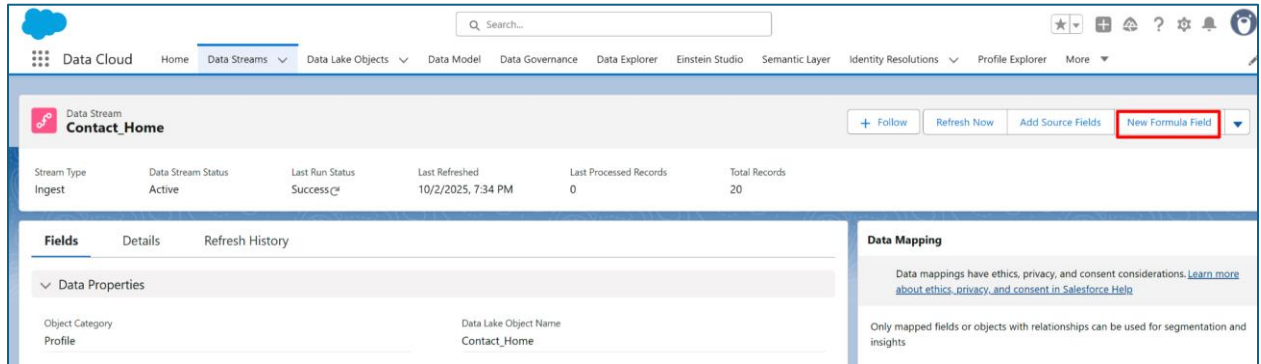


The screenshot shows the detail page for the 'Contact_Home' data stream. It includes a summary section with stream type, status, last run status, last refreshed time, last processed records, and total records. Below this are tabs for 'Fields', 'Details', and 'Refresh History'. The 'Fields' tab is active, showing a list of fields with columns for Field Name, Field Label, Field API Name, Data Type, Field Used As, Formula Field, and Status. There are two fields listed: 'Data Source' and 'Data Source Object'. To the right, there is a 'Data Mapping' section with a 'Data Space' dropdown set to 'default' and a 'Fields mapped' count of 0/0. A 'READY' status is shown with a 'Start' button. At the bottom, there is a 'Share' button.

Field Name	Field Label	Field API Name	Data Type	Field Used As	Formula Field	Status
1	Data Source	DataSource_c	Text		✓	
2	Data Source Object	DataSourceObject_c	Text		✓	

2. Add a Formula Field

- In the stream detail, click **Fields** → **Add Formula Field**.



- Define a new formula field:

- **Name:** CompositeContactKey
- **Type:** Text
- **Formula:** CONCAT(Email, "-", MobilePhone)

(This creates a composite key for unique identification.)

The screenshot shows the 'New Formula Field' dialog box. It has three main sections: 'Field Label' with the value 'CompositeContactKey', 'Field API Name' with the value 'CompositeContactKey', and 'Formula Return Type' set to 'Text'. Below these, there's a 'Search function' section with a list of functions: Conversion, Date, Logical, and Text. The 'Transformation Formula' section contains the formula 'CONCAT(Email, "-", MobilePhone)'. On the right, there's a 'Tested Value' section with a 'Test' button and an 'Output' field. At the bottom right, there are 'Cancel' and 'Save' buttons.

- **Map the Formula Field**

The mapping interface opens. On the right side, under **Data Model entities**, expand the **Profile** subject area.

Data Cloud Home **Data Streams** Data Lake Objects Data Model Data Governance Data Explorer Einstein Studio Semantic Layer Identity Resolutions Profile Explorer More

Data Stream
Contact_Home [+ Follow](#) [Refresh Now](#) [Add Source Fields](#) [New Formula Field](#)

Stream Type	Data Stream Status	Last Run Status	Last Refreshed	Last Processed Records	Total Records
Ingest	Active	Success	10/2/2025, 7:19 PM	0	20

Fields Details Refresh History

Data Properties

Object Category: Profile Data Lake Object Name: Contact_Home

Object API Name: Contact_Home_dtl

Fields (74)

Field Name	Field Label	Field API Na...	Data Type	Field Used As	Formula Field	Status
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Data Mapping

Data mappings have ethics, privacy, and consent considerations. [Learn more about ethics, privacy, and consent in Salesforce Help](#)

Only mapped fields or objects with relationships can be used for segmentation and insights

Data Space: default Fields mapped: 0/0 **READY** [Start](#)

Post Poll Question


Contact_Home

Contact_Home

Unmapped

- A₀ Account ID
- A₀ Assistant's Name
- Asst. Phone
- Birthdate
- Business Fax
- Business Phone
- Buyer Attributes
- Clean Status
- CompositeContactKey

Data Model entities



No objects selected

Select standard or create custom objects to display here as mapping targets

[Learn More](#) [Select Objects](#)

Click the + button in front of **Contact Point Address**, **Contact Point Email**, **Contact Point Phone**.

Learn More

Q Contact Point

- > Contact Point ☒
- > Contact Point Address ☒
- > Contact Point App
- > Contact Point Consent
- > Contact Point Digital Id
- > Contact Point Email ☒
- > Contact Point OTT Service
- > Contact Point Phone ☒

Field Label ▼ Data Ty... ▼ Custom Key Qualifier ▼

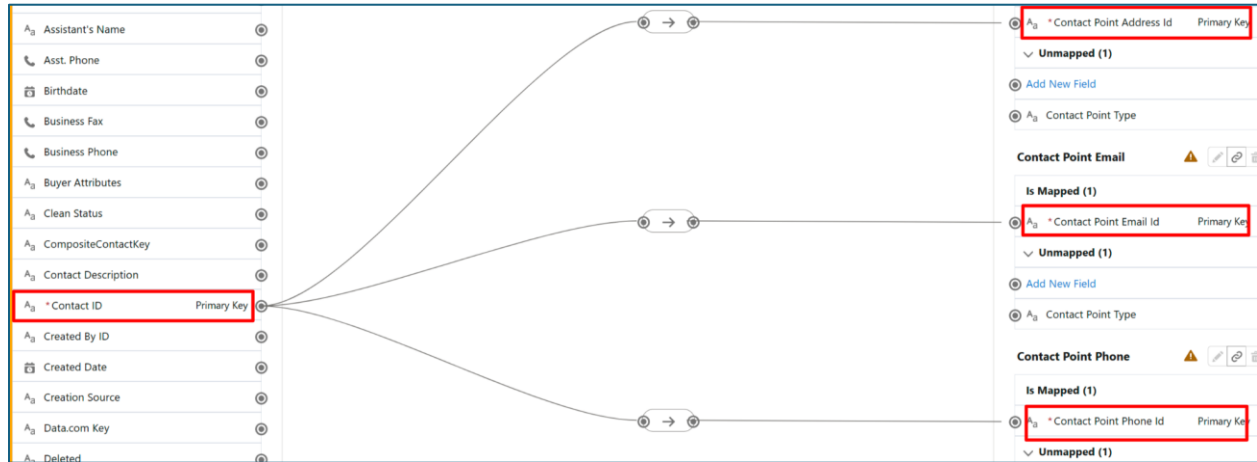
Article Score Date DateTime

Done Close

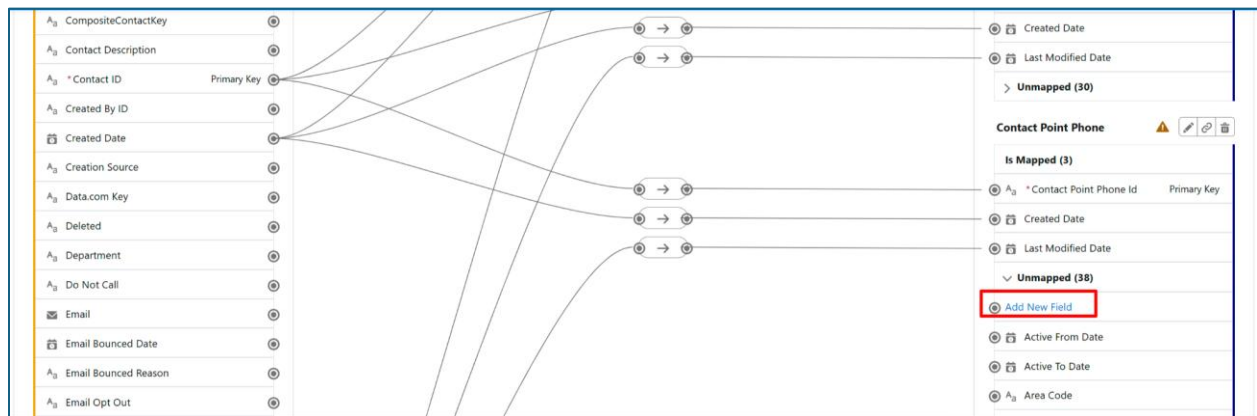
- > Contact Point Address ☒
- > Contact Point App
- > Contact Point Consent
- > Contact Point Digital Id
- > Contact Point Email ☒
- > Contact Point OTT Service
- > Contact Point Phone ☒
- > Contact Point Social
- > Contact Profile
- > Opportunity Contact

Done Close

- Drag your Contact ID field into the **Contact Point Address Id, Contact Point Email Id, Contact Point Phone Id**



- Add New Field **Contact Point**



Add New Attribute

*** Field Label**

*** Field API Name**

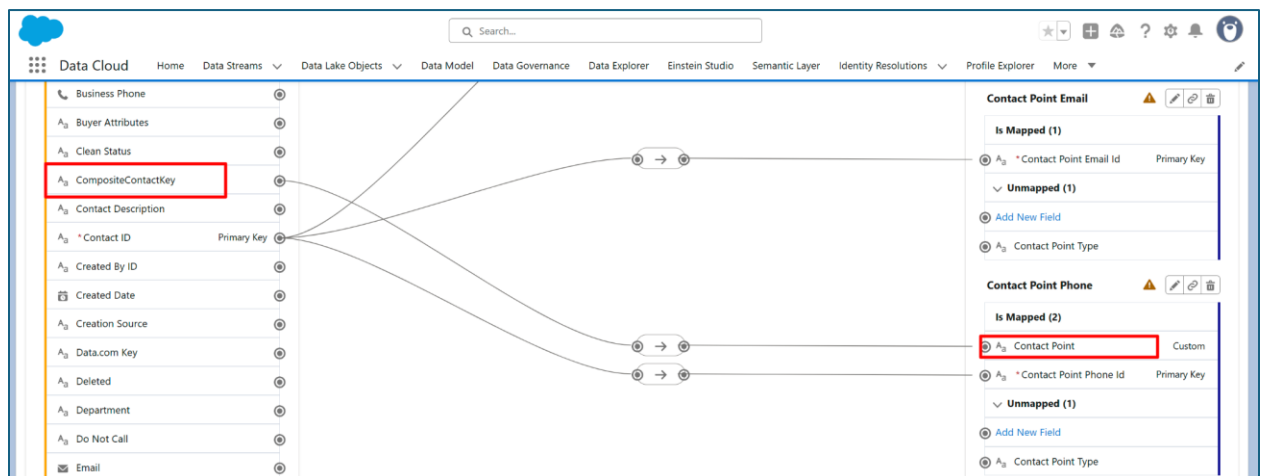
*** Data Type**

Text
▼

☐ Enable Value Suggestion

Cancel
Save

- Drag your CompositeContactKey field into the **Contact Point** section.

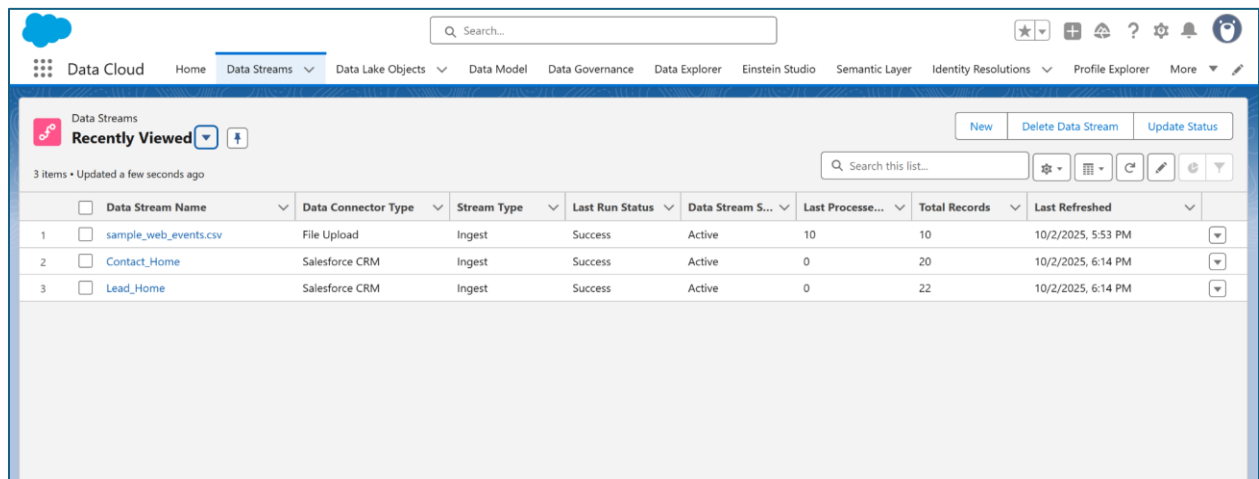


- Now **Save & Close**.

Part 2: Connect & Map Data

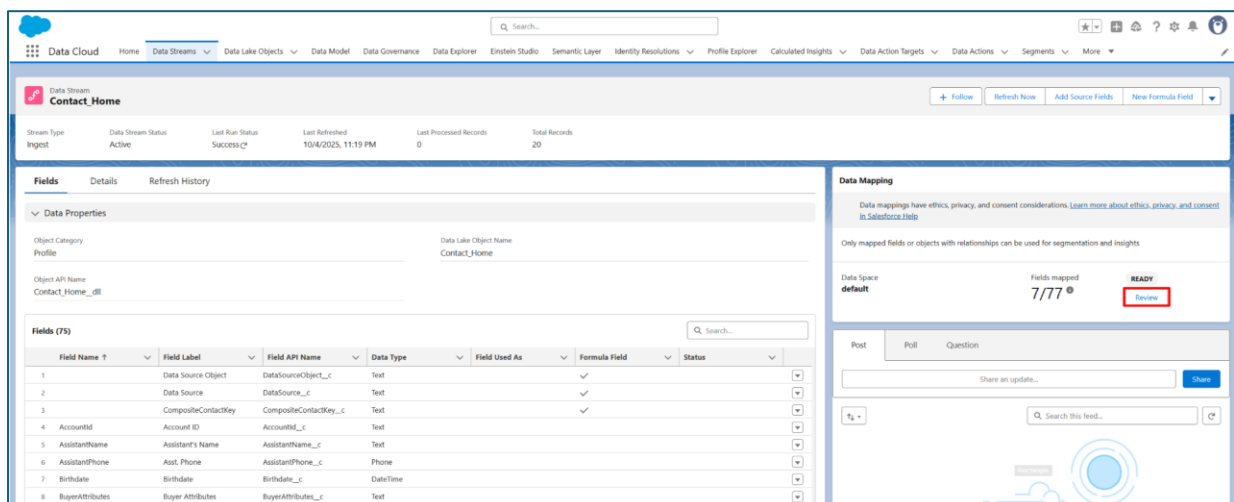
1. Navigate to Data Model

From App Launcher → **Data Cloud** → **Data Stream**.



	Data Stream Name	Data Connector Type	Stream Type	Last Run Status	Data Stream S...	Last Processe...	Total Records	Last Refreshed
1	sample_web_events.csv	File Upload	Ingest	Success	Active	10	10	10/2/2025, 5:53 PM
2	Contact_Home	Salesforce CRM	Ingest	Success	Active	0	20	10/2/2025, 6:14 PM
3	Lead_Home	Salesforce CRM	Ingest	Success	Active	0	22	10/2/2025, 6:14 PM

- Select an existing data stream you ingested in Module 2 (e.g., Contact_Home).



Field Name	Field Label	Field API Name	Data Type	Field Used As	Formula Field	Status
1	Data Source Object	DataSourceObject_c	Text			
2	Data Source	DataSource_c	Text			
3	CompositeContactKey	CompositeContactKey_c	Text			
4	AccountID	AccountID_c	Text			
5	AssistantName	AssistantName_c	Text			
6	AssistantPhone	AssistantPhone_c	Phone			
7	Birthdate	Birthdate_c	DateTime			
8	BuyerAttributes	BuyerAttributes_c	Text			

2. Map the Data Field

Click **Review**

The screenshot shows the Data Cloud interface. The top navigation bar includes 'Data Cloud', 'Home', 'Data Streams', 'Data Lake Objects', 'Data Model', 'Data Governance', 'Data Explorer', 'Einstein Studio', 'Semantic Layer', 'Identity Resolutions', 'Profile Explorer', 'Calculated Insights', 'Data Action Targets', 'Data Actions', 'Segments', and 'More'. The main content area is titled 'Contact_Home' and shows a data stream with the following properties:

Stream Type	Data Stream Status	Last Run Status	Last Refreshed	Last Processed Records	Total Records
Ingest	Active	Success	10/4/2025, 11:19 PM	0	20

Below the properties, there is a 'Fields' section with a table of 75 fields. The table has columns: Field Name, Field Label, Field API Name, Data Type, Field Used As, Formula Field, and Status. The first 8 fields are listed:

Field Name	Field Label	Field API Name	Data Type	Field Used As	Formula Field	Status
1	Data Source Object	DataSourceObject_c	Text		✓	
2	Data Source	DataSource_c	Text		✓	
3	CompositeContactKey	CompositeContactKey_c	Text		✓	
4	AccountID	AccountID_c	Text			
5	AssistantName	AssistantName_c	Text			
6	AssistantPhone	AssistantPhone_c	Phone			
7	Birthdate	Birthdate_c	DateTime			
8	BuyerAttributes	BuyerAttributes_c	Text			

On the right side, the 'Data Mapping' panel is visible. It shows 'Data Space: default' and 'Fields mapped: 7/77'. A 'READY' status is shown with a 'Review' button highlighted in red. Below this, there is a 'Post' section with a 'Share an update...' button and a 'Question' section with a search bar.

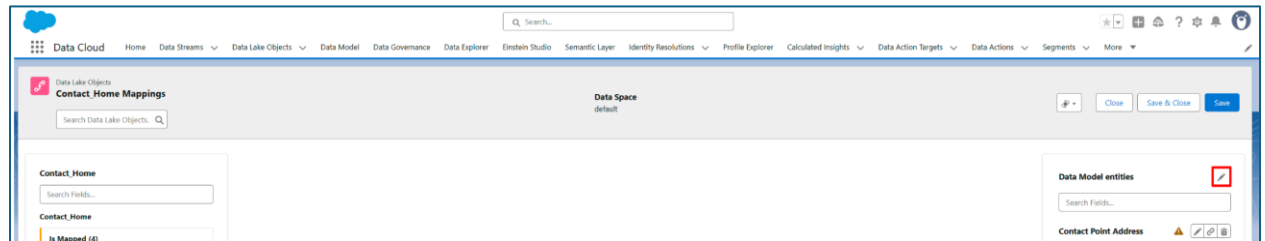
The mapping interface opens. On the right side, under **Data Model entities**, expand the **Profile** subject area.

The screenshot shows the 'Data Model entities' panel. On the left, there is a search bar and a list of 'Unmapped' fields under the 'Contact_Home' data stream. The fields are:

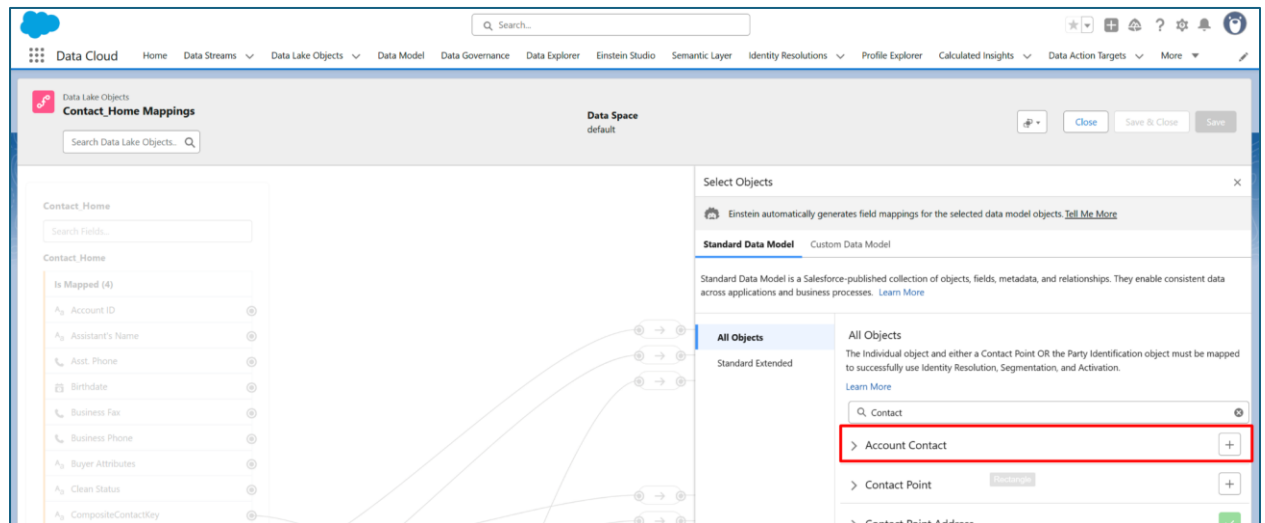
- Account ID
- Assistant's Name
- Asst. Phone
- Birthdate
- Business Fax
- Business Phone
- Buyer Attributes
- Clean Status
- CompositeContactKey

On the right, the 'Data Model entities' section is shown. It features a compass icon and the text 'No objects selected'. Below this, it says 'Select standard or create custom objects to display here as mapping targets'. There is a 'Learn More' link and a 'Select Objects' button highlighted in red.

Edit Data Model Entities.

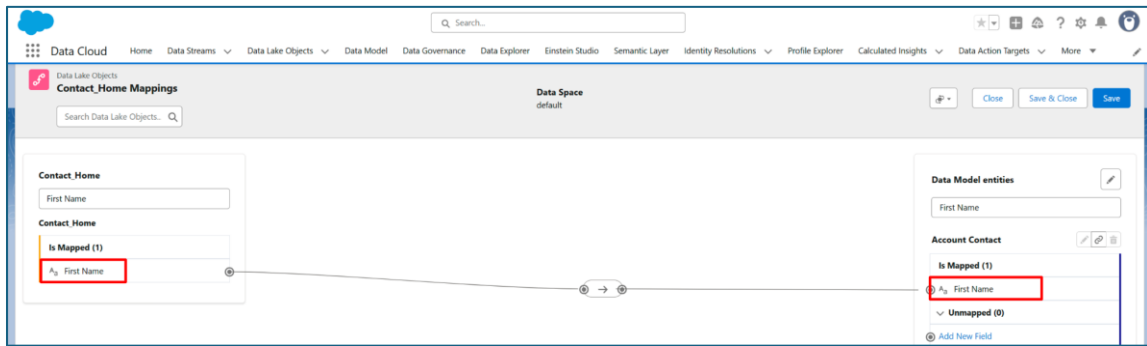


Click the + button in front of **Account Contact** and click **Done**.

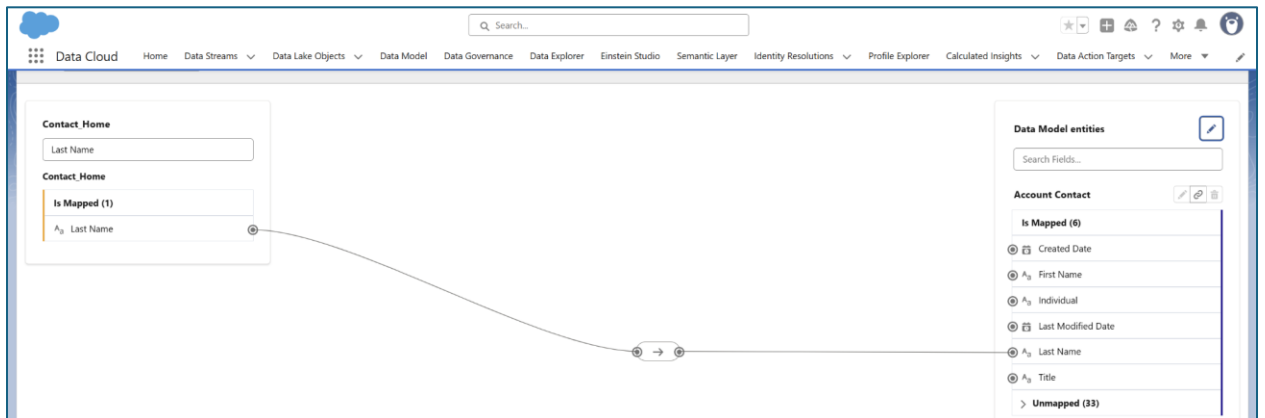


Map fields to the standard **Customer 360 DMO**:

First Name → First Name



Last Name → Last Name



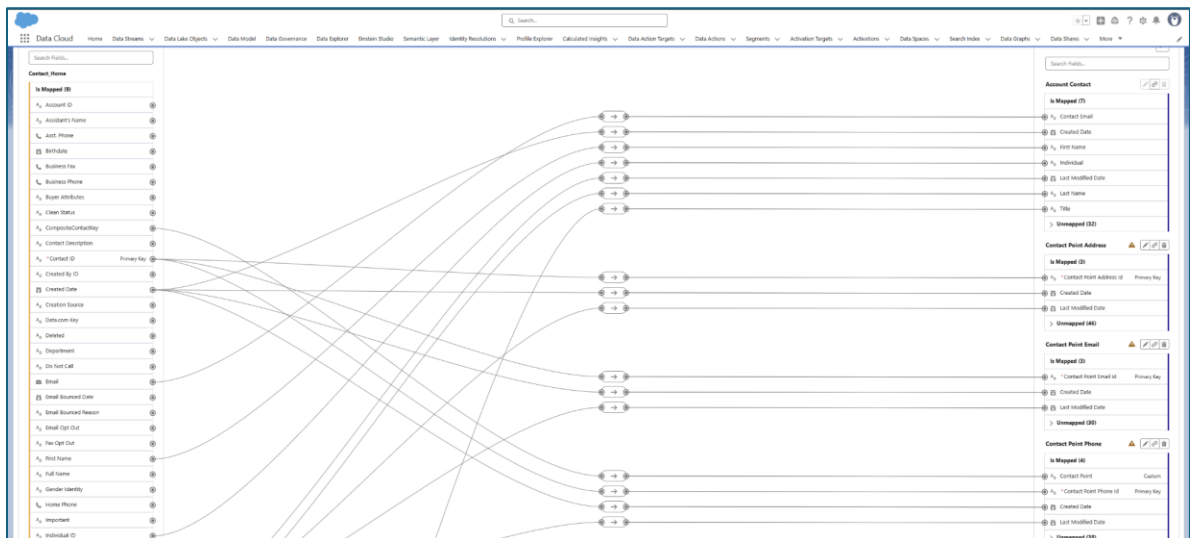
Email → Engagement → Contact Email



- Ensure required fields are mapped (highlighted fields must be filled).

3. Check Graph View

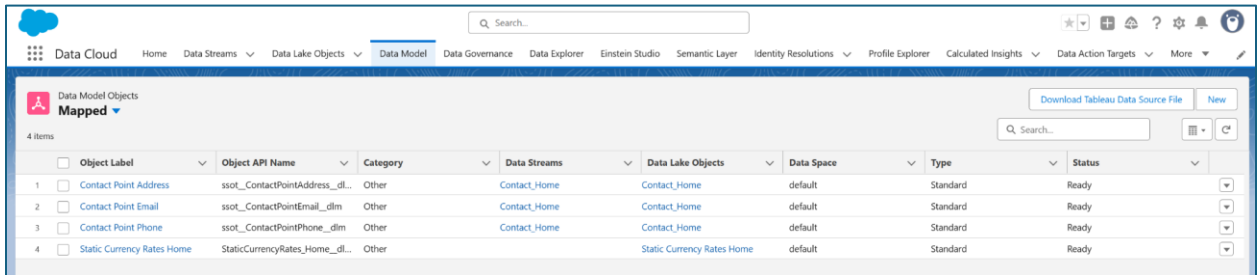
- Click **Graph View** to see relationships.
- Confirm **DLO** correctly links with **DMO**.
- Verify your formula field mapping is included.



Part 3: Validate in Data Explorer

Verify the Mapping

1. Go back to the **Data Model**.
2. You'll now see your **DMO (e.g., Contact Point Email)** showing the Data Stream name.
3. That confirms your mapping is live.



The screenshot shows the Data Cloud interface with the 'Data Model' tab selected. The 'Mapped' section displays a table with 4 items. The table columns are: Object Label, Object API Name, Category, Data Streams, Data Lake Objects, Data Space, Type, and Status. The rows represent different DMOs, including 'Contact Point Address', 'Contact Point Email', 'Contact Point Phone', and 'Static Currency Rates Home'.

	Object Label	Object API Name	Category	Data Streams	Data Lake Objects	Data Space	Type	Status
1	<input type="checkbox"/> Contact Point Address	ssot_ContactPointAddress_dim	Other	Contact_Home	Contact_Home	default	Standard	Ready
2	<input type="checkbox"/> Contact Point Email	ssot_ContactPointEmail_dim	Other	Contact_Home	Contact_Home	default	Standard	Ready
3	<input type="checkbox"/> Contact Point Phone	ssot_ContactPointPhone_dim	Other	Contact_Home	Contact_Home	default	Standard	Ready
4	<input type="checkbox"/> Static Currency Rates Home	StaticCurrencyRates_Home_dim	Other		Static Currency Rates Home	default	Standard	Ready