



Location Intelligence
Infrastructure Asset Management

Confirm[®]

Confirm Web API

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Specifications

The following sections outline all the Specifications that exist within the Confirm functionality.

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Confirm Web API

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Confirm Web API

Introduction

The Confirm Web API is a set of RESTful web APIs, which allows to retrieve and modify data in Confirm database. The APIs are available automatically with the Confirm web interface.

Currently the APIs can be categorized into two types - Create/Update API and Query API.

Create/Update API

Currently this can be used to modify the following entities:

Entity	Operations
Features	Create Feature <ul style="list-style-type: none"> • Feature Conditions • Feature Attributes • Feature Measurements • Feature Dates Update Feature <ul style="list-style-type: none"> • Feature Conditions • Feature Attributes • Feature Measurements • Feature Dates Note: Smart Attributes are not supported.
Jobs	Create a Job Update the Status of a Job Commit a Job
Defects	Create a Defect
CentralEnquiries	Add Images and Documents to an Enquiry

Create/Update API - Schema Definition

For more detailed information on how to use the Confirm Web API, refer to the schema definition:

- ConfirmWebApi.yaml

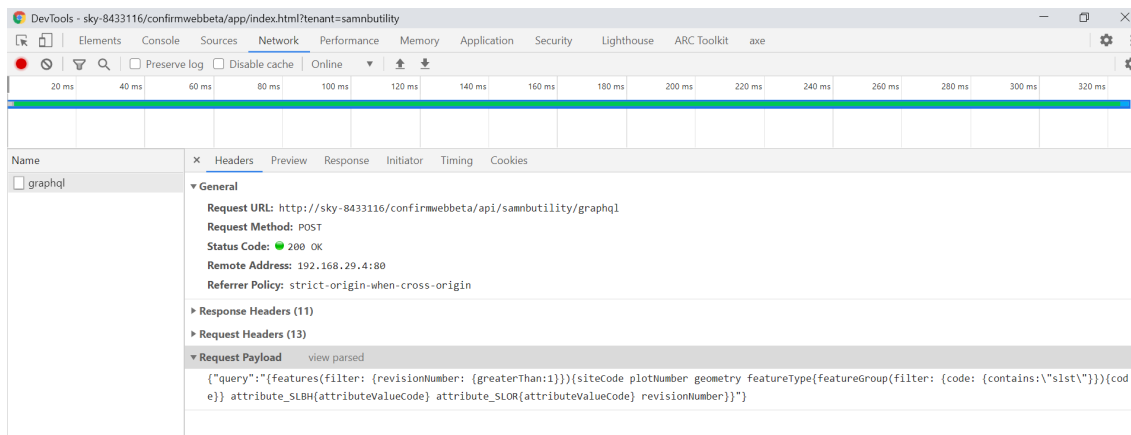
Query API

This API is designed to allow 3rd party systems to get data from Confirm. It is developed using GraphQL language, which gives more flexibility and efficiency. It allows users to ask for what they need and nothing more.

The GraphQL query can be generated either via **Confirm Web - Reporting interface** or directly using GraphQL Introspection.

The query can be captured from Confirm Web - Reporting interface using the browser once a report is run.

This can be done in multiple ways, developer console in browsers being one of them. Sample screenshot from chrome browser is as below:

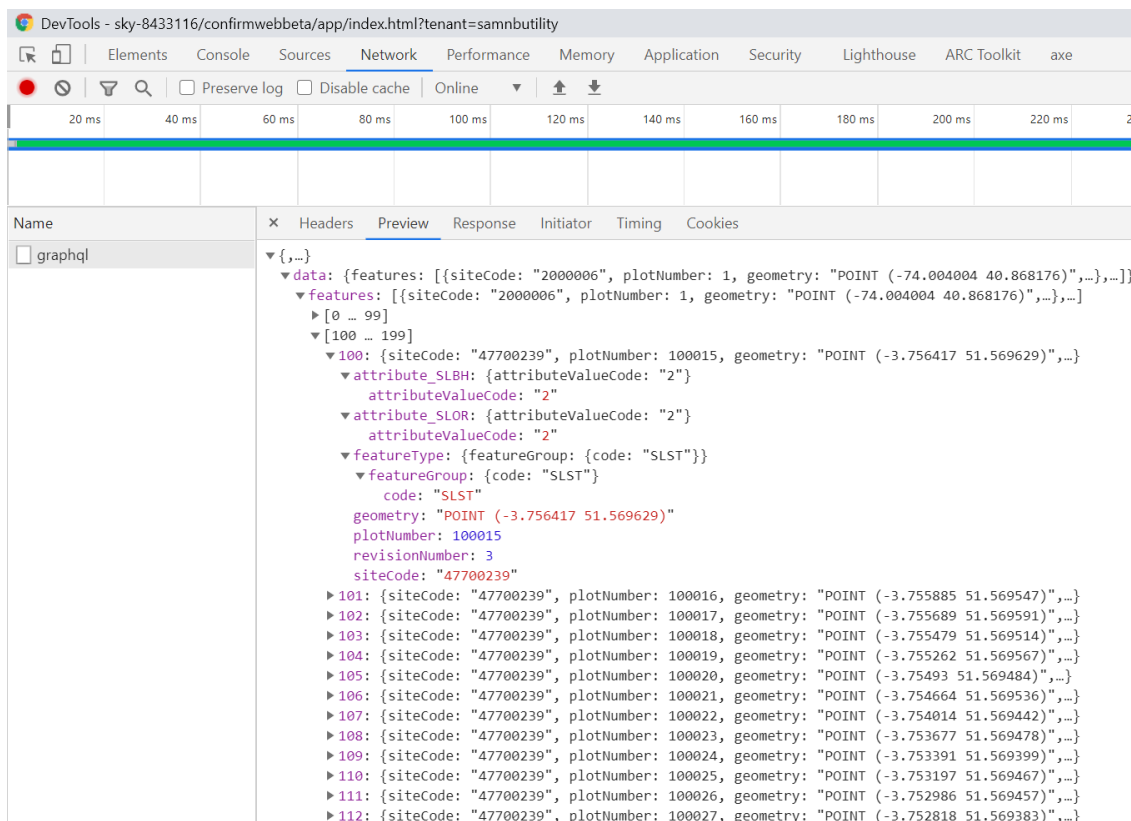


The value of query property (without quotes) within 'Request Payload' is the GraphQL query.

Sample GraphQL query is below:

```
{features(filter: {revisionNumber: {greaterThan:1}}){siteCode plotNumber geometry featureType{featureGroup(filter: {code: {contains:"slst"}}){code}} attribute_SLBH{attributeValueCode} attribute_SLOR{attributeValueCode} revisionNumber}}
```

The results are returned in the JSON format and can be seen in the developer console of the browser as well. Sample screen-shot from chrome browser below:



The captured query can also be run in a REST API client (like Postman), GraphQL query needs to be supplied as a query parameter in the GET request. Sample URL below:

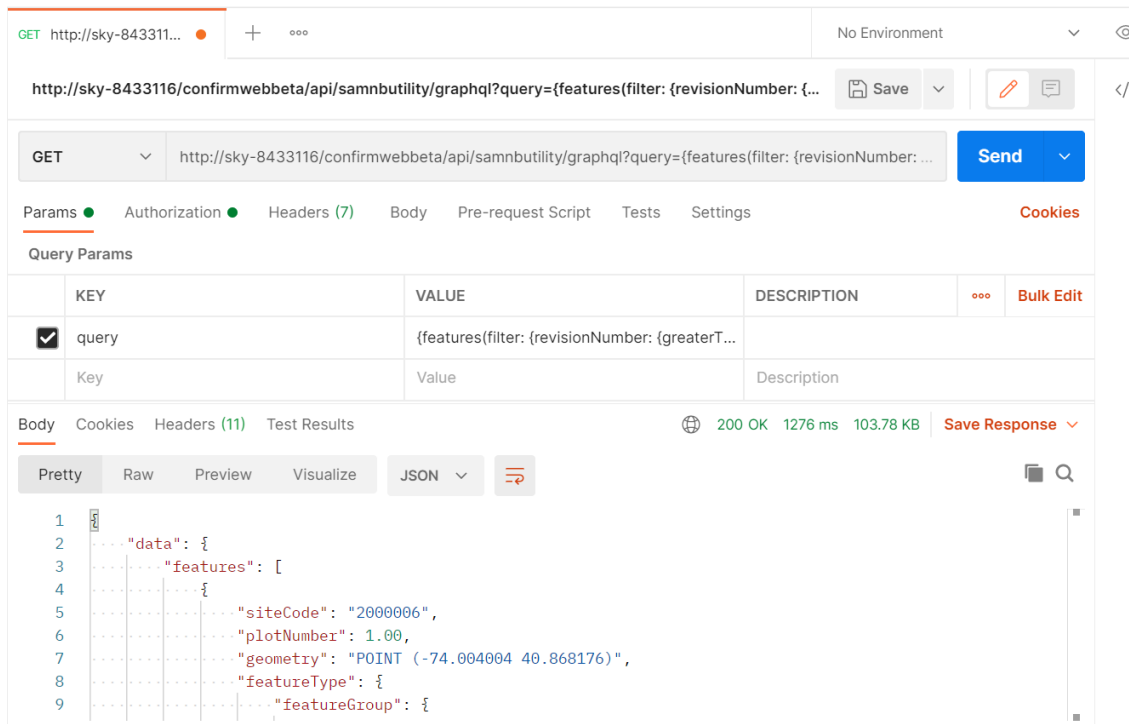
<https://ConfirmWebServer/ConfirmWeb/api/DatabaseName/graphql>

Sample use case of Query API - GIS Synchronisation

The external GIS systems can use this API to get the Feature data from Confirm.

GIS synchronization is based on Revision Number field hence it needs be part of API requests. Revision Number is used to keep track of when a feature was last updated so that only Confirm Features that have changed since the last synchronisation are fetched.

The response of this would be JSON list of features with specified columns filtered by the criteria specified in the query. Below is the sample screen-shot of GET API run in the Postman tool:



Note: A revision number could include up to 1000 features. Hence it is recommended to have a maximum revision number on GraphQL queries when performing initial synchronization in order to limit the results.

Confirm Web - API Authentication

Authentication for the Confirm Web API can be done using either OAuth or an API Key linked with a Confirm User. See the pages listed below for more details.

Generating an OAuth token

Follow the steps to generate an OAuth token:

1. Obtain your *API Key (Username)* and *Secret (password)* from Confirm system administrator
2. To generate the OAuth Token, encode your credentials (API Key and Secret) using base64 computation mechanism. To do this, provide API KEY and Secret to the base64 encoder (online encoder can be used), and generate the encoded 'base64value'.

- The following format should be used while computing the {BASE64VALUE}:
 {API KEY}:{SECRET}
- Enter the generated 'base64value' in the header of the request and call the token URI as shown below:

```
Authorization: Basic {base64Value}
Content-Type: application/x-www-form-urlencoded
POST {Confirm web url}/api/{tenant}/oauth/token
grant_type=client_credentials
```

Here, {tenant} is the tenant name and {Confirm web url} is the URL where Confirm web is deployed, like <https://ConfirmWebServer/ConfirmWeb/>.

- The access token is returned as follows:

```
{
  "access_token": "{your access token as a Base64 encoded value}",
  "token_type": "bearer",
  "expires_in": {The expiry time in seconds}
}
```

Authenticating with an API Key

Follow the steps to generate an API Key for a Confirm User and use in a Confirm Web API:

- On the User Security screen use the API Key button to generate an API for the User. Make sure you store this key securely, since it will not be accessible directly in Confirm again.
- The following format should be used while computing the {BASE64VALUE}:
 {username}:{api key}
- Enter the generated 'base64value' in the header of the request and call the Confirm Web URI as shown below:

```
Authorization: Basic {base64Value}
```