

StabilityAI REST API (v2beta)

Download OpenAPI specification: [Download](#)

Welcome to the Stability Platform API. As of March 2024, we are building the REST v2beta API service to be the primary API service for the Stability Platform. All AI services on other APIs (gRPC, REST v1, RESTv2alpha) will continue to be maintained, however they will not receive new features or parameters.

If you are a REST v2alpha user, we strongly recommend that you adjust the URL calls for the specific services that you are using over to the equivalent REST v2beta URL. Normally, this means simply replacing "v2alpha" with "v2beta". We are not deprecating v2alpha URLs at this time for users that are currently using them.

Authentication

You will need your [Stability API key](#) in order to make requests to this API. Make sure you never share your API key with anyone, and you never commit it to a public repository. Include this key in the `Authorization` header of your requests.

Rate limiting

This API is rate-limited to 150 requests every 10 seconds. If you exceed this limit, you will receive a `429` response and be timed out for 60 seconds. If you find this limit too restrictive, please reach out to us via [this form](#).

Support

Please see our [FAQ](#) for answers to common questions. If you have any other questions or concerns, please reach out to us via [this form](#).

To see the health of our APIs, please check our [Status Page](#).

Generate

Tools for generating new images or variations of existing images.

Stable Image Ultra

Our most advanced text to image generation service, Stable Image Ultra creates the highest quality images with unprecedented prompt understanding. Ultra excels in typography, complex compositions, dynamic lighting, vibrant hues, and overall cohesion and structure of an art piece. Made from the most advanced models, including Stable Diffusion 3, Ultra offers the best of the Stable Diffusion ecosystem.

Try it out

Grab your [API key](#) and head over to  [Google Colab](#)

How to use

Please invoke this endpoint with a `POST` request.

The headers of the request must include an API key in the `authorization` field. The body of the request must be `multipart/form-data`. The accept header should be set to one of the following:

- `image/*` to receive the image in the format specified by the `output_format` parameter.
- `application/json` to receive the image in the format specified by the `output_format` parameter, but encoded to base64 in a JSON response.

The only required parameter is the `prompt` field, which should contain the text prompt for the image generation.

Note: for the full list of optional parameters, please see the request schema below.

Output

The resolution of the generated image will be 1 megapixel. The default resolution is 1024x1024.

Credits

The Ultra service uses 8 credits per successful result. You will not be charged for failed results.

AUTHORIZATIONS: > `STABILITY_API_KEY`

HEADER PARAMETERS

authorization string `non-empty`
 required Your [Stability API key](#), used to authenticate your requests. Although you may have multiple keys in your account, you should use the same key for all requests to this API.

content-type string `non-empty`
 required Example: `multipart/form-data`
 The content type of the request body. Do not manually specify this header; your HTTP client library will automatically include the appropriate boundary parameter.

accept string
 required Default: `image/*`
 Enum: `application/json` `image/*`
 Specify `image/*` to get the image bytes directly. Otherwise specify `application/json` to receive the image as base64 encoded JSON.

REQUEST BODY SCHEMA: `multipart/form-data`

prompt string `[1 .. 10000] characters`
 required What you wish to see in the output image. A strong, descriptive prompt that clearly defines elements, colors, and subjects will lead to better results.

 To control the weight of a given word use the format `(word:weight)`, where `word` is the word you'd like to control the weight of and `weight` is a value between 0 and 1. For example: `The sky was a crisp (blue:0.3) and (green:0.8)` would convey a sky that was blue and green, but more green than blue.

negative_prompt string `<= 10000 characters`
 A blurb of text describing what you **do not** wish to see in the output image.
 This is an advanced feature.

aspect_ratio string
 Default: `1:1`
 Enum: `16:9` `1:1` `21:9` `2:3` `3:2` `4:5` `5:4` `9:16` `9:21`
 Controls the aspect ratio of the generated image.

seed number `[0 .. 4294967294]`
 Default: `0`

A specific value that is used to guide the 'randomness' of the generation. (Omit this parameter or pass `0` to use a random seed.)

`output_format`

string

Default: `png`

Enum: `jpeg` `png` `webp`

Dictates the `content-type` of the generated image.

Responses

> **200**

Generation was successful.

> **400**

Invalid parameter(s), see the `errors` field for details.

> **403**

Your request was flagged by our content moderation system.

> **413**

Your request was larger than 10MiB.

> **422**

You made a request with an unsupported language.

> **429**

You have made more than 150 requests in 10 seconds.

> **500**

An internal error occurred. If the problem persists [contact support](#).

Request samples

Python

JavaScript

cURL

Copy

```
import requests
```

```
response = requests.post(  
    f"https://api.stability.ai/v2beta/stable-image/generate/ultra",  
    headers={  
        "authorization": f"Bearer sk-MYAPIKEY",  
        "accept": "image/*"  
    },  
    files={"none": ''},  
    data={  
        "prompt": "Lighthouse on a cliff overlooking the ocean",  
        "output_format": "webp",  
    },  
)  
  
if response.status_code == 200:  
    with open("./lighthouse.webp", 'wb') as file:  
        file.write(response.content)  
else:  
    raise Exception(str(response.json()))
```

Response samples

200**400****403****413****422****429****500**

Content type

image/jpeg

Copy

The bytes of the generated jpeg.
(Caution: may contain cats)

Stable Image Core

Our primary service for text-to-image generation, Stable Image Core represents the best quality achievable at high speed. No prompt engineering is required! Try asking for a style, a scene, or a character, and see what you get.

Try it out

Grab your [API key](#) and head over to  [Google Colab](#)

How to use

Please invoke this endpoint with a `POST` request.

The headers of the request must include an API key in the `authorization` field. The body of the request must be `multipart/form-data`, and the `accept` header should be set to one of the following:

- `image/*` to receive the image in the format specified by the `output_format` parameter.
- `application/json` to receive the image encoded as base64 in a JSON response.

The body of the request should include:

- `prompt`

The body may optionally include:

- `aspect_ratio`
- `negative_prompt`
- `seed`
- `style_preset`
- `output_format`

Note: for more details about these parameters please see the request schema below.

Output

The resolution of the generated image will be 1.5 megapixels.

Credits

Flat rate of 3 credits per successful generation. You will not be charged for failed generations.

AUTHORIZATIONS: > `STABILITY_API_KEY`

HEADER PARAMETERS

`authorization`
`required`

string `non-empty`

Your [Stability API key](#), used to authenticate your requests. Although you may have multiple keys in your account, you should use the same

key for all requests to this API.

content-type
required

string `non-empty`

Example: `multipart/form-data`

The content type of the request body. Do not manually specify this header; your HTTP client library will automatically include the appropriate boundary parameter.

accept
required

string

Default: `image/*`

Enum: `application/json` `image/*`

Specify `image/*` to get the image bytes directly. Otherwise specify `application/json` to receive the image as base64 encoded JSON.

REQUEST BODY SCHEMA: `multipart/form-data`

prompt
required

string `[1 .. 10000] characters`

What you wish to see in the output image. A strong, descriptive prompt that clearly defines elements, colors, and subjects will lead to better results.

To control the weight of a given word use the format `(word:weight)`, where `word` is the word you'd like to control the weight of and `weight` is a value between 0 and 1. For example: `The sky was a crisp (blue:0.3) and (green:0.8)` would convey a sky that was blue and green, but more green than blue.

aspect_ratio

string

Default: `1:1`

Enum: `16:9` `1:1` `21:9` `2:3` `3:2` `4:5` `5:4` `9:16` `9:21`

Controls the aspect ratio of the generated image.

negative_prompt

string `<= 10000 characters`

A blurb of text describing what you **do not** wish to see in the output image.

This is an advanced feature.

seed

number `[0 .. 4294967294]`

Default: `0`

A specific value that is used to guide the 'randomness' of the generation. (Omit this parameter or pass `0` to use a random seed.)

style_preset	<p>string</p> <p>Enum: <code>3d-model</code> <code>analog-film</code> <code>anime</code> <code>cinematic</code> <code>comic-book</code> <code>digital-art</code> <code>enhance</code> <code>fantasy-art</code> <code>isometric</code> <code>line-art</code> <code>low-poly</code> <code>modeling-compound</code> <code>neon-punk</code> <code>origami</code> <code>photographic</code> <code>pixel-art</code> <code>tile-texture</code></p> <p>Guides the image model towards a particular style.</p>
output_format	<p>string</p> <p>Default: <code>png</code></p> <p>Enum: <code>jpeg</code> <code>png</code> <code>webp</code></p> <p>Dictates the <code>content-type</code> of the generated image.</p>

Responses

> 200

Generation was successful.

> 400

Invalid parameter(s), see the `errors` field for details.

> 403

Your request was flagged by our content moderation system.

> 422

You made a request with an unsupported language.

> 429

You have made more than 150 requests in 10 seconds.

> 500

An internal error occurred. If the problem persists [contact support](#).

POST `/v2beta/stable-image/generate/core`

Request samples

[Python](#)[JavaScript](#)[cURL](#)[Copy](#)


```
import requests

response = requests.post(
    f"https://api.stability.ai/v2beta/stable-image/generate/core",
    headers={
        "authorization": f"Bearer sk-MYAPIKEY",
        "accept": "image/*"
    },
    files={"none": ''},
    data={
        "prompt": "Lighthouse on a cliff overlooking the ocean",
        "output_format": "webp",
    },
)

if response.status_code == 200:
    with open("./lighthouse.webp", 'wb') as file:
        file.write(response.content)
else:
    raise Exception(str(response.json()))
```

Response samples

200**400****403****422****429****500**

Content type

image/png

Copy

The bytes of the generated png.
(Caution: may contain cats)

Stable Diffusion 3

Generate an image using a Stable Diffusion 3 model:

- SD3 Medium - the 2 billion parameter model

- SD3 Large - the 8 billion parameter model
- SD3 Large Turbo - the 8 billion parameter model with a faster inference time

This API is powered by [Fireworks AI](#). API status can be reviewed [here](#).

Try it out

Grab your [API key](#) and head over to one of the following sites:

-  Fireworks Playground
-  Google Colab

How to use

Please invoke this endpoint with a `POST` request.

The headers of the request must include an API key in the `authorization` field. The body of the request must be `multipart/form-data`. The accept header should be set to one of the following:

- `image/*` to receive the image in the format specified by the `output_format` parameter.
- `application/json` to receive the image encoded as base64 in a JSON response.

Generating with a prompt

Commonly referred to as **text-to-image**, this mode generates an image from text alone. While the only required

parameter is the `prompt`, it also supports an `aspect_ratio` parameter which can be used to control the aspect ratio of the generated image.

Generating with a prompt *and* an image

Commonly referred to as **image-to-image**, this mode also generates an image from text but uses an existing image as the starting point. The required parameters are:

- `prompt` - text to generate the image from
- `image` - the image to use as the starting point for the generation
- `strength` - controls how much influence the `image` parameter has on the output image
- `mode` - must be set to `image-to-image`

Note: maximum request size is 10MiB.

Optional Parameters:

Both modes support the following optional parameters:

- `model` - the model to use (SD3 Medium, SD3 Large, or SD3 Large Turbo)
- `output_format` - the the format of the output image
- `seed` - the randomness seed to use for the generation
- `negative_prompt` - keywords of what you **do not** wish to see in the output image

Note: for more details about these parameters please see the request schema below.

Output

The resolution of the generated image will be 1MP. The default resolution is 1024x1024.

Credits

- SD3 Medium: Flat rate of 3.5 credits per successful generation.
- SD3 Large: Flat rate of 6.5 credits per successful generation.
- SD3 Large Turbo: Flat rate of 4 credits per successful generation.

As always, you will not be charged for failed generations.

AUTHORIZATIONS: > *STABILITY_API_KEY*

HEADER PARAMETERS

<code>authorization</code> <code>required</code>	string <code>non-empty</code> Your Stability API key , used to authenticate your requests. Although you may have multiple keys in your account, you should use the same key for all requests to this API.
---	--

<code>content-type</code> <code>required</code>	string <code>non-empty</code> Example: <code>multipart/form-data</code> The content type of the request body. Do not manually specify this header; your HTTP client library will automatically include the appropriate boundary parameter.
--	--

<code>accept</code> <code>required</code>	string Default: <code>image/*</code> Enum: <code>application/json</code> <code>image/*</code> Specify <code>image/*</code> to get the image bytes directly. Otherwise specify <code>application/json</code> to receive the image as base64 encoded JSON.
--	---

REQUEST BODY SCHEMA: `multipart/form-data`

prompt
required

string [1 .. 10000] characters

What you wish to see in the output image. A strong, descriptive prompt that clearly defines elements, colors, and subjects will lead to better results.

mode

string (GenerationMode)

Default: text-to-image

Enum: image-to-image text-to-image

Controls whether this is a text-to-image or image-to-image generation, which affects which parameters are required:

- **text-to-image** requires only the prompt parameter
- **image-to-image** requires the prompt, image, and strength parameters

image

string <binary>

The image to use as the starting point for the generation.

Supported formats:

- jpeg
- png
- webp

Supported dimensions:

- Every side must be at least 64 pixels

Important: This parameter is only valid for **image-to-image** requests.

strength

number [0 .. 1]

Sometimes referred to as *denoising*, this parameter controls how much influence the image parameter has on the generated image. A value of 0 would yield an image that is identical to the input. A value of 1 would be as if you passed in no image at all.

Important: This parameter is only valid for **image-to-image** requests.

aspect_ratio

string

Default: 1:1

Enum: 16:9 1:1 21:9 2:3 3:2 4:5 5:4 9:16 9:21

Controls the aspect ratio of the generated image. Defaults to 1:1.

Important: This parameter is only valid for **text-to-image** requests.

model

string

Default: `sd3-large`

Enum: `sd3-large` `sd3-large-turbo` `sd3-medium`

The model to use for generation.

- `sd3-medium` requires 3.5 credits per generation
- `sd3-large` requires 6.5 credits per generation
- `sd3-large-turbo` requires 4 credits per generation

seed

number `[0 .. 4294967294]`

Default: `0`

A specific value that is used to guide the 'randomness' of the generation. (Omit this parameter or pass `0` to use a random seed.)

output_format

string

Default: `png`

Enum: `jpeg` `png`

Dictates the `content-type` of the generated image.

negative_prompt

string `<= 10000 characters`

Keywords of what you **do not** wish to see in the output image. This is an advanced feature.

Important: This parameter does **not** work with `sd3-large-turbo`.

Responses

> 200

Generation was successful.

> 400

Invalid parameter(s), see the `errors` field for details.

> 403

Your request was flagged by our content moderation system.

> 413

Your request was larger than 10MiB.

> 422

You made a request with an unsupported language.

> 429

You have made more than 150 requests in 10 seconds.

> 500

An internal error occurred. If the problem persists [contact support](#).

```
POST /v2beta/stable-image/generate/sd3
```

Request samples

Python

JavaScript

cURL

Copy

```
import requests

response = requests.post(
    f"https://api.stability.ai/v2beta/stable-image/generate/sd3",
    headers={
        "authorization": f"Bearer sk-MYAPIKEY",
        "accept": "image/*"
    },
    files={"none": ''},
    data={
        "prompt": "Lighthouse on a cliff overlooking the ocean",
        "output_format": "jpeg",
    },
)

if response.status_code == 200:
    with open("./lighthouse.jpeg", 'wb') as file:
        file.write(response.content)
else:
    raise Exception(str(response.json()))
```

Response samples

200

400

403

413

422

429

500

Content type

image/png

Copy

The bytes of the generated png.
(Caution: may contain cats)

Upscale

Tools for increasing the size of your existing images.

Conservative

Takes images between 64x64 and 1 megapixel and upscales them all the way to 4K resolution. Put more generally, it can upscale images ~20-40x times while preserving all aspects. Conservative Upscale minimizes alterations to the image and should not be used to reimagine an image.

Try it out

Grab your [API key](#) and head over to  [Google Colab](#)

How to use

Please invoke this endpoint with a `POST` request.

The headers of the request must include an API key in the `authorization` field. The body of the request must be `multipart/form-data`, and the `accept` header should be set to one of the following:

- `image/*` to receive the image in the format specified by the `output_format` parameter.