GEUTEBRÜCK

G-SIM Web API User Manual

Version: 3.0

08.12.2025

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About This Documentation

Current software version: G-SIM Web API 3.0.

The latest features and changes of the current software version are listed in the Release Notes.

Note that the illustrations in this documentation may not match those of your software version.

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Installation

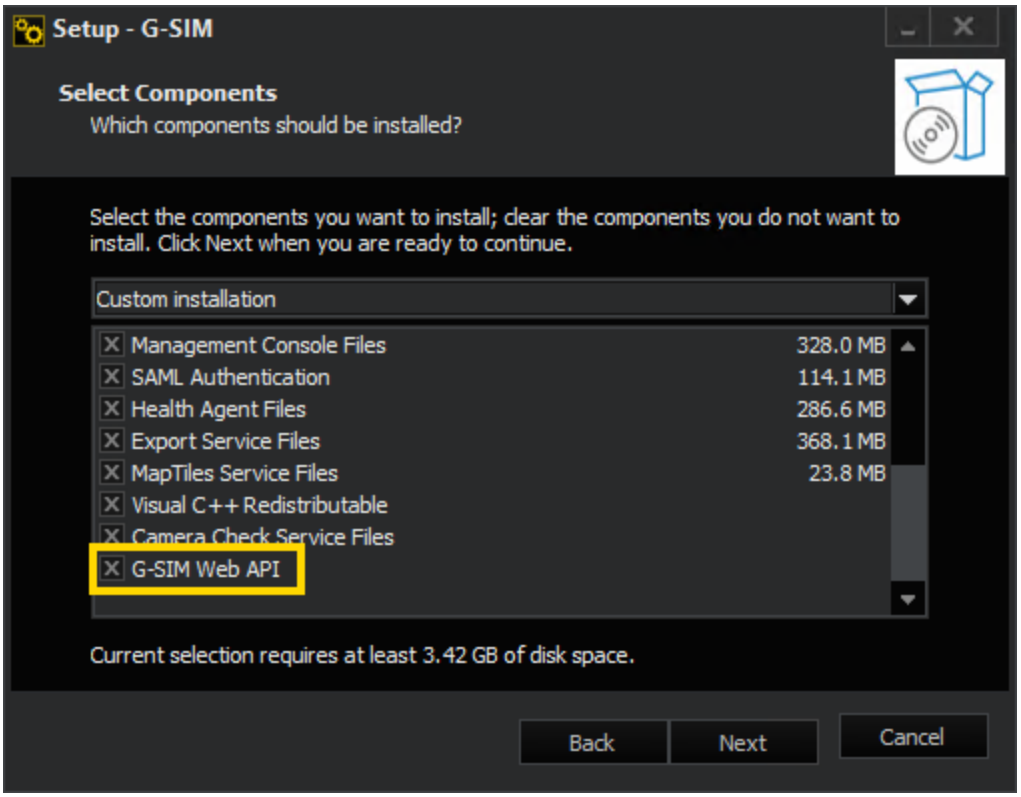
Install the G-SIM Web API using the G-SIM installer on the G-SIM server or a separate server.

Requirement:
G-SIM 12 or newer is required to install the G-SIM Web API.

The use of a G-SIM cluster or the global function is not supported by the G-SIM Web API.

How to install the G-SIM Web API:

1. Run the `G-SIM_Installer_xxx.exe` file on the G-SIM server or a separate server.
2. In the License Agreement dialog window, select the option I accept the agreement and click Next.
3. In the Select Destination Location dialog window, select the installation folder.
4. In the Select Components dialog window, select G-SIM Web API.



5. In the **Ready to Install** dialog window, click **Install**.
6. When the installation is completed, click **Finish**.

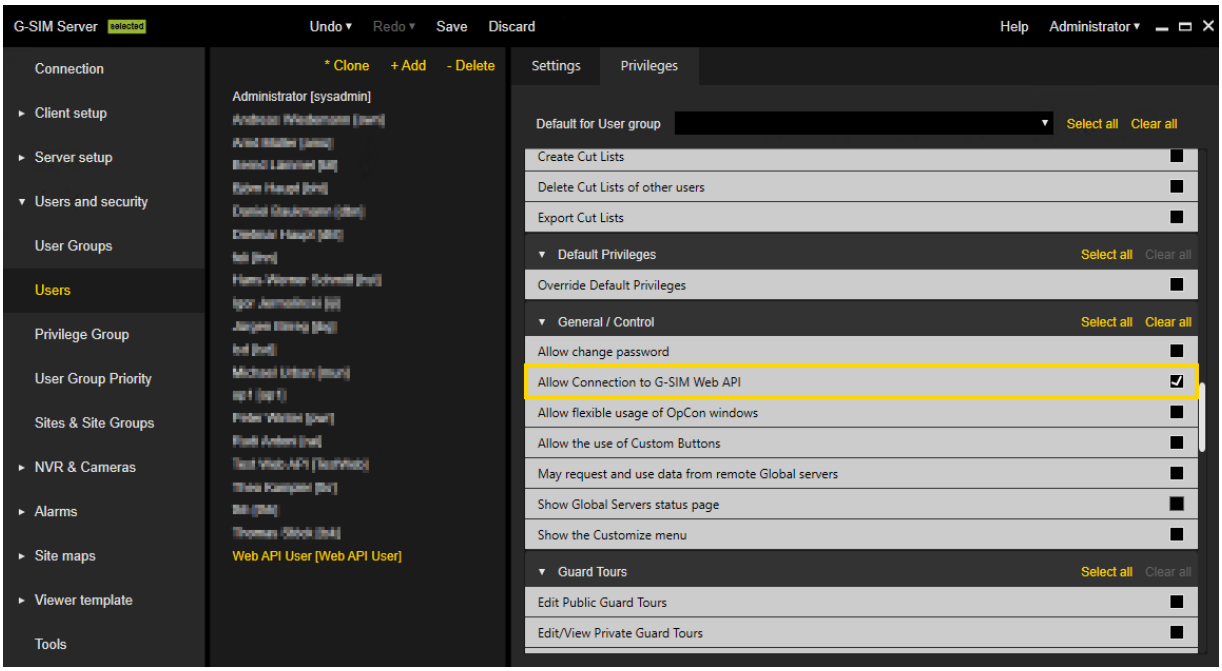
The G-SIM Web API is installed.

Enable Use of Web API

To use the G-SIM Web API, add a G-SIM Web API User in G-SIM and, if necessary, change the G-SIM server IP address in the `appsettings.json` file of the Web API.

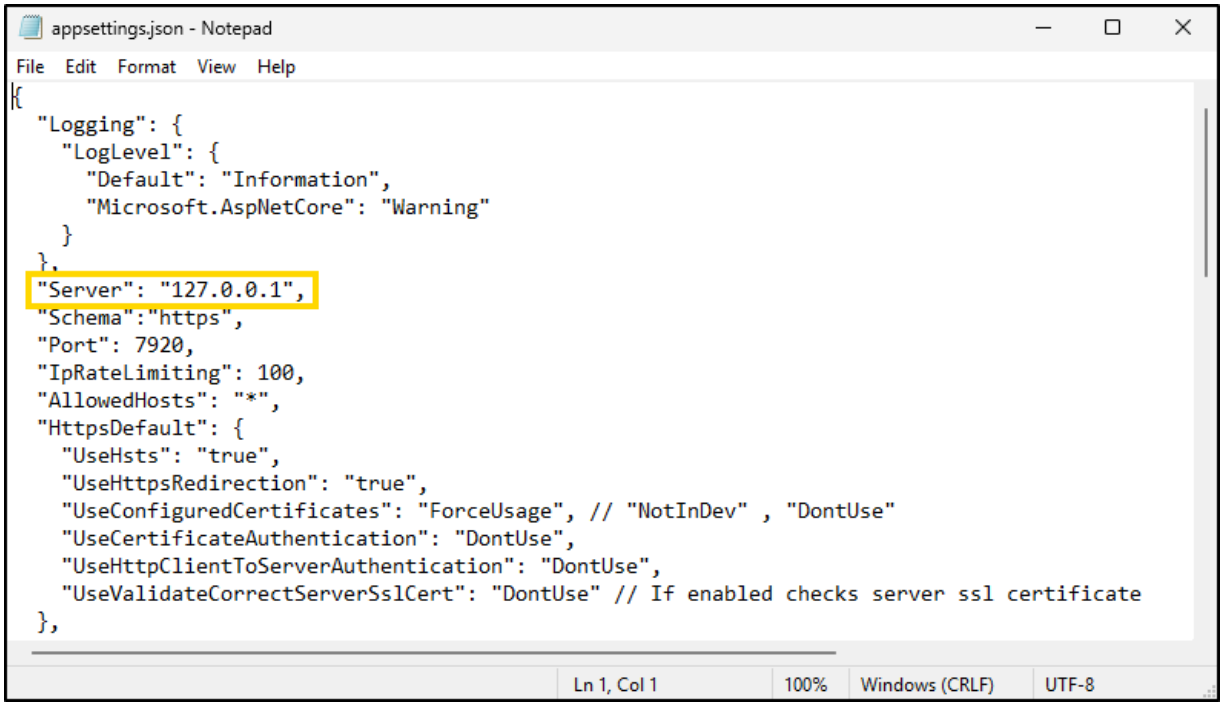
Add G-SIM Web API User:

In G-SIM, add a user for accessing the G-SIM Web API and enable the user privilege **Allow Connection to G-SIM Web API** for this user. This privilege allows the user to connect to the G-SIM Web API via the authentication endpoint. If this privilege is enabled for a user, all other privileges are disabled and the user cannot log in to the Management Console and make changes.



Change Server IP Address:

If the G-SIM Web API is installed on a server other than the G-SIM server, you must specify the IP address of the G-SIM server in the `appsettings.json` file. You can find this file in the installation directory `C:\Program Files\Geutebrueck\G-SIM Web API`. Change the `Server` setting and restart the **G-SIM Web API** service after saving your changes.


appsettings.json - Notepad
File Edit Format View Help
{
"Logging": {
"LogLevel": {
"Default": "Information",
"Microsoft.AspNetCore": "Warning"
}
},
"Server": "127.0.0.1",
"Schema":"https",
"Port": 7920,
"IpRateLimiting": 100,
"AllowedHosts": "*",
"HttpsDefault": {
"UseHsts": "true",
"UseHttpsRedirection": "true",
"UseConfiguredCertificates": "ForceUsage", // "NotInDev" , "DontUse"
"UseCertificateAuthentication": "DontUse",
"UseHttpClientToServerAuthentication": "DontUse",
"UseValidateCorrectServerSslCert": "DontUse" // If enabled checks server ssl certificate
},
Ln 1, Col 1
100%
Windows (CRLF)
UTF-8

Connection with G-Connect

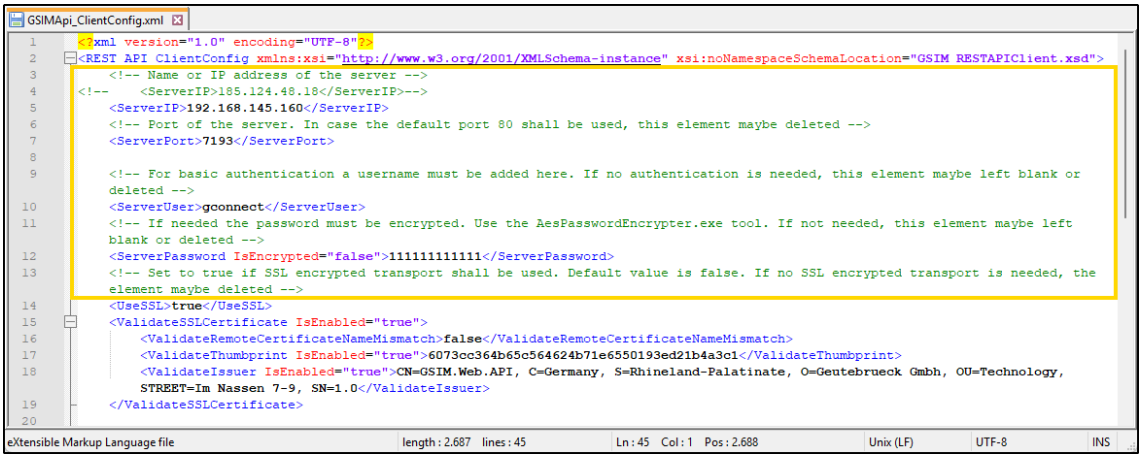
With the G-SIM Web API, you can use third-party map objects connected to G-Connect in G-SIM. You can add and configure the map objects in the Management Console and map them to objects on the third-party site. This allows you to display and use map objects such as doors, windows, gates, and similar in the Operator Console. You can display and control current statuses such as access alarms, opening and closing processes, and similar via the respective context menu in the Operator Console (for further information, see G-SIM documentation).

Requirements:
- G-Connect 6.0.0 or newer
- NuGet package Microsoft.AspNetCore.SignalR.Client

How to connect the G-SIM Web API with G-Connect:

To use third-party map objects connected to G-Connect in G-SIM, connect G-Connect to the G-SIM Web API WebSocket (SignalR hub).

1. Install G-Connect.
2. In the G-Connect configuration file `GSIMApi_ClientConfig.xml`, specify the connection data of the G-SIM Web API.



Value	Description
<ServerIP>	Enter the IP address of the G-SIM Web API server.

Value	Description
<ServerPort>	Enter the port of the G-SIM Web API server.
<ServerUser>	Enter the login name of the G-SIM Web API user (see **Add G-SIM Web API User:**). **The user privilege Allow Connection to G-SIM Web API must be enabled for this user.**
<ServerPassword>	Enter the password of the G-SIM Web API user.

3. Save your changes.

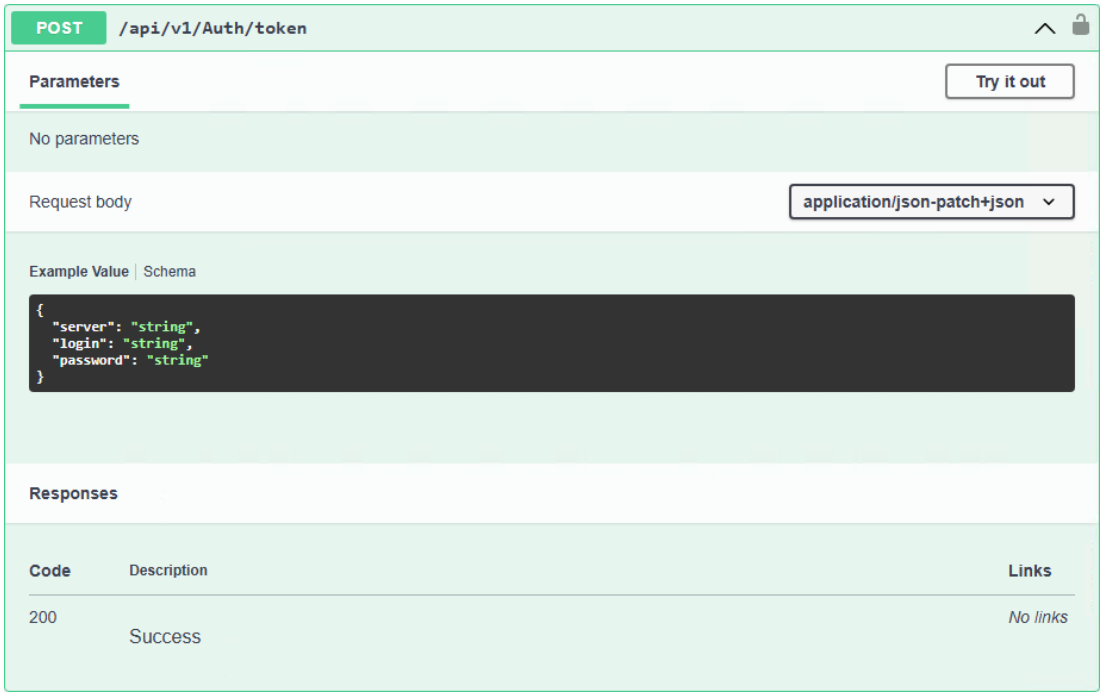
An access token is created, which is used to call the G-SIM Web API endpoints (see **G-Connect Endpoints**). If no connection could be established and no access token could be created, an error message will be displayed. You can also check your connection via the authentication in Swagger (see **Authentication in Swagger**).

G-Connect Endpoints

G-SIM Web API endpoints for the connection with of G-Connect.

Open Swagger:
You can open the Swagger web interface via the URL `https://localhost or host-ip:7193/swagger/index.html`. The host IP is the IP address of the G-SIM Web API server.

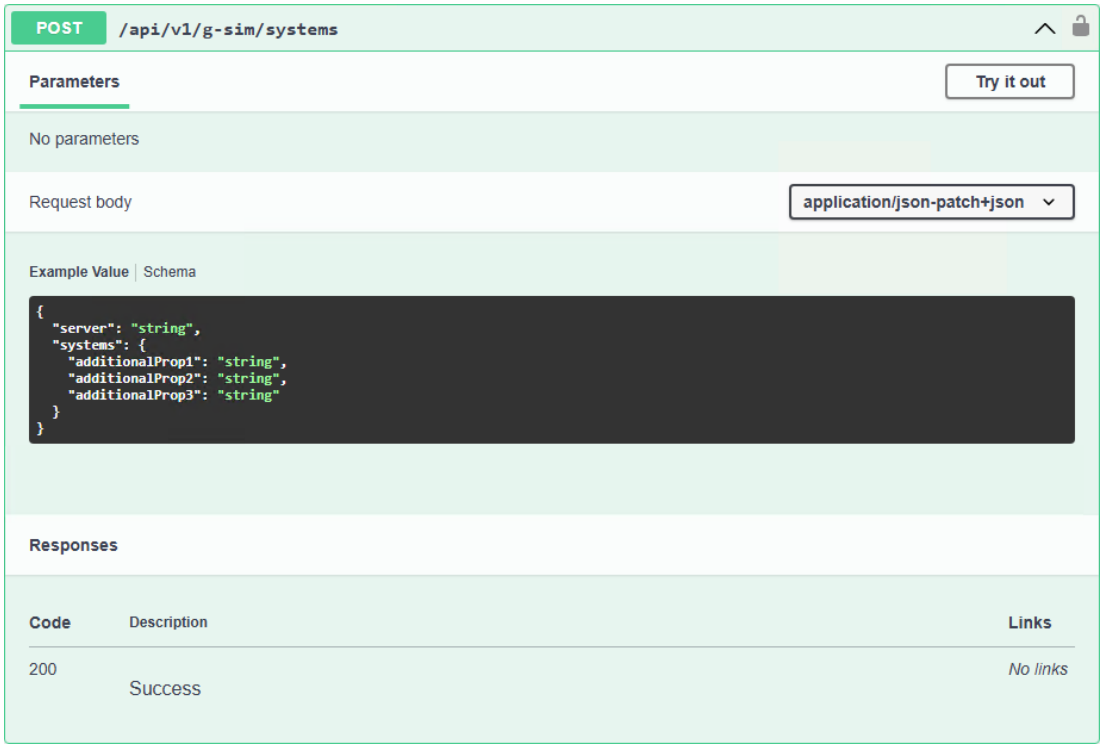
/api/v1/Auth/token



Example:

```
{
  "server":"127.0.0.1",
  "login": "Web API User",
  "password": "API123"
}
```

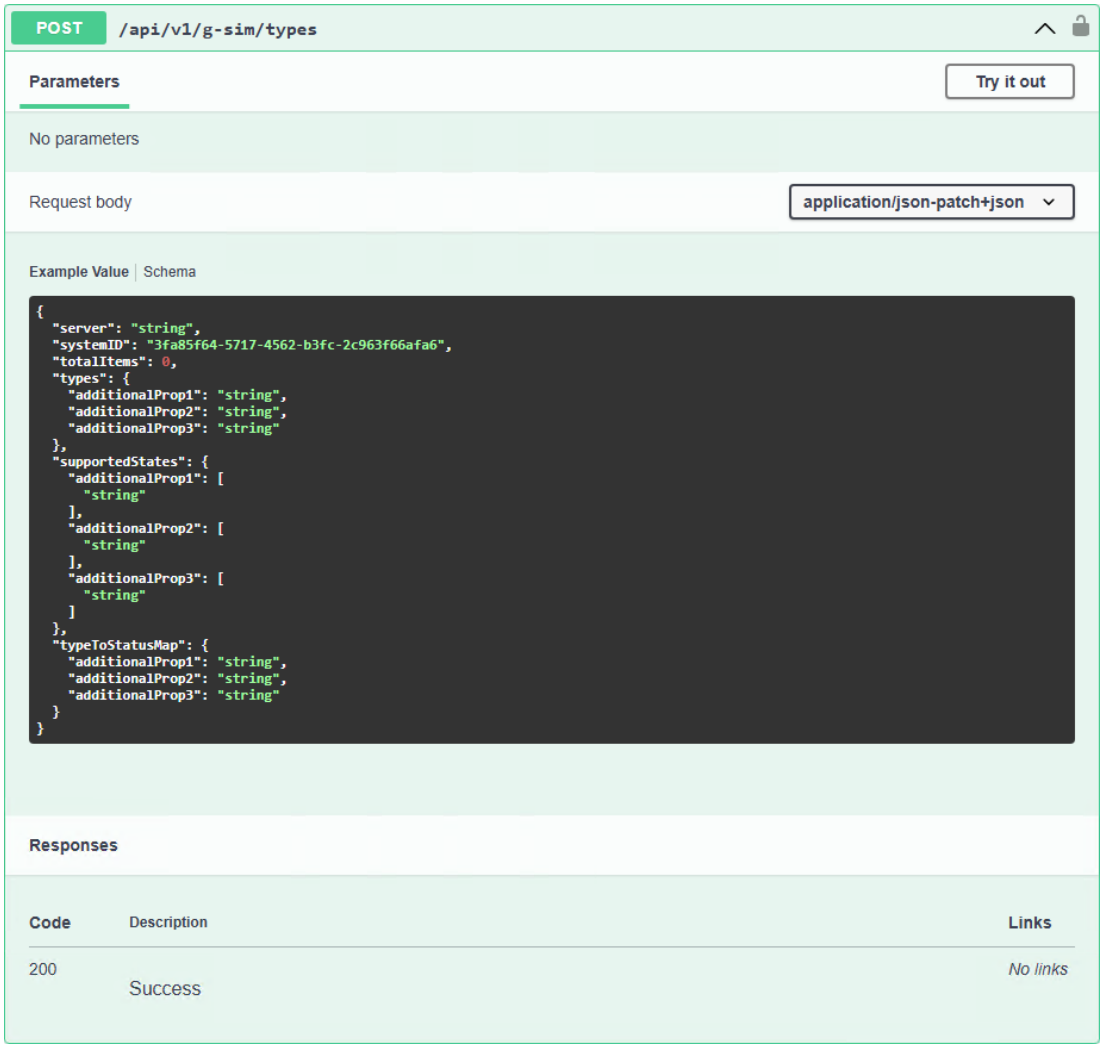
/api/v1/g-sim/systems



Example:

```
public class SystemsDto
{
    public string? Server { get; set; }

    public Dictionary<Guid, string> Systems { get; set; }
}
```

/api/v1/g-sim/types

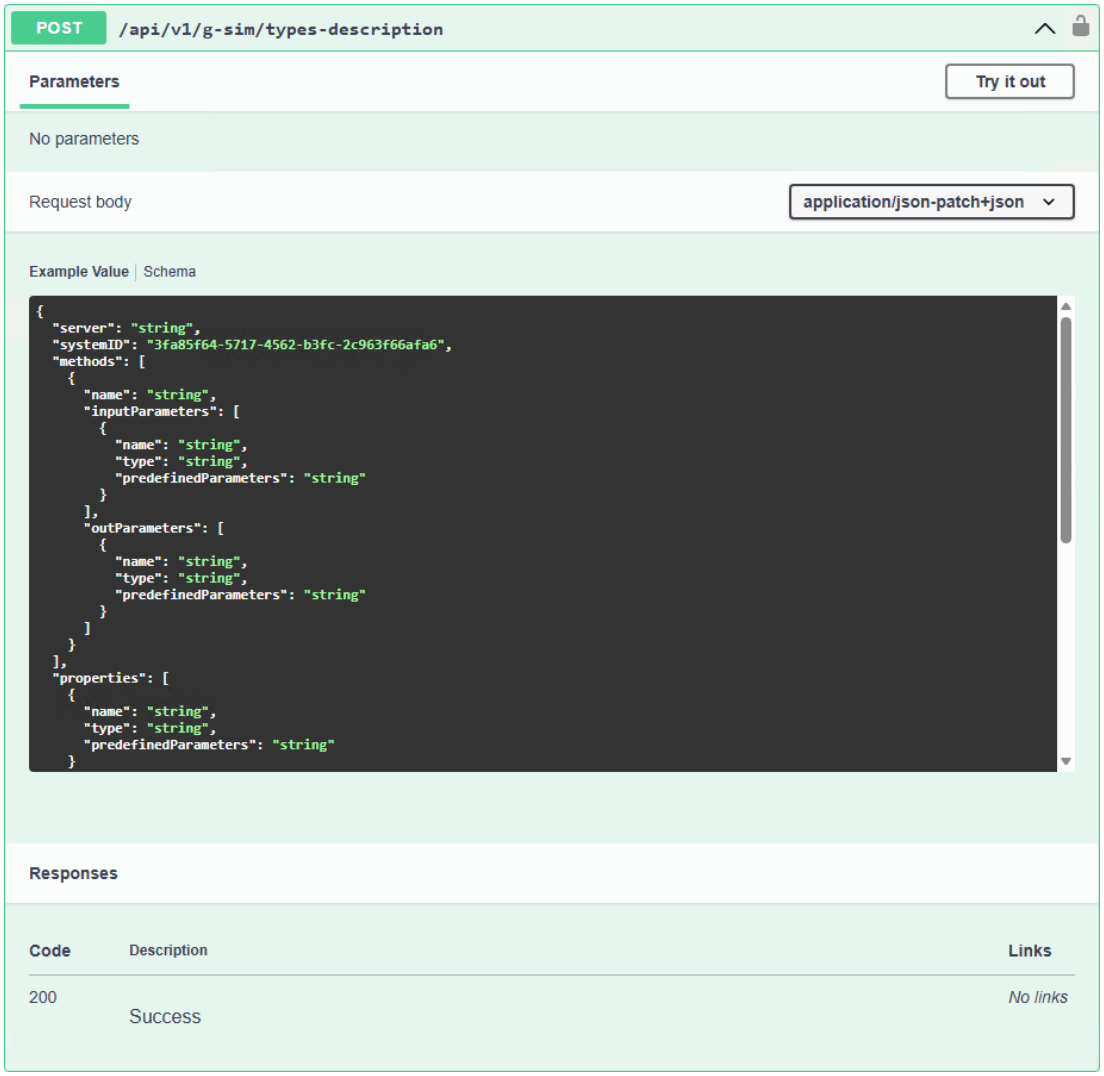


Example:

```
public class LenelTypesDto
{
    public int TotalItems { get; set; }

    public Dictionary<string, string> Types { get; set; }

    public Dictionary<string, List<string>> SupportedStates {
get; set; }

    public Dictionary<string, string> TypeToStatusMap { get;
set; }
```

```
    public Guid SystemID { get; set; }

    public string? Server { get; set; }
}
```

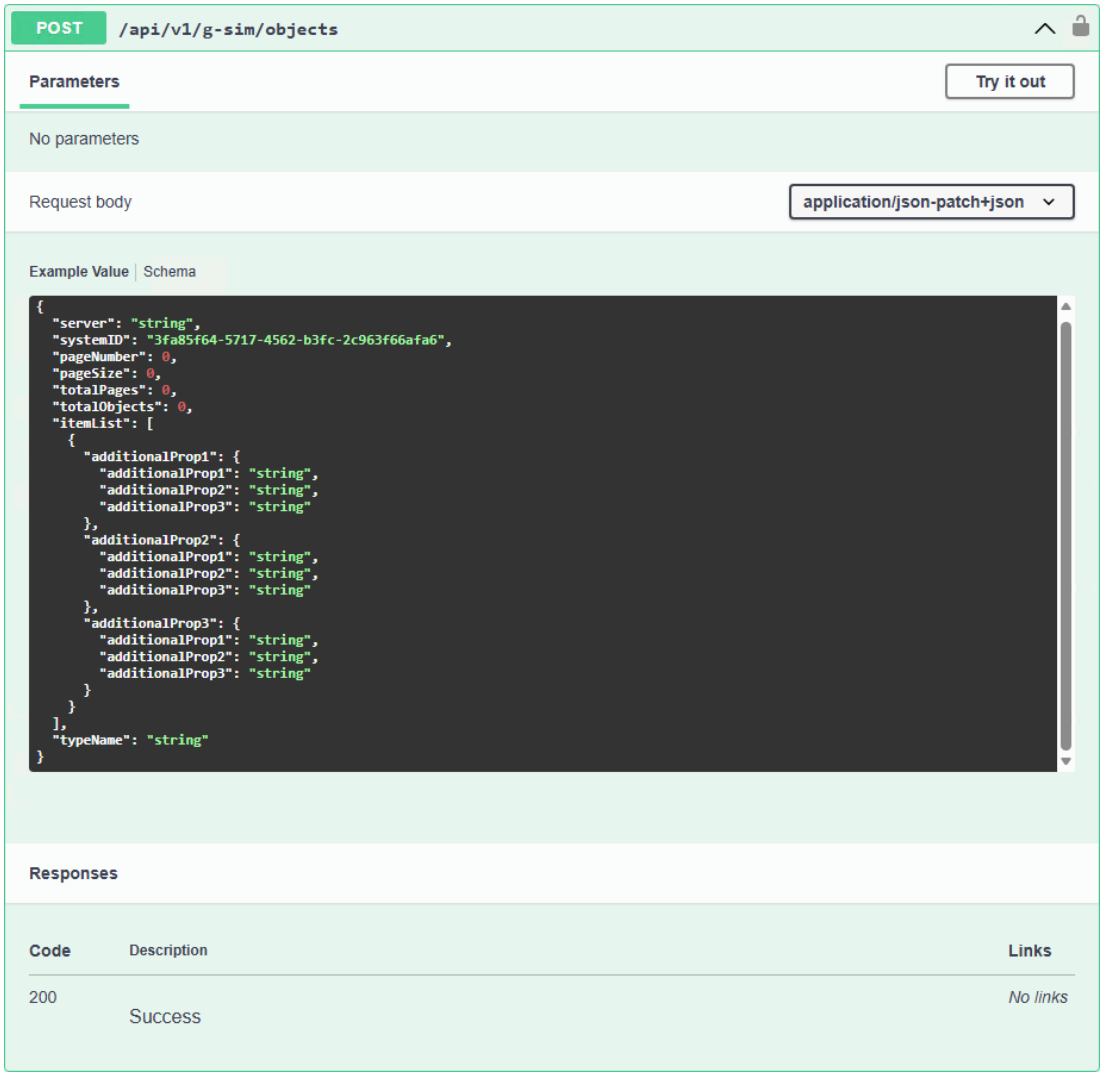
/api/v1/g-sim/types-description



Example:

```
public class LenelTypeDescriptionDto
{
    public List<Method> Methods { get; set; }

    public List<Parameter> Properties { get; set; }

    public string TypeName { get; set; }

    public Dictionary<string, List<PredefinedParameter>> Pre-
definedParameters { get; set; }

    public Guid SystemID { get; set; }

    public string? Server { get; set; }
}
```

/api/v1/g-sim/objects



POST /api/v1/g-sim/objects

Parameters — Try it out

No parameters

Request body — application/json-patch+json

Example Value | Schema


```
{
  "server": "string",
  "systemID": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
  "pageNumber": 0,
  "pageSize": 0,
  "totalPages": 0,
  "totalObjects": 0,
  "itemList": [
    {
      "additionalProp1": {
        "additionalProp1": "string",
        "additionalProp2": "string",
        "additionalProp3": "string"
      },
      "additionalProp2": {
        "additionalProp1": "string",
        "additionalProp2": "string",
        "additionalProp3": "string"
      },
      "additionalProp3": {
        "additionalProp1": "string",
        "additionalProp2": "string",
        "additionalProp3": "string"
      }
    }
  ],
  "typeName": "string"
}
```


Responses

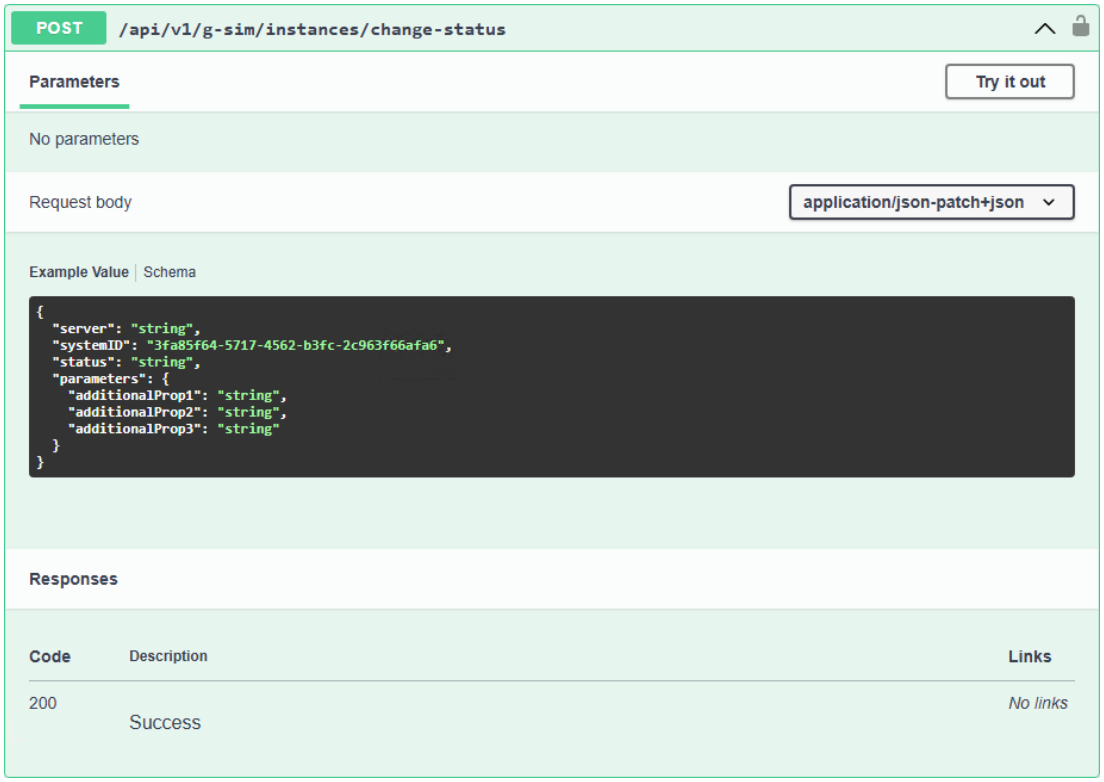
Code	Description	Links
200	Success	*No links*

Example:

```
public class LenelInstanceDto
{
    public List<Dictionary<string, Dictionary<string, string>>>
ItemList { get; set; }

    public string TypeName { get; set; }

    public int PageNumber { get; set; }

    public int PageSize { get; set; }
```

```
    public int TotalPages { get; set; }

    public int TotalObjects { get; set; }

    public Guid SystemID { get; set; }

    public string? Server { get; set; }
}
```

/api/v1/g-sim/instances/change-status

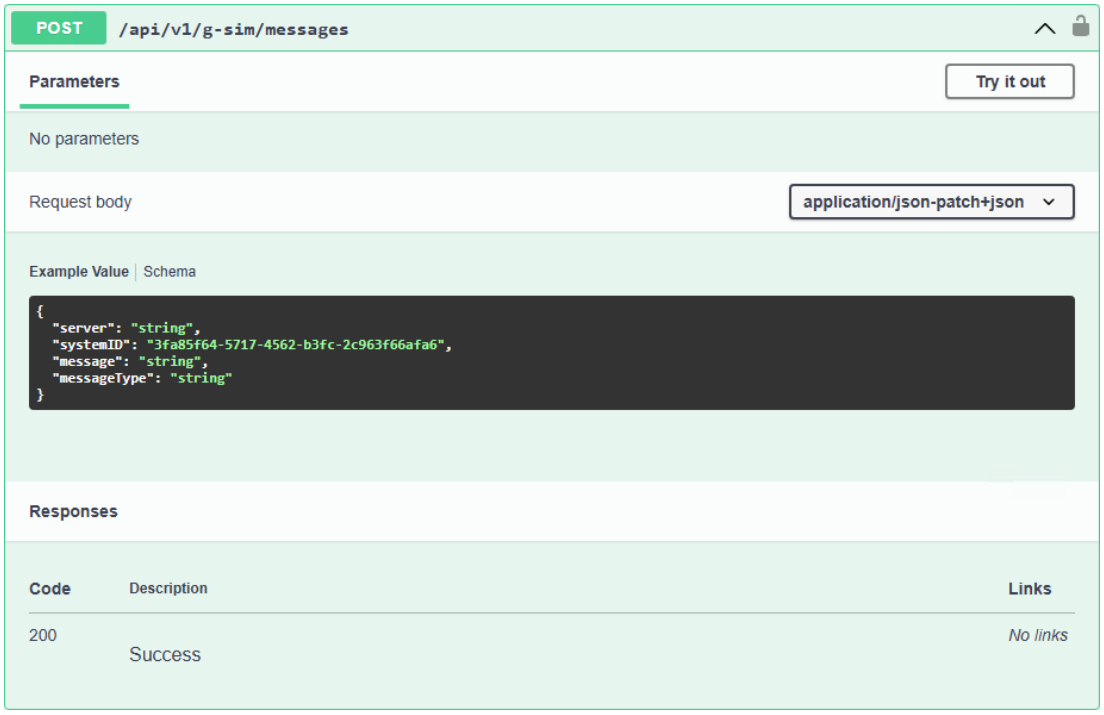


Example:

```
public class ChangeStatusDto
{
    public string Status { get; set; }
```

```
    public Dictionary<string, string> Parameters { get; set; }

    public Guid SystemID { get; set; }

    public string? Server { get; set; }
}
```

/api/v1/g-sim/messages



Example:

```
public class MessageModelDto
{
    public string Message { get; set; }

    public string MessageType { get; set;

    public Guid SystemID { get; set; }

    public string? Server { get; set; }
```

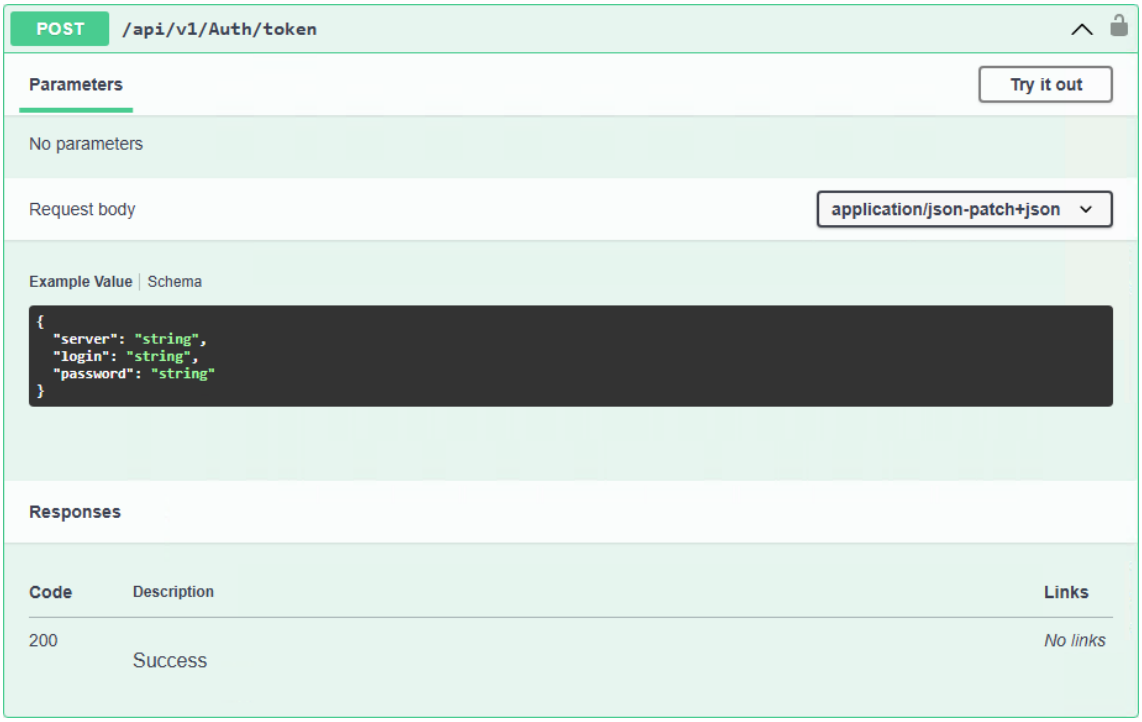
```
}
```

Authentication in Swagger

Use the authentication endpoint /api/v1/Auth/token in Swagger, to authenticate with the G-SIM server and check your connection data.

Open Swagger:
You can open the Swagger web interface via the URL `https://localhost or host-ip:7193/swagger/index.html`. The host IP is the IP address of the G-SIM Web API server.

1. Open the endpoint /api/v1/Auth/token and click Try it out.



2. In the Request body, specify the connection data of the G-SIM Web API.

Value	Description
server	If the G-SIM Web API is installed on a server other than the G-SIM server, enter the IP address of the G-SIM Web API server. If the G-SIM Web API is installed on the same server as the G-SIM server, this setting is optional. If the value is null, loc-

Value	Description
	alhost is used.
login	Enter the login name of the G-SIM Web API user. **The user privilege Allow Connection to G-SIM Web API must be enabled for this user.**
password	Enter the password of the G-SIM Web API user.

Example:

```
{
  "server":"127.0.0.1",
  "login": "Web API User",
  "password": "API123"
}
```

3. Click **Execute**.

If you execute the request and the call is successful, your access token will be displayed in the response body. This token is a mandatory parameter for every Web API call of the endpoints in order to identify the G-SIM server authentication. If you want to call the endpoints via Swagger, you must authorize yourself in Swagger with this access token.

Example:

```
{
  "access_token": "AQAAANCMnd8BFdERjHoAwE_Cl-sBAAAAock-
gFKrZaEGpVCukB5pglgAAAAACAAAAAAAQZgAAAAEAACAAAAB8VKxQagH5yltFrFjgjhS_
yVlSv4-Ee4U8yGZzk8FdNAAAAAAOgAAAAAIAACAAAAB2F4kGFmVegC6R7_
UWKa2ReLST9Lr9B78gT2Ha1SQBlcAAAAD__ky4cN51smb-
cb8ySSZY8d6j39vQ6j9MfFr1kkTQqVx-
c40c2eBRZ0B5BgKPohRsVBhF7kwFcl0aTurPbC7px-6iFoX2UkOovwPl5ggKxeJaa-
S5SwWv0OLFa4xW_0RplScOdUcFSFEc6sgPmFI1OrjE_yU3ZrAJWHqTcgJWyYEp_-Li_e3t-
HzUDcorCou7biM9snGKW7tCtypvFrpk3E1hxqpvf9-6VQy9R8VkaPkpJ4ekDiiXA_
Aj0BGzInqvtAAAAAi8lkhCNvyhRz_5Bp0RuomKfPQzqSvjSz1cNeXtzQdMP5cLb-
duKOCK5N7KxDBxlf6IhB9ouq9fENWz9LWR1kvcQ",
  "expires_in": 86399
}
```

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