

## RAG Query Pinecone

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## ReadyFlow overview: RAG Query Pinecone [Technical Preview]

You can use the RAG Query Pinecone [Technical Preview] ReadyFlow to query Pinecone VectorDB with an embedded prompt.

This ReadyFlow generates and vectorizes a query from a user-specified question. It then performs a search on the specified Pinecone index and returns the result with the shortest distance. A prompt is created from the original user query and generated text document. The prompt is then passed to Bedrock for an answer to the user query. A Pinecone API Key, an OpenAI API key, an AWS Access Key ID and an AWS Secret Access Key are required to run this flow. Define a KPI on the failure\_AskBedrock connection to monitor failed responses.



**Note:** This ReadyFlow is considered Technical Preview and is not designed for production use. The flow uses Python processors and must be run in NiFi 2.x.

To ensure correct functionality, make sure the OpenAI embedding model specified is the same model used to insert data in the queried Pinecone Index and that your Pinecone index has been created with the same dimension as the 'text-embedding-ada-002' model (1536).

RAG Query Pinecone [Technical Preview] ReadyFlow details	
Source	Custom prompt-query
Source Format	Natural language
Destination	Pinecone
Destination Format	Vector DB

## Prerequisites

Learn how to collect the information you need to deploy the RAG Query Pinecone [Technical Preview] ReadyFlow, and meet other prerequisites.

### For your data ingest source

- You have a query in the form of a question that is relevant to the data in your Pinecone collection.

### For Cloudera Data Flow

- You have enabled Cloudera Data Flow for an environment.

For information on how to enable Cloudera Data Flow for an environment, see [Enabling Cloudera Data Flow for an Environment](#).

- You have created a Machine User to use as the Cloudera Workload User.
- You have given the Cloudera Workload User the EnvironmentUser role.

- From the Management Console, go to the environment for which Cloudera Data Flow is enabled.
- From the Actions drop down, click Manage Access.
- Identify the user you want to use as a Workload User.



**Note:**

The Cloudera Workload User can be a machine user or your own user name. It is best practice to create a dedicated Machine user for this.

- Give that user EnvironmentUser role.

- You have synchronized your user to the Cloudera on cloud environment that you enabled for Cloudera Data Flow.

For information on how to synchronize your user to FreeIPA, see [Performing User Sync](#).

- You have granted your Cloudera user the DFCatalogAdmin and DFFlowAdmin roles to enable your user to add the ReadyFlow to the Catalog and deploy the flow definition.

1. Give a user permission to add the ReadyFlow to the Catalog.

- a. From the Management Console, click User Management.
- b. Enter the name of the user or group you wish to authorize in the Search field.
- c. Select the user or group from the list that displays.
- d. Click Roles Update Roles .
- e. From Update Roles, select DFCatalogAdmin and click Update.



**Note:** If the ReadyFlow is already in the Catalog, then you can give your user just the DFCatalogViewer role.

2. Give your user or group permission to deploy flow definitions.

- a. From the Management Console, click Environments to display the Environment List page.
- b. Select the environment to which you want your user or group to deploy flow definitions.
- c. Click Actions Manage Access to display the Environment Access page.
- d. Enter the name of your user or group you wish to authorize in the Search field.
- e. Select your user or group and click Update Roles.
- f. Select DFFlowAdmin from the list of roles.
- g. Click Update Roles.

3. Give your user or group access to the Project where the ReadyFlow will be deployed.

- a. Go to Data Flow Projects .
- b. Select the project where you want to manage access rights and click More Manage Access .

4. Start typing the name of the user or group you want to add and select them from the list.

5. Select the Resource Roles you want to grant.

6. Click Update Roles.

7. Click Synchronize Users.

### For your data ingest target

- You have your OpenAI API key.
- Your Pinecone index has been created with the same dimension as the 'text-embedding-ada-002' model (1536)
- You have your Pinecone API key.

### Related Concepts

[Required parameters](#)

## Required parameters

When deploying the RAG Query Pinecone [Technical Preview] ReadyFlow, you have to provide the following parameters. Use the information you collected in *Prerequisites*.

**Table 1: RAG Query Pinecone [Technical Preview] ReadyFlow configuration parameters**

Parameter name	Description
AWS Access Key ID	Specify the AWS access key ID.
AWS Region	Specify the AWS region.

Parameter name	Description
AWS Secret Access Key	Specify the AWS secret access key.
Bedrock Model Name	Specify the Bedrock model name. The default model is 'Anthropic - Claude Text Generation'.
OpenAI API Key	Specify the API key used to authenticate to OpenAI.
OpenAI Model Name	Specify the OpenAI model name to use for embedding the data. The default model is 'text-embedding-ada-002'.
Pinecone API Key	Specify the API key used to authenticate to Pinecone.
Pinecone Environment	Pinecone no longer requires the environment to connect, but you still need to provide a value for this parameter for the deployment to succeed as the related property in the Pinecone processor is required.
Pinecone Index	Specify the name of the Pinecone index. To ensure correct functionality of this ReadyFlow, make sure your Pinecone index has been created with the same dimension as the 'text-embedding-ada-002' model (1536).
User Query	Specify the question to include in the Bedrock prompt.

### Related Concepts

[Prerequisites](#)

### Related Information

[Deploying a ReadyFlow](#)