



Augment.ws

Salesforce

Augment File Operations

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Augment FileOps

How does it work?

The Augment FileOps for Salesforce (AFO) is designed to work with Salesforce Objects and their associated files. It operates by querying a specific object type within Salesforce and collecting all the files connected to each record. Subsequently, every file is transmitted to an AI platform accompanied by instructions detailing the data points to be extracted. Upon receiving a response from the AI platform, the extracted data is then aligned with Salesforce fields, either updating the existing record or generating a new custom object record linked to it.

Configuration

AFO requires three types of configuration (API, Fields, and Objects). These configurations are interconnected, enabling the setup and management of a scheduled Apex Batch Job. This job utilizes a designated AI Platform and Language Model, a defined set of Fields and their descriptions, and a Salesforce Object as a source of the file data for processing.

API Configuration

AFO needs a configuration for each external AI Platform and Large Language Model (LLM) used. API configurations can be reused by multiple Object processing configurations.

1. In Salesforce Setup navigate to Custom Meta Data Types.
2. Find the type “Augment API Configuration” and click Manage Records

Field	Description
API Type	The provider of the API Google, OpenAI, Anthropic
Model	This is the model name from the AI platform that will be used.
Named Credential	The name of the Named Credential that will be used to access the AI Platform.
Label	This is the display name of the configurations
Augment API Configuration Name	A unique value that is used to reference this configuration. It will be auto filed based on the Label, but it can be modified.



Object Configuration

AFO uses Object Configurations to target documents for data extraction. AFO queries the Content Documents linked to the configured object then uses batch processing to answer extraction questions.

The Object Configuration also tells AFO where to store the extracted data. Extracted data can be stored in fields of the queried object (API Name of Object to Query) or on a custom object created to hold the extracted data.

NOTE: In both cases it is recommended that you create a Boolean Field (Is Processed Field) to track the processing state. If present, this field will be automatically updated to “True” when a document is processed. If you want to reprocess a set of documents you can change the field value to ‘False’ manually or with a bulk update.

Creating an Object Configuration

1. In Salesforce Setup navigate to Custom Meta Data Types.
2. Find the Custom Metadata Type “Augment Object Configuration”
3. Click the “Manage Records” link and click the “New” button.
4. Add the required fields:

Field	Description
Label	This needs to be a Unique Value, like the target object name
Augment API Configuration Name	The value of the “Augment API Configuration Name” field for the API configuration that you will use
API Name of Object to Query	The target object where documents are linked for example Account, CustomObject__c
Additional Restrictions	Additional condition for selecting the Objects to query. For instance Name like ‘Expression%’ Any of the primary object’s fields can be used to target the desired objects.
Schedule	An Apex cron schedule express . Example: 0 5 * * ? every hour at 5 minutes past the hour.
Store Response	When checked the response from the AI Platform will be stored as JSON in a note linked to the updated or inserted object.
Document Prompt	A general description of what you would like the LLM to consider when extracting the data values. Suggestions: “Extract the requested fields from the document” You could



	could use this to further restrict the LLM by including additional information like: <i>"Use only document content that is in English"</i>
API Name of Custom Object for results	If you have created a custom object to capture the LLM Results add it here. Example: LLM_Invoice_Data__c If you are updating the object being queried leave this blank.
Is Processed Field	Field that tracks if an object has been processed. This field must be present on the custom object or the primary Object. Example: LLM_Invoice_Data__c.Is_Processed__c Account.Is_Processed__c
Filename Inclusion Regular Expression	A regular express that allows for including Linked documents based on the filename Default for all should be .* Example: .*\.pdf files that end in .pdf
Enabled	Check if you want the configuration to be run. Unchecking will cause the Scheduled Job for this configuration being deleted. If it is not enabled then no Scheduled Job will be created.
Debug Logging	This will enable additional debug logging and create a Log File related to the API requests as a file linked to the Object specified in "API Name of Custom Object for results"

Field Mapping Configuration

The Field Mapping Configuration provides the Salesforce Object and object field names where the extracted data will be stored. It also provides the instructions on how to extract the data for the field. The instructions will be automatically prepended with data about the Field Type and the Accepted List Values.

1. In Salesforce Setup navigate to Custom Meta Data Types.
2. Find the Custom Metadata Type "Augment Field Mapping Configuration"
3. Click the "Manage Records" link and click the "New" button.

Field	Description
Label	This is the display name of the record if you have the same field name on more than one object, then make the value unique.
Augment Field Mapping Configuration Name	This needs to be a Unique Value, like the field API name it will be auto filled based on the Label value.
Field API Name	The API name of the field to be extracted. Example: Invoice_Number__c



Field Extract Description	The instructions for the LLM. Example: The 9 character alpha numeric value following "Invoice Number" on page one of the document.
Parent Object(s)	The parent object of the field. Example: LLM_Invoice_Data__c or Account. If the field exists on multiple objects with the same Field API Name, you can add all the object API Names separated with a comma.
Enabled	Check if you want the configuration to be included

Named Credentials

AFO uses a Salesforce Named Credential to manage the authentication necessary to communicate with external APIs.

A Named Credential and External Credential are included in the package for each of the supported AI Platforms.

For each API Platform that is used the External Credential will need to be updated with the API key created for the platform.

Update the API Key

1. In Salesforce Setup Navigate to Named Credentials. In the Header Tab Click on "External Credentials"
2. You will see the three configurations:
Augment Anthropic
Augment Google
Augment Open AI
3. For each AI Platform you use Click on the Label and open the configuration
4. Navigate to the "Principals" section. You should see an entry with the Parameter Name "Augment" choose Edit from the dropdown menu under actions.
5. In the "Authentication Parameters" click the Add button.
In the Name field, add **"apiKey"**
In the Value field, paste the API key for the AI provider.
6. Click Save.

Permission Set

To run the AFO you will need to create a permission set and assign it to any accounts that will be used to run the application.



1. In Setup Navigate to “Permission Sets”
2. In the Table header Click “New”
3. Set the Label to something Descriptive like “Augment FileOps”
4. Add a description like “Used to the Augment FileOps managed package”
5. Choose a Licence type or leave as None.
6. Save the Permission Set.
7. In the “Apps” section of the Permission Set Navigate to “External Credential Principal Access” and click “Edit”
8. In the Shuttle Box “Available External Credential Principals” you should see
Anthropic - Augment
Google - Augment
OpenAI - Augment
9. Select each value and move it to the “Enabled External Credential Principals”
10. Click “Save”

Users

AFO uses Apex Jobs to schedule the execution of file analysis. Apex Jobs must run under a user. This can be a real person OR an account created to run the jobs.

1. In Setup Navigate to “Users”. Find the or Create the User under which the application will run.
2. Click on the Users “Full Name”
3. At the top of the page under the user’s name you will see a link to “Permission Set Assignments” click on the link, then Click “Edit Assignments”
4. Add the Permission Set you created “Augment FileOps”
5. Add this Permission Set to any users who will be setting up or testing the application.

NOTE: For Production Jobs it is recommended to run under a dedicated account so that processes do not break when a user’s permission changes.

Set up Job Scheduler

AFO uses a master scheduler to automatically create jobs for any Object Configurations that are enabled to set up the Master Scheduler:

1. In Setup Navigate to “Scheduled Jobs”
2. In Apex Jobs, click “Schedule Apex”
3. In the Job Name add “Augment FileOps Master Scheduler”



4. In Apex Class add "ObjectBatchScheduler"
5. Choose Cron Expression and add "0 01 * * * ?" (This is one minute after every hour.) or choose your own schedule.
6. When the Master Scheduler runs it will automatically pick up any enabled Object Configuration and schedule them. It will also remove disabled configurations.

Single Object Processing

The Package contains a Lightning Web Component that can be deployed to the Objects that have Linked Documents. When deployed as a Button a user can reprocess all of the documents attached to the Object Record.

Adding the "Process Documents" Button

1. In setup go to the Object Manager and select the Object Type(s) you have configured in the Object Configuration.
2. Click on Buttons, Links, and Actions on the left menu and then click on "New Action" in the upper right hand corner.
3. From the "Action Type" menu Select "Lightning Web Component"
4. From the "Lightning Web Component" menu select: Augment:augmentProcessObject
5. In the Label Field add "Process Documents" or any name you want for the button.

Adding the Button to a Layout

1. In setup go to the Object Manager and select the Object Type you have configured in the Object Configuration.
2. Click on Page Layouts. Select the page layout that you want to add the button to
3. Use your preferred method to control who has access to the button.

Configuration and Testing



Choose a Supported AI Platform

Augment FileOps for Salesforce (AFO) support three different AI language model platforms:

- Anthropic
- Google
- OpenAI

You can choose to use a single AI platform or pick and choose which AI platform is best for your document tasks.

Each Platform has different available models. Each model has different cost and accuracy metrics. Basic data extraction tasks do not require the newest or most sophisticated models

AI Platform Costs

For all platforms, the cost estimate is based on processing a 5 page textual document with 10 extraction points. This equates to 15,000 input tokens and 2000 output tokens. Below are the current models tested from the different platforms.

Platform	Model	Images Support	Estimated Cost	Comment
Anthropic	claude-3-5-sonnet-20241022	Yes	\$0.075	Fast, Accurate for advanced tasks Token Rate Limits may affect processing times
Anthropic	claude-3-5-haiku-20240307	Yes	\$0.02	Fast, Reasonably Accurate for basic extraction tasks. Token Rate Limits may affect processing times
Google	gemini-2.0-flash	Yes	\$0.002	Fast, Accurate for advanced tasks
Google	gemini-1.5-Flash	Yes	\$ 0.0015	Fast, Accurate for basic extraction tasks
OpenAI	gpt-4o	No	\$0.0575	Slower, Accurate for advanced tasks. Token Rate Limits may affect processing times
OpenAI	gpt-3.5-turbo	No	\$ 0.01	Slower, Not Recommended



				for basic tasks. Token Rate Limits may affect processing times
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Google API Setup

Using AI Studio

1. Navigate to <https://aistudio.google.com/>
2. Sign into your google account.
3. Click **Create API Key**.
4. You may need to set up billing and payments
5. Copy and save API Key for future use

Manual Set Up

Create a new Project or Use an Existing Project

You must have the Workspace Role: roles/resourcemanager.projectCreator to create a project.

Create New

1. Navigate to <https://console.cloud.google.com/projectcreate>
2. You will need to login with a google account
3. Create a project to support your Salesforce Integration
4. Ensure that your account has billing set up

Use Existing

1. Navigate to <https://console.cloud.google.com/>
2. Select the project you will use from the menu next to the Google Cloud logo in the upper right.

Enable the Google API

1. Using the project you created, enable the Gemini API
<https://console.cloud.google.com/marketplace/product/google/generativelanguage.googleapis.com>



Create an API Key

1. Navigate to: <https://console.cloud.google.com/apis/credentials>
2. Click on the + CREATE CREDENTIALS button and Choose API Key
3. Once the key has been created click on the Key Name
4. Update the Key Name to “Augment SFDC”
5. Under “API restrictions”
6. Restrict the API key to the “Generative Language API”
7. **Note the API Key** as you will need to add it to your Salesforce Configuration.

Anthropic API Setup

1. Navigate to the Anthropic Console
<https://console.anthropic.com/>
2. Sign in or create a developer account
3. Click on “Get API Key”
4. Copy and store the API Key for future use
5. Make sure you set up billing

Open AI API Setup

1. Navigate to the Open AI Console
<https://platform.openai.com/>
2. Log in or Sign up
3. Create a project for this use case by navigating to Organization Settings → Projects:
<https://platform.openai.com/settings/organization/projects>
4. Create an API Key by navigate to your Organization Settings → API Keys:
<https://platform.openai.com/settings/organization/api-keys>
5. Create an API Key, assign it to the project.
6. If you want to restrict access to the API Key it will need the following permissions:
/v1/models Read
/v1/assistants Write
/v1/threads Write
7. Make sure you set up billing.



