

# Simulations API Documentation - Ortho

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## Overview

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This document describes how Simulations API's Ortho feature works.

To execute a ortho simulation the client will need to do a single request `POST /api/quick-simulations/ortho` sending the photo binary as `multipart/form-data`. The response will be in JSON format as detailed along this document.

This request is meant to be done directly by the client (via web browser or mobile devices), using a server as middleman won't work since we have ip rate limiting to prevent abuse usage.

## Request Structure

- `POST /api/quick-simulations/ortho`
- Headers
  - `Authorization: Bearer $SIGNATURE`
  - `Content-Type: multipart/form-data`
- Body (*format: multipart/form-data*)
  - `img_photo: $PHOTO_BLOB`

## Illustrating with cURL

```
curl -XPOST \  
-H "Authorization: Bearer $SIGNATURE" \  
-H "Content-Type: multipart/form-data" \  
-F "img_photo=@$PHOTO_PATH" \  
"https://api.e91efc7.dentrino.ai/api/quick-simulations/ortho"
```

## Response Structure

### Success

```
// Status Code: 2xx  
{  
  "success": true,  
  "beforeUrl": "https://.../before.jpg?...",  
  "resultUrl": "https://.../result.jpg?..."  
}
```

### Error

```
// Status Code: 4xx / 5xx
{
  "success": false,
  "error": {
    "id": "PUBLIC ID",
    "message": "PUBLIC MESSAGE",
    "debug": {
      "__ALERT__": "THIS DEBUG OBJECT WILL NOT EXIST IN PRODUCTION",
      "debugId": "INTERNAL ID FOR DEBUGGING",
      "message": "PUBLIC MESSAGE FOR DEBBUGING",
      "details": {...},
      "tags": {...}
    }
  }
}
```

## Signature

### Overview

The signature informs which client is using the API and prevents data from being tampered. It needs to be generated before each request and sent in the `Authorization` header.

To generate a signature the client will need a `CLIENT_ID` and `CLIENT_SECRET` that will be generated by TastyTech to each client. The `Client Secret` is used to hash the claims preventing them from being tampered.

The signature is composed by two parts joined by an `:`.

```
// Illustrative pseudo-code
CLAIMS_JSON = "{...}"
PART1 = base64($CLAIMS_JSON)
PART2 = hmac.sha256($CLAIMS_JSON, $CLIENT_SECRET)
SIGNATURE = "$PART1:$PART2"
```

### Signature Claims

The claims are represented as a JSON and have the following information:

```
{
  "client_id": "...",
  "recaptcha_token": "...",
  "params_hashed": { ... }
}
```

// Recaptcha Token isn't mandatory for mobile clients.

**Claim:** `client_id`

The plain `CLIENT_ID`.

**Claim:** `recaptcha_token`

The token responded by Recaptcha v3. That should be used on web browsers, see [Recaptcha v3 Google Docs](#) for more information.

**Claim:** `params_hashed`

All the parameters sent in the body as `multipart/form-data` must be hashed as MD5 and added to the `claims.params_hashed` JSON.

```
// Sample of "params_hashed" when sending "img_photo: $PHOTO_BINARY" in the body
{
  ...
  "params_hashed": {
    "img_photo": md5($PHOTO_BINARY)
  }
}
```