



AAI Enterprise Knowledge AAI Package

Readme

**Version 3.0
10/23/2024**

Generative AI - AA Enterprise Knowledge Package - Read.me

Table of contents

Introduction	3
Problems with LLM and the Solution	3
Solution	3
Use Case of RAG	3
Why AAI Enterprise Knowledge?	4
Admin user functions - via AAI Enterprise Knowledge portal	4
End user functions	5
AAI Enterprise Knowledge (RAG) Package Design	5
Package actions:	5
Create Project	6
Add file(s) to Knowledge Base	8
Ask Question	10
Ask Question in Chat	12
Ask Questions with Follow-ups	14
Remove from Knowledge Base	17
Setup / Important Points / limitations to be considered:	24
Documentation	25

Introduction

This document explains the overview of Generative AI and use of RAG to augment the query response generation using LLM or foundation models. This also explains how our AI platform – AAI Enterprise Knowledge helps implementing RAG concept and how the package is built using its APIs. This is **built for both Cloud and On-premise deployments**.

Retrieval Augmented Generation, or **RAG**, is an architectural approach that can improve the efficacy of large language model (LLM) applications by leveraging custom data. This is done by retrieving data/documents relevant to a question or task and providing them as context for the LLM.

Problems with LLM and the Solution

Problems:

1. No source.
2. LLM models do not know your data.
3. Doesn't answer recent data, ChatGPT knowledge is limited to Sep'21 data.
4. Doesn't answer company specific data like how many employees joined last month?
5. Cost associated with any LLM.
6. Privacy and Security concerns.

Solution

An easy and popular way to use your own data is to provide it as part of the prompt with which you query the LLM model. This is called retrieval augmented generation (RAG), as you would retrieve the relevant data and use it as augmented context for the LLM. Instead of relying solely on knowledge derived from the training data, a RAG workflow pulls relevant information and connects static LLMs with real-time data retrieval.

With RAG architecture, organizations can deploy any LLM model and augment it to return relevant results for their organization by giving it a small amount of their data without the costs and time of fine-tuning or pretraining the model.

Use Case of RAG

There are many different use cases for RAG. Commonly used are:

1. **Ticket Submission and Initial Response:** Customers submit support tickets to Automation Anywhere, describing their issues. Their system processes the ticket and forwards the extracted message to AAI Enterprise Knowledge API. With a rich knowledge base from diverse sources (PDFs, Office, JSON, HTML, XML, Knowledge Portals, etc.), the API assesses the message and generates initial responses — acknowledgment, info, or detailed inquiries.

2. **Iterative Conversations:** During the conversation, customers share more details, queries, or clarifications. Using natural language processing and context, the API generates and emails responses directly to customers, efficiently resolving tickets without human intervention.
3. **Human-Agent Interaction:** The collaborative effort between the API and human agent ensures that complex issues are handled effectively, combining the efficiency of automation with no or the least amount of human touch.
4. **Data Analysis and Insights:** The company gathers valuable data from interactions, identifying common issues and customer satisfaction levels. These insights are instrumental in enhancing customer support strategies and guiding product improvements.
5. **Continuous Iteration and Enhanced Experience:** The company continually refines the API's responses and workflows based on real-world usage, contributing to an enhanced customer experience. Customers receive timely, accurate, and helpful support, solidifying brand loyalty and customer satisfaction.

Why AAI Enterprise Knowledge?

Efficient bots successfully managed ticket requests, minimizing manual inputs. In their relentless pursuit of pushing the boundaries of efficiency and excellence, they sought to leverage a Gen AI solution to further optimize their pre-existing ticketing process and free up the support workforce to address more creative and complex workflows.

It is more information-aware, leveraging and associating information from across sources to guarantee consistency. It also calibrates its model based on your usage to offer more optimized responses with enhanced context.

Custom Knowledge Base - Upload sitemaps, files, and URLs to train on your unique data, enabling this AI Chatbot to assist customers with personalized responses.

No-code Integration - Easily set up AAI Enterprise Knowledge chatbot with no-code; embed on your site or integrate via API for a seamless experience.

Admin user functions - via AAI Enterprise Knowledge portal

An admin user can:

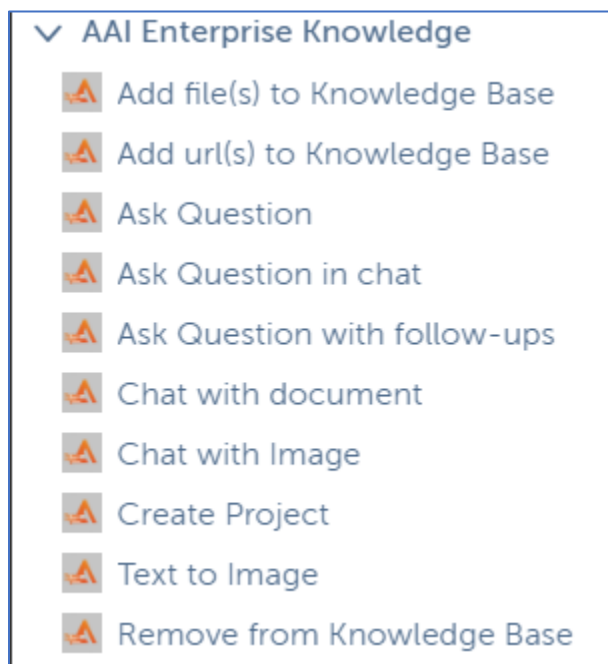
1. Implement RBAC (Role Based Access Control) mechanism using IAM (Identity Access Management) service. Admin can provide appropriate permissions / roles to the users in organization using IAM access management.
2. Create a new Project and thus a new Knowledgebase associated with it.

End user functions

An end user can:

1. Add file(s) to storage bucket, subject to appropriate permission / role assigned via Admin interface. This will automatically synchronize the file contents in Vector database and Embeddings (indexed).
2. Can perform Q&A on the uploaded documents / files maintaining the query context using a query session.

AAI Enterprise Knowledge (RAG) Package Design



Additional parameter for On-premise Deployment type:

The below parameter is added to select either "Cloud" or "On-premise" version, if "On-premise Version" option is selected, it is mandatory to provide the deployment endpoint URL. Provide custom endpoint base URL in format: <https://on-prem-endpoint-url> or <http://on-prem-endpoint-url:port>, all other parameters would remain same for both the deployment types.

Required bot agent version: 21.250 or above

Deployment Type

Specify Enterprise Knowledge base instance deployment type: Cloud or On-premise.

☒ Cloud Version

☐ On-premise Version

Endpoint Url

” Required

Provide custom endpoint base url (useful in case of on-prem deployment) in the format: https://on-prem-endpoint-url or http://on-prem-endpoint-url:port

Required bot agent version: 21.250 or above

Deployment Type

Specify Enterprise Knowledge base instance deployment type: Cloud or On-premise.

☐ Cloud Version

☒ On-premise Version

 Endpoint Url

” Required

(x)

Provide custom endpoint base url (useful in case of on-prem deployment) in the format: https://on-prem-endpoint-url or http://on-prem-endpoint-url:port

Package actions:

It is recommended to use the actions in the below logical order of creation:

Create Project

This action is used to create a new Project in AAI Enterprise Knowledge. A Project here is an umbrella under which all the entities like knowledge base, agents, access management etc. exist.

AAI Enterprise Knowledge: Create Project (disabled)

Create a new project

Required bot agent version: 21.250 or above

API Key

CredentialVariableInsecure string

[REDACTED] (x)

Provide API key received from admin.

Secret Key

CredentialVariableInsecure string

[REDACTED] (x)

Provide secret key received from admin.

Project Name

MyFinanceProject (x)

Provide new Project name.

Description

Finance project. (x)

Provide description for the Project.

Project Type (optional)

Generic

Provide project type.

Temperature

0.6 (x)

Provide Temperature for the project.

Assigned to (optional)

Choose a variable (x)

Project id of the newly created Project.

Sr, No.	Field name	Value	Input / Output	Description
1	API Key	API key	Input - string	API key provided by the Admin.
2	Secret Key	Secret key	Input - string	Service key provided by the Admin.
3	Project Name	Project name	Input - string	Name of the Project you want to create.
4	Description	Description	Input- string	Description of the project.
5	Project Type	Project type	Input - string	Project types set by your organization. Some examples are Generic or Support projects.
6	Temperature	Temperature	Input - string	Determines, whether the output is more random and creative or more predictable.
7	Assigned to	Project Id generated	Output - string	Returns the Project Id generated.

Add file(s) to Knowledge Base

This action is used to upload files from the local drive folders list. This will not take files from the sub-folders within the provided folders.

This action is used to synchronize the latest data source with the knowledge base. The files contents start getting vectorized and indexed almost immediately after the files are uploaded.

API Enterprise Knowledge: Add file(s) to Knowledge Base (disa.)

Add file(s) to Knowledge Base
Required bot agent version: 21.250 or above

API Key
Credential Variable Insecure string

Secret Key
Credential Variable Insecure string

Project
Sales Eng - Playground - Dev RPM0kz6SAybwu2V...

Select the Project from the list

Metadata
Dictionary Variable

Type
String

Key
key1

Value
value1

Add

Provide metadata for the files

List of local folder paths

List Variable

Type
String

Value at 0
C:\temp2\1

Type
String

Value at 1
C:\temp2\2

Add

Local folder paths e.g. C:\folder1 or C:\folder1\folder2

Assigned to (optional)
AddFilesStatusList

Status of each file with 'Status:' and error(s), if any with 'Error:' keywords

Sr, No.	Field name	Value	Input / Output	Description
1	API Key	API key	Input - string	API key provided by the Admin.

2	Secret Key	Secret key	Input - string	Service key provided by the Admin.
3	Project Name	Project name	Input - string	Name of the Project you want to create.
4	Metadata	Metadata key-value pairs	Input - dictionary	Meta like (Dept., Domain etc.) to be associated with the files.
5	Local Folders	Local folder paths	Input - dictionary	Paths of local folders (NOT files) from which the files to be uploaded to the KB.
6	Assigned to	List of upload Status and Error	Output - list<Any>	Returns the List of String which contains "Status:" and "Error:" sub-strings to check the status or error, if any.

Ask Question

This action is used to query all / specific documents uploaded to the Knowledge base in Untitled chat.

Ask questions

Required bot agent version: 21.250 or above

API Key
Credential Variable Insecure string

(x)

Provide API Key received from admin.

Secret Key
Credential Variable Insecure string

(x)

Provide Secret Key received from admin.

Project
Uk-AddressParsing 6VOOPSQRIG2wEMbyvG64P

Select the Project from the list.

Agent (optional)
address JtkBzZUjpikGY38wVeX7

Select the Agent from the list.

Model name (optional)
gpt-3.5-turbo (x)

Provide LLM model name: i.e. gpt-3.5-turbo

Agent type (optional)
chat_agent (x)

Provide agent type

User Query
What is the Company name for the address: 'Dr
(x)

Provide user's query.

Document Key (optional)

List
Variable

This list is empty

Add

Selected documents from the Knowledge base on which you want to ask questions.

Assigned to

Multiple variables
Dictionary

response

(x)2

Json response received from the Knowledge base.

Sr, No.	Field name	Value	Input / Output	Description
1	API Key	API key	Input - string	API key provided by the Admin.
2	Secret Key	Secret key	Input - string	Service key provided by the Admin.
3	Project	Project name	Input - string	Select the Project to be used.
4	Agent (Optional)	Agent name	Input - string	Name of the default / custom agent which is already configured via Admin interface.
5	Model Name (Optional)	LLM model name	Input - string	Name of the LLM model name to be used for the RAG operations.
6	Agent type (Optional)	Agent type	Input - string	Type of the Agent already configured via Admin interface. Examples are: Chat, Support etc.
7	User Query	User query	Input - string	The query to be asked to the files already uploaded to the Knowledge base.
8	Document Key (Optional)	Document key	Input - list<string>	List of Document keys (i.e., the File names with extension) uploaded to Knowledge base (KB). Using this, the user query will be asked to these specific files and not on all the documents uploaded in KB.
9	Assigned to	Output dictionary values	Output - dictionary<Any>	Dictionary values with Keys : message_id - Message id in the current chat, chat_id - Chat id of the current chat, output - Response from knowledge base (RAG), sources - File names from where the resposne found.

				<p>url_1, url_2... - Url of the sources found.</p> <p>score_1, score_2... - Response matching score.</p> <p>score_infor_arr_size - Lenght or count of the scores.</p>
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Ask Question in Chat

This action is used to query all / specific documents uploaded to the Knowledge base in a specific chat.

AAI Enterprise Knowledge: Ask Question in chat

Ask a question in a particular chat.
Required bot agent version: 21.250 or above

API Key
Credential Variable Insecure string

Provide API Key received from admin.

Secret Key
Credential Variable Insecure string

Provide Secret Key received from admin.

Project
Sales Eng - Playground - Dev RPMNkz65AhjBwAdV...

Select the Project from the list.

Chat
Generative AI: Generative AI AGIBdEV6CYCGUzV0EnL

Select the Chat from the list.

Agent (optional)
Tursted Car Expert 78q23VzoRmG95CwOrwD1

Select the Agent from the list.

Model name (optional)
 gpt-3.5-turbo

Provide LLM model name: i.e. gpt-3.5-turbo

Agent type (optional)
chat_agent (x)

Provide agent type:

User Query
When is the session on GenerativeAI? (x)

Provide user's query:

Document Key (optional)
List Variable

Type
String

Value at 0
car_report_232332.pdf (x)

Add

Selected documents from the Knowledge base on which you want to ask questions.

Assigned to
Multiple variables Dictionary

gcsResponse (x)

Json response received from the Knowledge base.

Sr, No.	Field name	Value	Input / Output	Description
1	API Key	API key	Input - string	API key provided by the Admin.
2	Secret Key	Secret key	Input - string	Service key provided by the Admin.
3	Project	Project name	Input - string	Select the Project to be used.
4	Chat	Chat	Input - string	Select the Chat in which you want to start conversation.
5	Agent (Optional)	Agent name	Input - string	Name of the default / custom agent which is already configured via Admin interface.
6	Model Name (Optional)	LLM model name	Input - string	Name of the LLM model name to be used for the RAG operations.
7	Agent type (Optional)	Agent type	Input - string	Type of the Agent already configured via Admin interface. Examples are: Chat, Support etc.
8	User Query	User query	Input - string	The query to be asked to the files already uploaded to the Knowledge base.
9	Document Key (Optional)	Document key	Input - list<string>	List of Document keys (i.e., the File names with extension) uploaded to Knowledge base

				(KB). Using this, the user query will be asked to these specific files and not on all the documents uploaded in KB.
10	Assigned to	Output dictionary values	Output - dictionary<Any>	Dictionary values with Keys : message_id - Message id in the current chat, chat_id - Chat id of the current chat, output - Response from knowledge base (RAG), sources - File names from where the resposne found. url_1, url_2... - Url of the sources found. score_1, score_2... - Response matching score. score_infor_arr_size - Lenght or count of the scores.

Ask Questions with Follow-ups

This action is used to query all / specific documents in a specific Chat Id (conversation Id). Here, the Conversation Id is equal to Chat Id, so, eventually, if you want to provide a variable value instead of selecting Chat Id from drop-down box, you need to use this action.

User Query

When is the session on GenerativeAI?

Provide user's query.

Conversation Id

AGlBsdflkjhppeiEHHSHdfds

Specify, If you want to continue the previous conversation.

Document Key (optional)

List Variable

Selected documents from the Knowledge base on which you want to ask questions.

Assigned to

Multiple variables Dictionary

gcsResponse

AAI Enterprise Knowledge: Ask Question with follow-ups

Ask questions (with follow-ups)

Required bot agent version: 21.250 or above

API Key

Credential Variable Insecure string

Provide API Key received from admin.

Secret Key

Credential Variable Insecure string

Provide Secret Key received from admin.

Project

Sales Eng - Playground - Dev j9PMNkz65AijbwAsV...

Select the Project from the list.

Agent (optional)

default_kb_agent

Select the Agent from the list.

Model name (optional)

gpt-3.5-turbo

Provide LLM model name, i.e. gpt-3.5-turbo

Agent type (optional)

chat_agent

Provide agent type

Sr, No.	Field name	Value	Input / Output	Description
1	API Key	API key	Input - string	API key provided by the Admin.
2	Secret Key	Secret key	Input - string	Service key provided by the Admin.
3	Project	Project name	Input - string	Select the Project to be used.

4	Agent (Optional)	Agent name	Input - string	Name of the default / custom agent which is already configured via Admin interface.
5	Model Name (Optional)	LLM model name	Input - string	Name of the LLM model name to be used for the RAG operations.
6	Agent type (Optional)	Agent type	Input - string	Type of the Agent already configured via Admin interface. Examples are: Chat, Support etc.
7	User Query	User query	Input - string	The query to be asked to the files already uploaded to the Knowledge base.
8	Conversation Id	Any previous Chat Id	Input - string	The Chat Id in which you want to continue the conversaton.
9	Document Key (Optional)	Document key	Input - list<string>	List of Document keys (i.e., the File names with extension) uploaded to Knowledge base (KB). Using this, the user query will be asked to these specific files and not on all the documents uploaded in KB.
10	Assigned to	Output dictionary values	Output - dictionary<Any>	Dictionary values with Keys : message_id - Message id in the current chat, chat_id - Chat id of the current chat, output - Response from knowledge base (RAG), sources - File names from where the resposne found. url_1, url_2... - Url of the sources found. score_1, score_2... - Response matching score. score_infor_arr_size - Lenght or count of the scores.

Chat with Document

This action is used to extract information from the local PDF file. Only PDF documents are allowed here.

AAI Enterprise Knowledge: Chat with document

Extract the information from selected document

Required bot agent version: 21.250 or above

API Key

(x)

Provide API Key received from admin.

Secret Key

(x)

Provide Secret Key received from admin.

Project

Select the Project from the list.

Agent (optional)

Select the Agent from the list.

Agent type

Provide agent type

User Query

(x)

Provide user's query.

Select local document

(x)

Select pdf file from local folder

Assigned to

Json response received from the Knowledge base.

(x)

Sr No	Field Name	Value	Input / Output	Description
1	API Key	API Key	Input - String	API key provided by the Admin
2	Secret Key	Secret Key	Input - String	Secret key provided by the Admin
3	Project	Project Name	Input - String	Select the project, to be used
4	Agent (Optional)	Agent Name	Input - String	Name of the default / custom agent which is already configured via Admin interface
5	Agent Type	Agent Type	Input - String	Type of the agent already configured via Admin interface. Examples are: Chat, Custom
6	User Query	User Query	Input - String	The query to be asked to the selected pdf document.
7	Select Local Document	Local PDF file	Input - String	PDF document from the local file system, from which information will be extracted.
8	Assign to	Output dictionary values	Output - dictionary<Any>	Dictionary values with Keys: message_id - Message id in the current chat, chat_id - Chat id of the current chat, output - Response from knowledge base (RAG), sources - File names from where the resposne found. url_1, url_2... - Url of the sources found. score_1, score_2... - Response matching score. score_infor_arr_size - Lenght or count of the scores.

Note: Please note the to run this command properly, kindly go to Project → Settings and enable the User Textract option. Also select AI KB Agent as an agent for optimum performance.

Chat with Image

This action is used to extract information from any local image file.

AAI Enterprise Knowledge: Chat with Image

Extract the information from selected image file

Required bot agent version: 21.250 or above

API Key

Credential Variable Insecure string

?? [Redacted] (x)

Provide API Key received from admin.

Secret Key

Credential Variable Insecure string

?? [Redacted] (x)

Provide Secret Key received from admin.

Project

Sales Eng - Playground - Dev

RPMNkz65AhjBwAslV3vC

Select the Project from the list.

Agent (optional)

Image Identity

n5ssplggSOWZW8dj8w1A

Select the Agent from the list.

Agent type

Custom Agent

Provide agent type

User Query

?? What kind of information this image contains? (x)

Provide user's query.

Select local document

?? C:\Users\Administrator\Docur

(x)

Browse...

Select image file from local folder

Assigned to

Json response received from the Knowledge base.

Multiple variables Dictionary

A Response

(x)

Sr No	Field Name	Value	Input / Output	Description
1	API Key	API Key	Input - String	API key provided by the Admin
2	Secret Key	Secret Key	Input - String	Secret key provided by the Admin
3	Project	Project Name	Input - String	Select the project, to be used
4	Agent (Optional)	Agent Name	Input - String	Name of the default / custom agent which is already configured via Admin interface
5	Agent Type	Agent Type	Input - String	Type of the agent already configured via Admin interface. Examples are: Chat, Custom
6	User Query	User Query	Input - String	The query to be asked to the selected pdf document.
7	Select Local Document	Local Image file	Input - String	Image file from the local file system, from which information will be extracted.
8	Assign to	Output dictionary values	Output - dictionary<Any>	Dictionary values with Keys: message_id - Message id in the current chat, chat_id - Chat id of the current chat, output - Response from knowledge base (RAG), sources - File names from where the resposne found. url_1, url_2... - Url of the sources found. score_1, score_2... - Response matching score. score_infor_arr_size - Lenght or count of the scores.

Text to Image

This action is used to generate an image from the text prompt provided. The Generated image will be downloaded to the folder path provided in the action.

AAI Enterprise Knowledge: Text to Image

Generate image from given text.

Required bot agent version: 21.250 or above.

API Key

Credential Variable Insecure string

?? (x)

Provide API Key received from admin.

Secret Key

Credential Variable Insecure string

?? (x)

Provide Secret Key received from admin.

Project

Sales Eng - Playground - Dev

RPMNkz65AhjBwAslV3vC

Select the Project from the list.

Agent (optional)

Image Identity

n5ssplggSOWZW8dj8w1A

Select the Agent from the list.

Agent type

Custom Agent

Provide agent type.

Text to generate Image

?? Generate an image of attacking eagle

(x)

Provide text to generate the image.

Local folder path

?? C:\Temp

(x)

Provide folder path from local file system where generated image will be downloaded. i.e. C:\folder1, C:\folder1\folder2

Assigned to

Json response received from the Knowledge base.

Multiple variables Dictionary

Response

(x)

Sr No	Field Name	Value	Input / Output	Description
1	API Key	API Key	Input - String	API key provided by the Admin
2	Secret Key	Secret Key	Input - String	Secret key provided by the Admin
3	Project	Project Name	Input - String	Select the project, to be used
4	Agent (Optional)	Agent Name	Input - String	Name of the default / custom agent which is already configured via Admin interface
5	Agent Type	Agent Type	Input - String	Type of the agent already configured via Admin interface. Examples are: Chat, Custom
6	Text to generate image	Text prompt	Input - String	The prompt to be used to the generate an image.
7	Local Folder Path	Local folder path	Input - String	Path of the local file system where generated image will be downloaded.
8	Assign to	Output dictionary values	Output - dictionary<Any>	Dictionary values with Keys: message_id - Message id in the current chat, chat_id - Chat id of the current chat, output - Response from knowledge base (RAG), sources - File names from where the resposne found. url_1, url_2... - Url of the sources found. score_1, score_2... - Response matching score. score_infor_arr_size - Lenght or count of the scores. generated_image_1 - File path of the generated image. image_url_arr_size - Size of the image_url array.

Note: To generate image from the text, agent must have Dall-E 3 Image Generation block added.

Remove from Knowledge Base

This action is used to delete file(s) from the Knowledge base associated with the selected Project.

AAI Enterprise Knowledge: Remove from Knowledge Base

Remove file(s)/Url(s) from Knowledge Base
Required bot agent version: 21.250 or above

API Key
Credential Variable Insecure string
[Redacted] (X)

Provide API Key received from admin.

Secret Key
Credential Variable Insecure string
[Redacted] (X)

Provide Secret Key received from admin.

Project
Sales Eng - Playground - Dev RPMNkz65AhjBwAdV... (X)

Select the Project from the list.

List of file names from knowledge base
List Variable

Type
String

Value at 0
[Redacted] (X)

Add

file names from knowledge base: e.g. File Name1.docx, File Name2.pdf

Assigned to (optional)
Choose a variable (X)

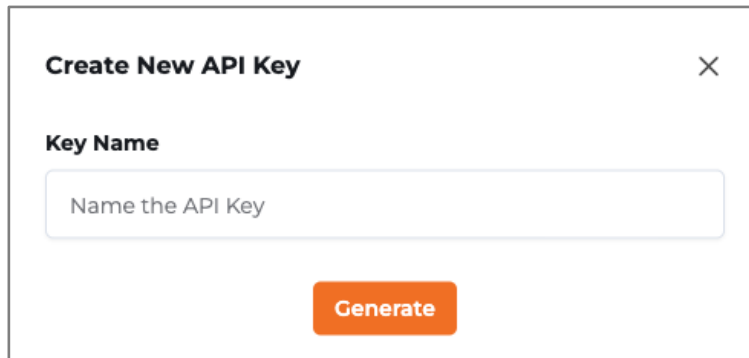
Status of each file with "Status:" and error(s), if any with "Error:" keywords

Sr, No.	Field name	Value	Input / Output	Description
1	API Key	API key	Input - string	API key provided by the Admin.
2	Secret Key	Secret key	Input - string	Service key provided by the Admin.
3	Project	Project name	Input - string	Select the Project to be used.
4	File names	List of file names (without path)	Input - list<string>	Specify the list of file name (without file path) to be deleted.
5	Assigned to	List of upload Status and Error	Output - list<Any>	Returns the List of String which contains "Status:" and "Error:" sub-strings to check the status or error, if any.

Setup / Important Points / limitations to be considered:

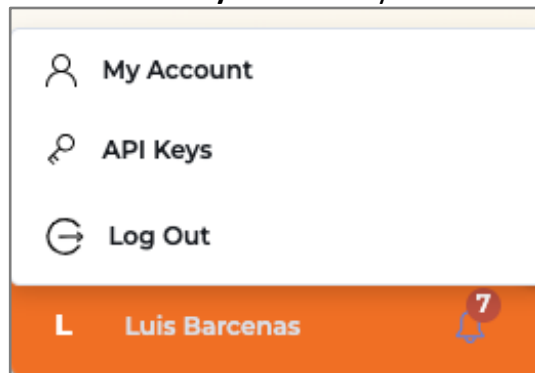
1. To get your **API key** from AAI Enterprise Knowledge, follow these steps or contact your administrator or IT support. **For On-premise version**, please ask for the deployment endpoint URL to customer IT support team:

In left-bottom side in the web console, click on your Username → API Keys



A dialog box titled "Create New API Key" with a close button (X) in the top right corner. It contains a label "Key Name" above a text input field with the placeholder text "Name the API Key". Below the input field is an orange button labeled "Generate".

2. Click on **Create New Key** or contact your administrator

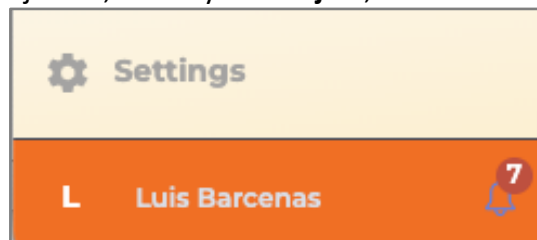


3. Generate a unique Name for your API Key and click **Generate**

Create New Key

4. Copy the **Key Secret** and **API Key**

5. To get the Project Id, select your **Project**, Click - “**Settings**” → **PROJECT ID**



6. The max. 1000 characters can be inputted as the User query text.
7. Knowledge base **supports the following file formats**: Plain text (.txt), Hypertext Markup Language (.html), Microsoft Word document (.doc/.docx), Comma-separated values (.csv), Microsoft Excel spreadsheet (.xls/.xlsx) and Portable Document Format (.pdf).
8. Below should be the logical package **Actions order**, in which, should get executed:
 - a. Create Project.
 - b. Add file(s) to Knowledge base.
 - c. Ask Question / Ask Question in Chat / Ask Question with follow-ups.

AAI Enterprise Knowledge Documentation

1. Learning: [Projects | AAI EK](#)
2. API swagger: [Get Projects](#)