Starting April 29, 2025, Gemini 1.5 Pro and Gemini 1.5 Flash models are not available in projects that have no prior usage of these models, including new projects. For details, see Model versions and lifecycle (/vertex-ai/generative-ai/docs/learn/model-versions#legacy-stable).

Veo on Vertex AI API

Release Notes

Veo is the name of the model that supports video generation. Veo generates a video from a text prompt or an image prompt that you provide.

To explore this model in the console, see the **`Video Generation`** model card in the Model Garden.

Try Veo on Vertex AI (Vertex AI Studio) (https://console.cloud.google.com/vertex-ai/studio/media)

Try Veo in a Colab (https://colab.research.google.com/github/GoogleCloudPlatform/generative-ai/blob/main/vision/getting-started/veo3_video_generation.ipynb)

Request access: Advanced features & Veo waitlist (https://docs.google.com/forms/d/e/1FAIpQLSciY6O_qGg2J0A8VUcK4egJ3_Tysh-wGTl-I218XtC0e7IM_w/viev

Supported Models

Veo API supports the following models:

- **`veo-2.0-generate-001`** (/vertex-ai/generative-ai/docs/models/veo/2-0-generate-001)
- **`veo-3.0-generate-preview`** (Preview) (/vertex-ai/generative-ai/docs/models/veo/3-0-generate-preview)

HTTP request

```
curl -X POST \
  -H "Authorization: Bearer $(gcloud auth print-access-token)" \
  -H "Content-Type: application/json" \
https://LOCATION-aiplatform.googleapis.com/v1/projects/PROJECT_ID/locations/LOCATION/publishers/google/models/MOD

-d '{
  "instances": [
    {
      "prompt": string,
      // Optional. An image to guide video generation.
      "image": {
        // Union field can be only one of the following:
        "bytesBase64Encoded": string,
        "gcsUri": string,
        // End of list of possible types for union field.
        "mimeType": string
      }
    }
  ],
  "parameters": {
    "aspectRatio": string,
    "negativePrompt": string,
    "personGeneration": string,
    "sampleCount": integer,
    "seed": uint32,
    "storageUri": string,
    "durationSeconds": integer,
```

```
    "enhancePrompt": boolean
  }
}'
```

Use the following parameters for the Veo model. For more information, see Generate videos using text and image prompts using Veo (/vertex-ai/generative-ai/docs/video/generate-videos).

Parameter	
`prompt`	`string` Required for text-to-video. Optional if an input image prompt is provided (image-to-video). A text string to guide the first eight seconds in the video. For example: • *A fast-tracking shot through a bustling dystopian sprawl with bright neon signs, flying cars and mist, night, lens flare, volumetric lighting* • *A neon hologram of a car driving at top speed, speed of light, cinematic, incredible details, volumetric lighting* • *Many spotted jellyfish pulsating under water. Their bodies are transparent and glowing in deep ocean* • *extreme close-up with a shallow depth of field of a puddle in a street. reflecting a busy futuristic Tokyo city with bright neon signs, night, lens flare* • *Timelapse of the northern lights dancing across the Arctic sky, stars twinkling, snow-covered landscape* • *A lone cowboy rides his horse across an open plain at beautiful sunset, soft light, warm colors*
`image`	`string` Required for image-to-video. Optional if a text prompt is provided (text-to-video). An input image for guiding video generation. We recommend an image that is 1280 x 720 pixels or 720 x 1280 pixels. One of the following: • A Base64-encoded image byte string • A Cloud Storage bucket URI If the aspect ratio of the image is different, the image is cropped using a center crop tool. If the aspect ratio of the image is the same but the resolution is larger, the image is resized.
`durationSeconds`	`integer` Required. The length of video files that you want to generate. The following are the accepted values for each model: • **`veo-2.0-generate-001`**: **`5`**-**`8`**. The default is **`8`**. • **`veo-3.0-generate-preview`**: **`8`**.
`negativePrompt`	`string` Optional. A text string that describes anything you want to discourage the model from generating. For example: • *overhead lighting, bright colors* • *people, animals* • *multiple cars, wind*
`enhancePrompt`	`boolean` Optional. Use Gemini to enhance your prompts. Accepted values are **`true`** or **`false`**. The default value is **`true`**.
`seed`	`uint32`

Parameter	
	Optional. A number to request to make generated videos deterministic. Adding a seed number with your request without changing other parameters will cause the model to produce the same videos. The accepted range is `0-4,294,967,295`.
`storageURI`	`string` Optional. A Cloud Storage bucket URI to store the output video, in the format `gs://BUCKET_NAME/SUBDIRECTORY`. If a Cloud Storage bucket isn't provided, base64-encoded video bytes are returned in the response.
`sampleCount`	`int` Optional. The number of output images requested. Accepted values are `1`-`4`.
`aspectRatio`	`string` Optional. Defines the aspect ratio of the generated video. One of the following: • 16:9 (default, landscape) • 9:16 (portrait) ★ **Note:**The 9:16 aspect ratio isn't supported by `veo-3.0-generate-preview`.
`personGeneration`	`string` Optional. The safety setting that controls whether people or face generation is allowed. One of the following: • `allow_adult` (default value): allow generation of adults only • `dont_allow`: disallows inclusion of people/faces in images
`generateAudio`	`boolean` Required for `veo-3.0-generate-preview`. Generate audio for the video. Accepted values are `true` or `false`. `generateAudio` isn't supported by `veo-2.0-generate-001`.

Sample request

Use the following requests to send a text-to-video request or an image-to-video request:

Text-to-video generation request

REST
(#rest)

To test a text prompt by using the Vertex AI Veo API, send a POST request to the publisher model endpoint.

Before using any of the request data, make the following replacements:

- ***PROJECT_ID***: Your Google Cloud project ID (/resource-manager/docs/creating-managing-projects#identifiers).
- ***MODEL_ID***: The model ID to use. Available values:
  - `veo-2.0-generate-001` (GA)
  - `veo-3.0-generate-preview` (Preview)
- ***TEXT_PROMPT***: The text prompt used to guide video generation.
- ***OUTPUT_STORAGE_URI***: Optional: The Cloud Storage bucket to store the output videos. If not provided, video bytes are returned in the response. For example: `gs://video-bucket/output/`.

- ***RESPONSE_COUNT***: The number of video files you want to generate. Accepted integer values: 1-4.
- ***DURATION***: The length of video files that you want to generate. Accepted integer values are 5-8.
- **Additional optional parameters**

  Use the following optional variables depending on your use case. Add some or all of the following parameters in the `"parameters": {}` object.

```
"parameters": {
  "aspectRatio": "ASPECT_RATIO",
  "negativePrompt": "NEGATIVE_PROMPT",
  "personGeneration": "PERSON_SAFETY_SETTING",
  "sampleCount": RESPONSE_COUNT,
  "seed": SEED_NUMBER
}
```

  - ***ASPECT_RATIO***: string. Optional. Defines the aspect ratio of the generated videos. Values: `16:9` (default, landscape) or `9:16` (portrait).
  - ***NEGATIVE_PROMPT***: string. Optional. A text string that describes what you want to discourage the model from generating.
  - ***PERSON_SAFETY_SETTING***: string. Optional. The safety setting that controls whether people or face generation is allowed. Values:
    - `allow_adult` (default value): Allow generation of adults only.
    - `disallow`: Disallows inclusion of people or faces in images.
  - ***RESPONSE_COUNT***: int. Optional. The number of output images requested. Values: `1-4`.
  - ***SEED_NUMBER***: uint32. Optional. A number to make generated videos deterministic. Specifying a seed number with your request without changing other parameters guides the model to produce the same videos. Values: `0` - `4294967295`.

HTTP method and URL:

```
POST https://us-central1-aiplatform.googleapis.com/v1/projects/PROJECT_ID/locations/us-central1/publishers/googl
```

Request JSON body:

```
{
  "instances": [
    {
      "prompt": "TEXT_PROMPT"
    }
  ],
  "parameters": {
    "storageUri": "OUTPUT_STORAGE_URI",
    "sampleCount": "RESPONSE_COUNT"
  }
}
```

To send your request, choose one of these options:

curlPowerShell (#powershell)
(#curl)

Note: The following command assumes that you have logged in to the **gcloud** CLI with your user account by running **gcloud init** (/sdk/gcloud/reference/init) or **gcloud auth login** (/sdk/gcloud/reference/auth/login) , or by using Cloud Shell (/shell/docs), which automatically logs you into the **gcloud** CLI . You can check the currently active account by running **gcloud auth list** (/sdk/gcloud/reference/auth/list).

Save the request body in a file named `request.json`, and execute the following command:

```
curl -X POST \
     -H "Authorization: Bearer $(gcloud auth print-access-token)" \
     -H "Content-Type: application/json; charset=utf-8" \
     -d @request.json \
     "https://us-central1-aiplatform.googleapis.com/v1/projects/PROJECT_ID/locations/us-central1/publisher
```

This request returns a full operation name with a unique operation ID. Use this full operation name to poll that status of the video generation request.

```
{
  "name": "projects/PROJECT_ID/locations/us-central1/publishers/google/models/MODEL_ID/operations/a1b07c8e-7b5a-4a
}
```

Image-to-video generation request

REST (#rest)

To test a text prompt by using the Vertex AI Veo API, send a POST request to the publisher model endpoint.

Before using any of the request data, make the following replacements:

- ***PROJECT_ID***: Your Google Cloud project ID (/resource-manager/docs/creating-managing-projects#identifiers).
- ***MODEL_ID***: The model ID to use. Available values:
  - `veo-2.0-generate-001` (GA)
  - `veo-3.0-generate-preview` (Preview)
- ***TEXT_PROMPT***: The text prompt used to guide video generation.
- ***INPUT_IMAGE***: Base64-encoded bytes string representing the input image. To ensure quality, the input image should be 720p or higher (1280 x 720 pixels) and have a 16:9 or 9:16 aspect ratio. Images of other aspect ratios or sizes may be resized or centrally cropped during the upload process.
- ***MIME_TYPE***: The MIME type of the input image. Only the images of the following MIME types are supported: `image/jpeg` or `image/png`.
- ***OUTPUT_STORAGE_URI***: Optional: The Cloud Storage bucket to store the output videos. If not provided, video bytes are returned in the response. For example: `gs://video-bucket/output/`.
- ***RESPONSE_COUNT***: The number of video files you want to generate. Accepted integer values: 1-4.
- ***DURATION***: The length of video files that you want to generate. Accepted integer values are 5-8.
- **Additional optional parameters**

  Use the following optional variables depending on your use case. Add some or all of the following parameters in the `"parameters": {}` object.

```
  "parameters": {
    "aspectRatio": "ASPECT_RATIO",
    "negativePrompt": "NEGATIVE_PROMPT",
    "personGeneration": "PERSON_SAFETY_SETTING",
    "sampleCount": RESPONSE_COUNT,
    "seed": SEED_NUMBER
  }
```

- *ASPECT_RATIO*: string. Optional. Defines the aspect ratio of the generated videos. Values: `16:9` (default, landscape) or `9:16` (portrait).
- *NEGATIVE_PROMPT*: string. Optional. A text string that describes what you want to discourage the model from generating.
- *PERSON_SAFETY_SETTING*: string. Optional. The safety setting that controls whether people or face generation is allowed. Values:
  - `allow_adult` (default value): Allow generation of adults only.
  - `disallow`: Disallows inclusion of people or faces in images.
- *RESPONSE_COUNT*: int. Optional. The number of output images requested. Values: `1-4`.
- *SEED_NUMBER*: uint32. Optional. A number to make generated videos deterministic. Specifying a seed number with your request without changing other parameters guides the model to produce the same videos. Values: `0` - `4294967295`.

HTTP method and URL:

```
POST https://us-central1-aiplatform.googleapis.com/v1/projects/PROJECT_ID/locations/us-central1/publishers/googl
```

Request JSON body:

```
{
  "instances": [
    {
      "prompt": "TEXT_PROMPT",
      "image": {
        "bytesBase64Encoded": "INPUT_IMAGE",
        "mimeType": "MIME_TYPE"
      }
    }
  ],
  "parameters": {
    "storageUri": "OUTPUT_STORAGE_URI",
    "sampleCount": RESPONSE_COUNT
  }
}
```

To send your request, choose one of these options:

curlPowerShell (#powershell)
(#curl)

★ **Note:** The following command assumes that you have logged in to the **gcloud** CLI with your user account by running **gcloud init** (/sdk/gcloud/reference/init) or **gcloud auth login** (/sdk/gcloud/reference/auth/login) , or by using Cloud Shell (/shell/docs), which automatically logs you into the **gcloud** CLI . You can check the currently active account by running **gcloud auth list** (/sdk/gcloud/reference/auth/list).

Save the request body in a file named `request.json`, and execute the following command:

```
curl -X POST \
     -H "Authorization: Bearer $(gcloud auth print-access-token)" \
     -H "Content-Type: application/json; charset=utf-8" \
     -d @request.json \
     "https://us-central1-aiplatform.googleapis.com/v1/projects/PROJECT_ID/locations/us-central1/publisher
```

This request returns a full operation name with a unique operation ID. Use this full operation name to poll that status of the video generation request.

```
{
  "name": "projects/PROJECT_ID/locations/us-central1/publishers/google/models/MODEL_ID/operations/a1b07c8e-7b5a-4a
}
```

Poll the status of the video generation long-running operation

Check the status of the video generation long-running operation.

REST (#rest)

Before using any of the request data, make the following replacements:

- ***PROJECT_ID***: Your Google Cloud project ID (/resource-manager/docs/creating-managing-projects#identifiers).
- ***MODEL_ID***: The model ID to use. Available values:
  - `veo-2.0-generate-001` (GA)
  - `veo-3.0-generate-preview` (Preview)
- ***OPERATION_ID***: The unique operation ID returned in the original generate video request.

HTTP method and URL:

```
POST https://us-central1-aiplatform.googleapis.com/v1/projects/PROJECT_ID/locations/us-central1/publishers/googl
```

Request JSON body:

```
{
  "operationName": "projects/PROJECT_ID/locations/us-central1/publishers/google/models/MODEL_ID/operations/OP
}
```

To send your request, choose one of these options:

curl PowerShell (#powershell)
curl (#curl)

★ **Note:** The following command assumes that you have logged in to the **`gcloud`** CLI with your user account by running **`gcloud init`** (/sdk/gcloud/reference/init) or **`gcloud auth login`** (/sdk/gcloud/reference/auth/login) , or by using Cloud Shell (/shell/docs), which

automatically logs you into the **gcloud** CLI . You can check the currently active account by running **gcloud auth list** (/sdk/gcloud/reference/auth/list).

Save the request body in a file named **request.json**, and execute the following command:

```
curl -X POST \
     -H "Authorization: Bearer $(gcloud auth print-access-token)" \
     -H "Content-Type: application/json; charset=utf-8" \
     -d @request.json \
     "https://us-central1-aiplatform.googleapis.com/v1/projects/PROJECT_ID/locations/us-central1/publisher
```

This request returns information about the operation, including if the operation is still running or is done.

Response

```
{
  "name": "projects/PROJECT_ID/locations/us-central1/publishers/google/models/MODEL_ID/operations/OPERATION_ID",
  "done": true,
  "response": {
    "@type": "type.googleapis.com/cloud.ai.large_models.vision.GenerateVideoResponse",
    "videos": [
      {
        "gcsUri":"gs://BUCKET_NAME/TIMESTAMPED_FOLDER/sample_0.mp4",
        "mimeType": "video/mp4"
      }
    ]
  }
}
```

Response body (generate video request)

Sending a text-to-video or image-to-video request returns the following response:

```
{
  "name": string
}
```

Response element	Description
name	The full operation name of the long-running operation that begins after a video generation request is sent.

Sample response (generate video request)

```
{
  "name": "projects/PROJECT_ID/locations/us-central1/publishers/google/models/MODEL_ID/operations/OPERATION_ID"
}
```

Response body (poll long-running operation)

Polling the status of the original video generation long-running operation returns the following response:

```
{
   "name": string,
   "done": boolean,
   "response":{
      "@type":"type.googleapis.com/cloud.ai.large_models.vision.GenerateVideoResponse",
      "generatedSamples":[
         {
            "video":
            {
               "uri": string,
               "encoding": string
            }
         },
         {
            "video":
            {
               "uri": string,
               "encoding": string
            }
         },
         {
            "video":
            {
               "uri": string,
               "encoding": string
            }
         },
         {
            "video":
            {
               "uri": string,
               "encoding": string
            }
         },
      ]
   }
}
```

Response element	Description
`name`	The full operation name of the long-running operation that begins after a video generation request is sent.
`done`	A boolean value that indicates whether the operation is complete.
`response`	The response body of the long-running operation.
`generatedSamples`	An array of the generated video sample objects.
`video`	The generated video.
`uri`	The Cloud Storage URI of the generated video.
`encoding`	The video encoding type.

Sample response (poll long-running operation)

```
{
   "name": "projects/PROJECT_ID/locations/us-central1/publishers/google/models/MODEL_ID/operations/OPERATION_ID",
   "done":true,
   "response":{
      "@type":"type.googleapis.com/cloud.ai.large_models.vision.GenerateVideoResponse",
      "generatedSamples":[
         {
            "video":{
               "uri":"gs://STORAGE_BUCKET/TIMESTAMPED_SUBDIRECTORY/sample_0.mp4",
               "encoding":"video/mp4"
            }
         },
         {
            "video":{
               "uri":"gs://STORAGE_BUCKET/TIMESTAMPED_SUBDIRECTORY/sample_1.mp4",
               "encoding":"video/mp4"
            }
         },
         {
            "video":{
               "uri":"gs://STORAGE_BUCKET/TIMESTAMPED_SUBDIRECTORY/sample_2.mp4",
               "encoding":"video/mp4"
            }
         },
         {
            "video":{
               "uri":"gs://STORAGE_BUCKET/TIMESTAMPED_SUBDIRECTORY/sample_3.mp4",
               "encoding":"video/mp4"
            }
         }
      ]
   }
}
```

More information

- For more information about using Veo on Vertex AI, see Generate videos using text and image prompts using Veo (/vertex-ai/generative-ai/docs/video/generate-videos).

What's next

- Read Google DeepMind's information on the Veo model (https://deepmind.google/technologies/veo/).
- Read the blog post "Veo and Imagen 3: Announcing new video and image generation models on Vertex AI" (https://cloud.google.com/blog/products/ai-machine-learning/introducing-veo-and-imagen-3-on-vertex-ai).
- Read the blog post "New generative media models and tools, built with and for creators" (https://blog.google/technology/ai/google-generative-ai-veo-imagen-3/).