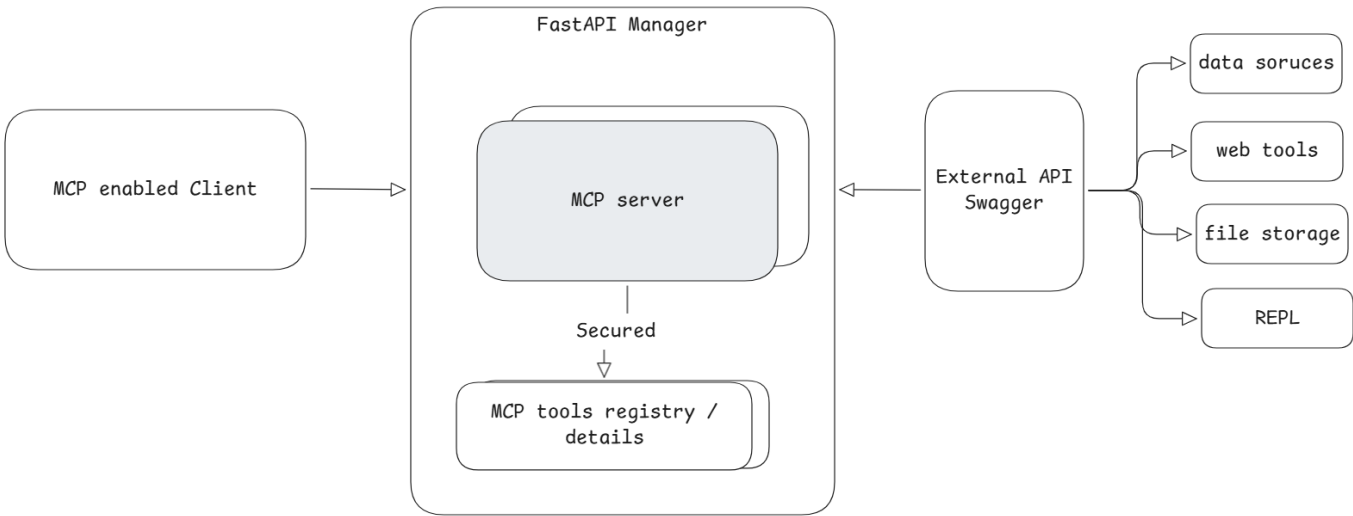# Architecture

step - 1 Input swagger

url or file

Flowchart Generation API [1.0.0] [OAS 3.0]

/api/swagger.json

API for generating and managing flowcharts from documents using Azure services.

Authorize 🔒

Error Logs ⌃

| POST | `/api/debugg/error-logs/download` | Download error log file | 🔒 ⌄ |

Flowchart ⌃

| POST | `/api/flowchart/excel/` | Export Flowchart to Excel with Macro | 🔒 ⌄ |

| POST | `/api/flowchart/json/` | Extract flowchart data as JSON from an existing document | 🔒 ⌄ |

| POST | `/api/flowchart/parse-svg/json` | Parse SVG Flowchart | 🔒 ⌄ |

Step - 2 MCP server creation

mcp server management

OpenAPI MCP Server Manager `1.0.0` `OAS 3.1`

/openapi.json

Create and manage MCP servers from OpenAPI specifications

default ⌃

| POST | /create-mcp-from-url | Create Mcp From Url | ⌄ |

| POST | /create-mcp-from-file | Create Mcp From File | ⌄ |

| GET | /list-mcp-servers | List Mcp Servers | ⌄ |

| DELETE | /stop-mcp-server/{server_id} | Stop Mcp Server | ⌄ |

| GET | / | Root | ⌄ |

request

| POST | /create-mcp-from-file | Create Mcp From File | ⌃ |

Create MCP server from uploaded OpenAPI file

Parameters   Cancel   Reset

No parameters

Request body **required**   multipart/form-data ⌄

openapi_file * **required**
string($binary)   Choose File   swagger.json

base_url * **required**
string   http://localhost:7071

bearer_token
string | (string | null)   gDk9LJahj01_fBhTwiqsC8hexnuKWBlQf0Gjt1RorZMDjnzfQ

                               ☐ Send empty value

server_name
string | (string | null)   fc_swagger_mcp

response

Curl

```
curl -X 'POST' \
  'http://localhost:8000/create-mcp-from-file' \
  -H 'accept: application/json' \
  -H 'Content-Type: multipart/form-data' \
  -F 'openapi_file=@swagger.json;type=application/json' \
  -F 'base_url=http://localhost:7071' \
  -F 'bearer_token=eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsIng1dCI6IkpZaEFjVFBNWl9MWDZEQmxPV1E3SG4wTmVYRSIsImtpZCI6IkpZaEFjVFBNWl9MWDZEQmxPV1E3SG4wTmVYRSJ9.eyJhdWQiOiJodHRwczovL2t
  -F 'server_name=fc_swagger_mcp'
```

Request URL

```
http://localhost:8000/create-mcp-from-file
```

Server response

Code	Details
200	**Response body**

```
{
  "status": "success",
  "server_id": "93052031-6366-4bb6-ab50-5089471898ce",
  "mcp_url": "http://localhost:8001/mcp/",
  "message": "MCP server 'fc_swagger_mcp' created successfully from uploaded file on port 8001"
}
```

Download

```
ENDPU...      ...14.3.JT14d0uss      ...UUC /tredle-mtp-from-tlid-mttp/Jvc  200 UK
🔒 Protected endpoint: parseSvgFlowchart (POST /api/flowchart/parse-svg/json)
🔒 Protected endpoint: post__api_flowchart_json_ (POST /api/flowchart/json/)
🔒 Protected endpoint: exportFlowchartToExcel (POST /api/flowchart/excel/)
🔒 Protected endpoint: downloadErrorLog (POST /api/debugg/error-logs/download)
🔑 Using Bearer token for 4 protected endpoints
```

step -3 - client access MCP tools

```
💬 Chat started! (type 'quit' to exit)

😀 You: what are the tools present?

🤖 Assistant: I have access to several tools that can help with various tasks, especially related to flowcharts and data extraction. Here's
a quick overview:

2. **Extract_flowchart_data_as_JSON_from_an_existing_document**: Extracts flowchart data as JSON from a document.

3. **Health_check_endpoint**: Checks the health of the service.

4. **Scrape_a_URL_for_flowchart_generation**: Scrapes a URL to generate flowcharts.

5. **Scrape_a_webpage_with_dynamic_selectors_and_response_typ**: Scrapes webpages using dynamic selectors and returns results in various for
mats like JSON, text, or HTML.

6. **exportFlowchartToExcel**: Generates an Excel file with a multi-swimlane flowchart using embedded VBA macros.

7. **downloadErrorLog**: Downloads error logs captured as a JSON file.

These tools are designed to help with tasks such as extracting data, generating flowcharts, and handling documents and logs. If you need ass
istance with any of these, feel free to ask!
```

health check

```
🤖 Assistant: 🔧 Calling tool: Health_check_endpoint with args: {}
It seems like there was an issue with the health check response, as the output didn't match the expected for
mat. It returned an "Output validation error." This might be due to a discrepancy in the expected response f
ormat from the service.

However, this doesn't necessarily mean there's a problem with the service itself, just with how the response
 is interpreted. If you have any specific tasks you'd like to perform, feel free to let me know!
```

backend processing

```
[2025-07-25T13:02:21.033Z] Executed 'Functions.swagger_json' (Succeeded, Id=cbebecb6-ffc3-4d32-9060-28b5012aa3ea, Duration=97ms)
[2025-07-25T13:16:54.851Z] Executing 'Functions.http_get' (Reason='This function was programmatically called via the host APIs.', Id=c1c70230-db6c-42ee-946
f-baf10e05e03e)
[2025-07-25T13:16:54.866Z] Executed 'Functions.http_get' (Succeeded, Id=c1c70230-db6c-42ee-946f-baf10e05e03e, Duration=15ms)
```

tool use example

```
😀 You: i want to Extracts flowchart data as JSON from a document.
🤖 Assistant: Sure, I can help with that. Please provide the document that contains the flowchart, either by uploading it or by sharing details i
f it's stored in a cloud storage container. Once I have access to the document, I'll proceed with extracting the flowchart data as JSON.

😀 You: what are the details?

🤖 Assistant: To extract flowchart data from a document stored in a cloud storage container, I would need the following blob configuration detail
s:

1. **Blob Container Name**: The name of the container where the document is stored.

2. **Blob Path**: The specific path to the document within the container.

3. **Connection String**: The connection string used to access the storage account.

If you provide these details, I'll be able to access the document and extract the flowchart data as JSON. If you have the document locally, you c
an also upload it directly. Let me know how you'd like to proceed!
```

backend processing

```
    'x-ms-version': 'REDACTED'
    'x-ms-creation-time': 'REDACTED'
    'x-ms-blob-content-md5': 'REDACTED'
    'x-ms-lease-status': 'REDACTED'
    'x-ms-lease-state': 'REDACTED'
    'x-ms-blob-type': 'REDACTED'
    'x-ms-server-encrypted': 'REDACTED'
    'Date': 'Fri, 25 Jul 2025 13:29:40 GMT'
[2025-07-25T13:29:43.953Z] D:\01-KPMG\01-Dev\Clara-AI-Services\Services\clara-ai-flowchart\backend\.venv\Lib\site-packages\openpyxl\reader\drawings.py:33:
UserWarning: DrawingML support is incomplete and limited to charts and images only. Shapes and drawings will be lost.
[2025-07-25T13:29:43.958Z]   warn("DrawingML support is incomplete and limited to charts and images only. Shapes and drawings will be lost.")
[2025-07-25T13:29:44.589Z] Executed 'Functions.get_flowchart_json' (Succeeded, Id=657607df-6287-4d4f-b91a-1e2608e78ccc, Duration=6305ms)
```

final response at the client

````
- **Title**: Remuneration and Shareholdings Disclosures
- **Nodes**: Contains various nodes with details such as ID, label, department, shape, and type.
- **Connectors**: Defines the connections between the nodes, indicating the flow of the chart.

Here's a snippet of the extracted JSON data:

```json
{
  "title": "Remuneration and Shareholdings Disclosures",
  "nodes": [
    {
      "id": "80",
      "label": "Remuneration Levels are recommended by the Company's Remuneration Committee to the Board of Direc
tors",
      "department": "Directors Fees",
      "shape": "PreDefinedProcess"
    },
    {
      "id": "94",
      "label": "Does the Board accept the recommendations of the committee?",
      "department": "Directors Fees",
      "shape": "Diamond"
```
````

ALL are Authentication supported