

GMAF API Anleitung

GMAF Server IP: 85.215.58.111

API-Key: fp2023

GMAF SOAP API: <http://85.215.58.111:8481/gmaf/gmafApi>

GMAF SOAP WSDL: <http://85.215.58.111:8481/gmaf/gmafApi?wsdl>

GMAF REST API: <http://85.215.58.111:8242/gmaf/gmafApi/gmaf/>

GMAF REST Open-API Spec: <http://85.215.58.111:8242/gmaf/gmafApi/openapi.json>

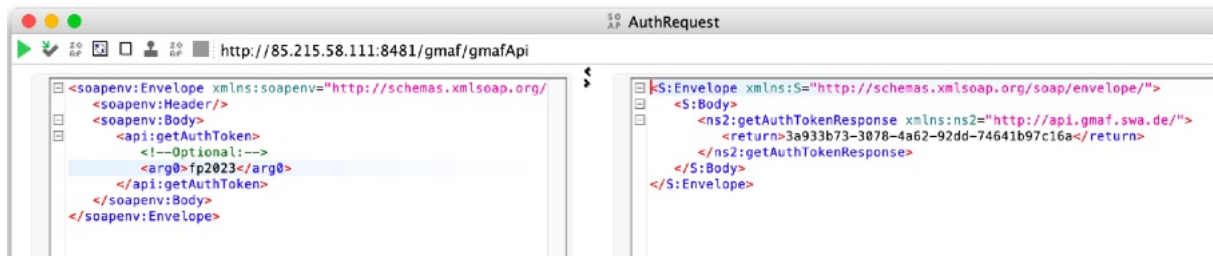
Allgemein rufen Sie zunächst mit dem api-key einen Token ab. Den Token aus der Response verwenden Sie dann in den weiteren Requests.

SOAP API

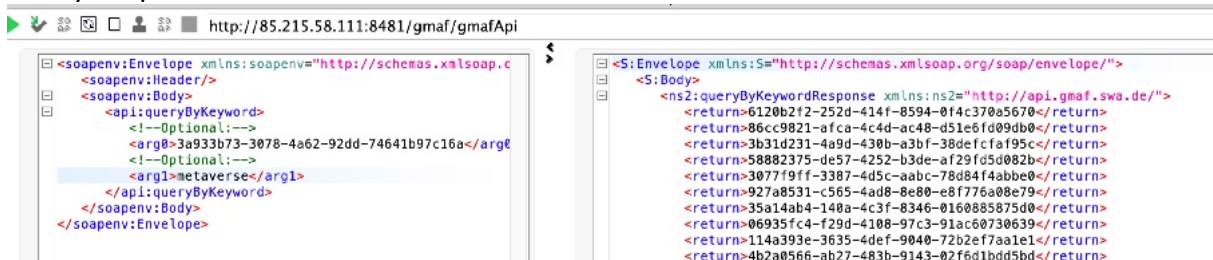
Tools: SoapUI (<https://www.soapui.org/>)

Beispiele

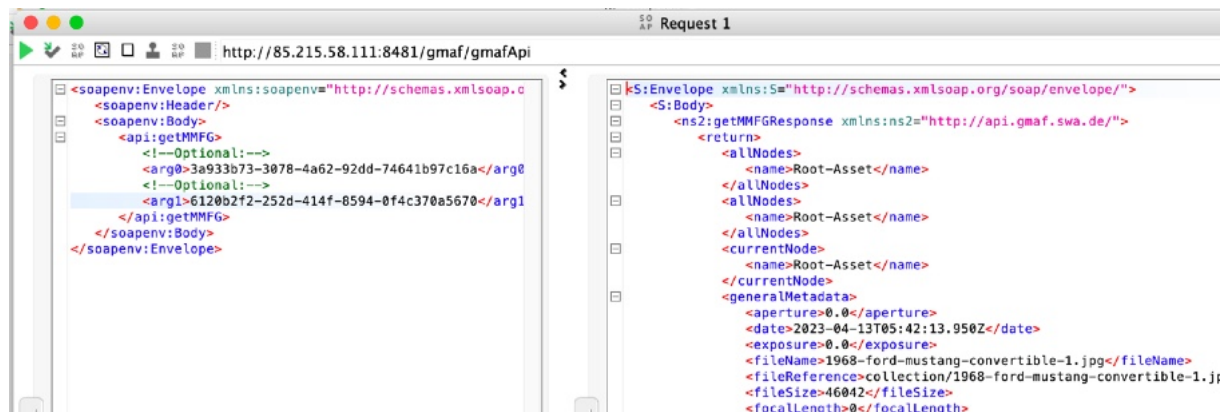
getAuthToken Request



Query-Request



Getmmfg-Request



Das Bild ist derzeit nicht über GMAF abrufbar. Dazu müssen Sie den Request auf der REST API verwenden. Anfrage mit dem API-Key und der ID, z.B. aus dem Query Request

```
curl -X 'GET'
'http://85.215.58.111:8242/gmaf/gmafApi/gmaf/preview/3a933b73-3078-4a62-92dd-74641b97c16a/6120b2f2-252d-414f-8594-0f4c370a5670' -H 'accept: image/*' --output 1968-ford-mustang-convertible-1.jpg
```

Das Bild wird dann in die Datei „1968-ford-mustang-convertible-1.jpg“ im aktuellen Verzeichnis geschrieben.

REST API

Die REST-Schnittstelle im Generic Multimedia Analysis Tool (GMAF) ist eine prototypische Implementierung.

Übersicht der REST Requests

Abrufe an GMAF können beispielsweise über die Methoden gemacht werden:

- query (query by keyword)
- getsimilarassetsbygraphcode (query by example)
- getRec (recommendations)

Beispiele:

Kommandozeile, Tool curl

GetToken-Request

```
curl -X 'GET' \
'http://85.215.58.111:8242/gmaf/gmafApi/gmaf/getToken/fp2023' \
-H 'accept: */*'
```

GetToken-Response

```
aa042a6d-40c5-4cba-9f1f-6bdb17c3c657
```

Query-Request

Mit dem Token aus der Response:

```
curl -X 'POST' \
  'http://85.215.58.111:8242/gmaf/gmafApi/gmaf/query/aa042a6d-40c5-4cba-9f1f-6bdb17c3c657/video' \
  -H 'accept: application/json' \
  -d ''
```

Query-Response

```
["6120b2f2-252d-414f-8594-0f4c370a5670", "86cc9821-afca-4c4d-ac48-d51e6fd09db0" ... "05598262-8c81-4d96-9180-b3912baa9f28"]
```

Das Ergebnis ist eine Liste von Ids.

Getmmfg-Request

Im Request wird dann eine ID verwendet, zum Beispiel die erste aus dem vorherigen Request.

```
curl -X 'POST' \
  'http://85.215.58.111:8242/gmaf/gmafApi/gmaf/getmmfg/aa042a6d-40c5-4cba-9f1f-6bdb17c3c657/6120b2f2-252d-414f-8594-0f4c370a5670' \
  -H 'accept: application/json' \
  -d ''
```

Getmmfg-Response

```
{
  "nodes": [
    {
      ...
    }
  ],
  "generalMetadata": {
    "id": "6120b2f2-252d-414f-8594-0f4c370a5670",
    "longitude": 0,
    "latitude": 0,
    "cameraModel": null,
    "lensModel": null,
    "aperture": 0,
    "exposure": 0,
    "cityNearBy": null,
    "focalLength": 0,
    "resolution": 0,
    "width": -1,
    "height": -1,
    "date": 1681364533950,
    "fileSize": 46042,
    "iso": 0,
    "shutterSpeed": 0,
    "fileName": "1968-ford-mustang-convertible-1.jpg",
    "fileReference": "/root/gmaf/collection/1968-ford-mustang-convertible-1.jpg",
    "previewUrl": "...",
    "sourceSystem": null
  },
  ...
}
```

```
}  
}
```

Laden der Mediadatei

Mit der ID, z.B. aus dem Query Request

```
curl -X 'GET'  
'http://85.215.58.111:8242/gmaf/gmafApi/gmaf/preview/aa042a6d-40c5-4cba-  
9f1f-6bdb17c3c657/6120b2f2-252d-414f-8594-0f4c370a5670' -H 'accept:  
image/*' --output 1968-ford-mustang-convertible-1.jpg
```

Das Bild wird dann in die Datei „1968-ford-mustang-convertible-1.jpg“ im aktuellen Verzeichnis geschrieben.

default

^

| | | |
|------|------------------------------------------------|---|
| GET | /gmaf/getToken/{api-key} | ▼ |
| POST | /gmaf/getCollection/{auth-token} | ▼ |
| POST | /gmaf/get-collection-ids/{auth-token} | ▼ |
| POST | /gmaf/getMetadata/{auth-token} | ▼ |
| GET | /gmaf/preview/{auth-token}/{id} | ▼ |
| POST | /gmaf/preview/{auth-token}/{id} | ▼ |
| POST | /gmaf/getmmfg/{auth-token}/{mmfg-id} | ▼ |
| POST | /gmaf/getgc/{auth-token}/{mmfg_id} | ▼ |
| POST | /gmaf/getRec/{auth-token}/{id} | ▼ |
| POST | /gmaf/{session}/{api-key} | ▼ |
| POST | /gmaf/getsimilarassetsbygraphcode/{auth-token} | ▼ |
| POST | /gmaf/getSim/{auth-token}/{id} | ▼ |
| POST | /gmaf/query/{auth-token}/{query} | ▼ |
| GET | /api | ▼ |
| GET | /api/getAuthToken | ▼ |
| GET | /application.wadl/{path} | ▼ |
| GET | /application.wadl | ▼ |

Open API Specification

Nachfolgend ist die OpenAPI Specification der REST-Schnittstelle abgebildet.

Laden Sie die Spezifikation in ein Werkzeug, z.B. <https://editor-next.swagger.io/>, damit können Sie die Methoden und Datentypen ansehen.

```
openapi: 3.0.1
info:
  version: 1.1.0
  title: GMAF
  description: GMAF REST
  contact:
    name: Stefan Wagenpfeil, Patrick Steinert
servers:
  - url: 'http://85.215.58.111:8242/gmaf/gmafApi'

paths:
  /gmaf/getToken/{api-key}:
    get:
      operationId: getAuthToken
      parameters:
        - name: api-key
          in: path
          required: true
          schema:
            type: string
      responses:
        default:
          description: default response
          content:
            '*/*':
              schema:
                type: string
  /gmaf/getCollection/{auth-token}:
    post:
      operationId: getCollection
      parameters:
        - name: auth-token
          in: path
          required: true
          schema:
            type: string
      responses:
        default:
          description: default response
          content:
            application/json:
              schema:
                type: array
```

```

            items:
                $ref: '#/components/schemas/MMFG'
/gmaf/get-collection-ids/{auth-token}:
  post:
    operationId: getCollectionIds
    parameters:
      - name: auth-token
        in: path
        required: true
        schema:
          type: string
    responses:
      default:
        description: default response
        content:
          application/json:
            schema:
              type: array
              items:
                type: string
/gmaf/getMetadata/{auth-token}:
  post:
    operationId: getCollectionMetadata
    parameters:
      - name: auth-token
        in: path
        required: true
        schema:
          type: string
    responses:
      default:
        description: default response
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/GeneralMetadata'
/gmaf/preview/{auth-token}/{id}:
  get:
    operationId: getImage
    parameters:
      - name: auth-token
        in: path
        required: true
        schema:
          type: string
      - name: id
        in: path
        required: true
        schema:
          type: string

```

```

    responses:
      default:
        description: default response
        content:
          image/*: {}
  post:
    operationId: getPreviewURL
    parameters:
      - name: auth-token
        in: path
        required: true
        schema:
          type: string
      - name: id
        in: path
        required: true
        schema:
          type: string
    responses:
      default:
        description: default response
        content:
          application/json:
            schema:
              type: string
/gmaf/getmmfg/{auth-token}/{mmfg-id}:
  post:
    operationId: getMMFGForId
    parameters:
      - name: auth-token
        in: path
        required: true
        schema:
          type: string
      - name: mmfg-id
        in: path
        required: true
        schema:
          type: string
    responses:
      default:
        description: default response
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/MMFG'
/gmaf/getgc/{auth-token}/{mmfg_id}:
  post:
    operationId: getOrGenerateGraphCode
    parameters:
      - name: auth-token
        in: path

```

```

        required: true
        schema:
          type: string
      - name: mmfg_id
        in: path
        required: true
        schema:
          type: string
    responses:
      default:
        description: default response
        content:
          application/json:
            schema:
              type: string
/gmaf/getRec/{auth-token}/{id}:
  post:
    operationId: getRecommendedAssets
    parameters:
      - name: auth-token
        in: path
        required: true
        schema:
          type: string
      - name: id
        in: path
        required: true
        schema:
          type: string
    responses:
      default:
        description: default response
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/MMFG'
/gmaf/{session}/{api-key}:
  post:
    operationId: getSession
    parameters:
      - name: api-key
        in: path
        required: true
        schema:
          type: string
    responses:
      default:
        description: default response
        content:
          application/json:

```



```

        schema:
          $ref: '#/components/schemas/GMAF'
/gmaf/getsimilarassetsbygraphcode/{auth-token}:
  post:
    operationId: getSimilarAssetIDsByGraphCode
    parameters:
      - name: auth-token
        in: path
        required: true
        schema:
          type: string
    requestBody:
      content:
        '*/*':
          schema:
            type: string
    responses:
      default:
        description: default response
        content:
          application/json:
            schema:
              type: array
              items:
                type: string
/gmaf/getSim/{auth-token}/{id}:
  post:
    operationId: getSimilarAssets
    parameters:
      - name: auth-token
        in: path
        required: true
        schema:
          type: string
      - name: id
        in: path
        required: true
        schema:
          type: string
    responses:
      default:
        description: default response
        content:
          application/json:
            schema:
              type: array
              items:
                $ref: '#/components/schemas/MMFG'
/gmaf/query/{auth-token}/{query}:
  post:
    operationId: queryByKeyword
    parameters:

```

```

    - name: auth-token
      in: path
      required: true
      schema:
        type: string
    - name: query
      in: path
      required: true
      schema:
        type: string
  responses:
    default:
      description: default response
      content:
        application/json:
          schema:
            type: array
            items:
              type: string
/api:
  get:
    operationId: setProcessingPlugins
    requestBody:
      content:
        '*/*':
          schema:
            type: string
    responses:
      default:
        description: default response
        content:
          application/json: {}
/api/getAuthToken:
  get:
    operationId: getAuthToken_1
    requestBody:
      content:
        '*/*':
          schema:
            type: string
    responses:
      default:
        description: default response
        content:
          application/json:
            schema:
              type: string
/application.wadl/{path}:
  get:
    operationId: getExternalGrammar
    parameters:
      - name: path

```

```

        in: path
        required: true
        schema:
            type: string
    responses:
        default:
            description: default response
            content:
                application/xml: {}
/application.wadl:
    get:
        operationId: getWadl
        responses:
            default:
                description: default response
                content:
                    application/vnd.sun.wadl+xml: {}
                    application/xml: {}
components:
    schemas:
        AssetLink:
            type: object
            properties:
                type:
                    type: integer
                    format: int32
                location:
                    type: string
                    format: url
                assetName:
                    type: string
        CompositionRelationship:
            type: object
            properties:
                type:
                    type: integer
                    format: int32
                relatedObject:
                    $ref: '#/components/schemas/Node'
    Context:
        type: object
        properties:
            name:
                type: string
            id:
                type: string
                format: uuid
    GeneralMetadata:
        type: object
        properties:
            id:
                type: string

```

```
    format: uuid
longitude:
  type: integer
  format: int64
latitude:
  type: integer
  format: int64
cameraModel:
  type: string
lensModel:
  type: string
aperture:
  type: number
  format: float
exposure:
  type: number
  format: float
cityNearBy:
  type: string
focalLength:
  type: integer
  format: int64
resolution:
  type: integer
  format: int32
width:
  type: integer
  format: int32
height:
  type: integer
  format: int32
date:
  type: string
  format: date-time
fileSize:
  type: integer
  format: int64
iso:
  type: integer
  format: int32
shutterSpeed:
  type: integer
  format: int64
fileName:
  type: string
fileReference:
  type: string
  format: binary
previewUrl:
  type: string
  format: url
sourceSystem:
```

```

        type: string
        format: uuid
Location:
  type: object
  properties:
    type:
      type: integer
      format: int32
    location:
      type: string
      format: url
    name:
      type: string
MMFG:
  type: object
  properties:
    nodes:
      type: array
      items:
        $ref: '#/components/schemas/Node'
    generalMetadata:
      $ref: '#/components/schemas/GeneralMetadata'
    security:
      $ref: '#/components/schemas/Security'
    locations:
      type: array
      items:
        $ref: '#/components/schemas/Location'
    currentNode:
      $ref: '#/components/schemas/Node'
    similarity:
      type: array
      items:
        type: number
        format: float
    tempSimilarity:
      type: array
      items:
        type: number
        format: float
    allNodes:
      type: array
      items:
        $ref: '#/components/schemas/Node'
    collectionElements:
      type: array
      items:
        $ref: '#/components/schemas/MMFG'
    id:
      type: string
      format: uuid
    begin:

```

```

        $ref: '#/components/schemas/Timerange'
    end:
        $ref: '#/components/schemas/Timerange'
Node:
  type: object
  properties:
    name:
      type: string
    weights:
      type: array
      items:
        $ref: '#/components/schemas/Weight'
    technicalAttributes:
      type: array
      items:
        $ref: '#/components/schemas/TechnicalAttribute'
    semanticRelationships:
      type: array
      items:
        $ref: '#/components/schemas/SemanticRelationship'
    compositionRelationships:
      type: array
      items:
        $ref:
'#/components/schemas/CompositionRelationship'
    assetLinks:
      type: array
      items:
        $ref: '#/components/schemas/AssetLink'
    detectedBy:
      type: string
    timerange:
      $ref: '#/components/schemas/Timerange'
    featureVector:
      $ref: '#/components/schemas/MMFG'
Security:
  type: object
  properties:
    owner_id:
      type: string
    group_id:
      type: string
    acl:
      type: string
SemanticRelationship:
  type: object
  properties:
    relatedNode:
      type: string
      format: url
    description:
      type: string

```

```
TechnicalAttribute:
  type: object
  properties:
    relative_x:
      type: integer
      format: int32
    relative_y:
      type: integer
      format: int32
    width:
      type: integer
      format: int32
    height:
      type: integer
      format: int32
    sharpness:
      type: number
      format: float
    blurriness:
      type: number
      format: float
    dominantColors:
      type: array
      items:
        type: object
        properties:
          red:
            type: integer
            format: int32
          green:
            type: integer
            format: int32
          blue:
            type: integer
            format: int32
          alpha:
            type: integer
            format: int32
          colorSpace:
            type: object
            properties:
              type:
                type: integer
                format: int32
              numComponents:
                type: integer
                format: int32
              cs_sRGB:
                type: boolean
          rgb:
            type: integer
            format: int32
```

```

        transparency:
            type: integer
            format: int32
Timerange:
    type: object
    properties:
        begin:
            type: string
            format: date-time
        end:
            type: string
            format: date-time
        universalTime:
            type: boolean
        relativeTime:
            type: boolean
Weight:
    type: object
    properties:
        context:
            $ref: '#/components/schemas/Context'
        weight:
            type: number
            format: float
GMAF:
    type: object
    properties:
        processingPlugins:
            type: array
            writeOnly: true
            items:
                type: string
        plugins:
            type: array
            items:
                type: string
GraphCode:
    type: object
    properties:
        dictionary:
            type: array
            items:
                type: string
        collectionElements:
            type: array
            items:
                $ref: '#/components/schemas/GraphCode'
        relationships:
            type: array
            items:
                type: array
                items:

```



```
        type: integer
        format: int32
collection:
  type: boolean
```