

FIWARE POI-DP GE API v4 Specification

DATE: 14

This version:

<http://fiwarepoi.apiblackprint.org/v1.0>

Latest version:

<http://fiwarepoi.apiblackprint.org/latest>

Editors

1. Ari Okkonen, Adminotech Oy

Copyright

This specification is licensed under the [FIWARE Open Specification License] (http://forge.fiware.org/plugins/mediawiki/wiki/fiware/index.php/FIWARE_Open_Specification_Legal_Notice_%28implicit_patents_license%29).

Abstract

FIWARE Points of Interest Generic Enabler R4

FIWARE POI (Points of interest) Generic Enabler API facilitates

- Storing information related to locations
- Relate any information to places, e.g.
 - Tourist attractions / services
 - Photos, videos, 3D content
 - Special location data of your business
 - Imaginary items of an outdoor game
 - ...
- Search information by location and other criteria
- Store information by location
- Develop an application that utilizes those capabilities

Specially FIWARE POI Generic Enabler API allows you to

- **combine** your own data with public POI data
- **speed up** mobile operation by fetching only the data your application needs
- define and use **own data structures**, if need for extra flexibility
- **distribute** your service and data to several separately managed servers

- store texts and links in **several languages**

REST API

Status of this document

Final version of the FIWARE POI DP GE API R4

Table of Contents

| | |
|--|----|
| FIWARE POI-DP GE API v4 Specification | 1 |
| Editors | 1 |
| Copyright | 1 |
| Abstract | 1 |
| REST API | 2 |
| Status of this document | 2 |
| Table of Contents | 3 |
| API Specification | 6 |
| Platform | 6 |
| Get Components [/get_components] | 6 |
| Get Components - GET /get_components | 6 |
| Query | 6 |
| Radial Search [/radial_search] | 7 |
| Radial Search - GET /radial_search | 7 |
| Bounding Box Search [/bbox_search] | 8 |
| Bounding Box Search - GET /bbox_search | 8 |
| Get POIs [/get_pois] | 9 |
| Get POIs - GET /get_pois | 9 |
| Update | 9 |
| Add POI [/add_poi] | 9 |
| Add POI - POST /add_poi | 9 |
| Update POI [/update_poi] | 10 |
| Update POI - POST /update_poi | 10 |
| Delete POI [/delete_poi] | 10 |
| Delete POI - DELETE /delete_poi | 10 |
| Examples | 10 |
| Platform | 10 |
| Get Components [/get_components] | 10 |
| Get Components - GET /get_components | 11 |
| Query | 11 |
| Radial Search [/radial_search] | 11 |
| Radial Search - GET /radial_search | 11 |
| Bounding Box Search [/bbox_search] | 12 |
| Bounding Box Search - GET /bbox_search | 12 |
| Get POIs [/get_pois] | 14 |
| Get POIs - GET /get_pois | 14 |
| Update | 15 |
| Add POI [/add_poi] | 15 |
| Add POI - POST /add_poi | 15 |
| Update POI [/update_poi] | 16 |
| Update POI - POST /update_poi | 16 |
| Delete POI [/delete_poi] | 17 |
| Delete POI - DELETE /delete_poi | 17 |

API Specification

Platform

Get Components [/get_components]

Get Components - GET /get_components

Return the list of POI data components available from this server.

Response 200 (application/json)

[Go to example](#)

[View in Apiary \(http://docs.fiwarepoi.apiary.io/#reference/platform/get-components/get-components\)](http://docs.fiwarepoi.apiary.io/#reference/platform/get-components/get-components)

Query

Radial Search [/radial_search]

Radial Search - GET /radial_search

Return the data of POIs within a given distance from a given location.

Parameters

lat (Required, number)

Latitude of the center of the search circle [degrees]

lon (Required, number)

Longitude of the center of the search circle [degrees]

radius (Optional, number)

Radius of the search circle [meters], default is implementation dependent

category (Optional, string)

POI category/categories to be included to results. Several categories can be given by separating them with commas. If this parameter is not given, all categories are included.

component (Optional, string)

POI data component names to be included to results. Several component names can be given by separating them with commas. If this parameter is not given, all components are included.

max_results (Optional, number)

Maximum number of POIs returned.

begin_time (Optional, string)

When time of interest begins. ISO 8601 adaptation format is used for times. However, it is allowed to leave the time zone definition out. If time zone is missing, the local time zone of the POI is used.

end_time (string, optional) - When time of interest ends. Format as for begin_time.

Required, if begin_time is defined. (Required)

min_minutes (number, optional) - Minimum time of availability in minutes. Optional. If begin_time is defined, default (Required)

Response 200 (application/json)

[Go to example](#)

[View in Apiary \(http://docs.fiwarepoi.apiary.io/#reference/query/radial-search/radial-search\)](http://docs.fiwarepoi.apiary.io/#reference/query/radial-search/radial-search)

Bounding Box Search [/bbox_search]

Bounding Box Search - GET /bbox_search

Return the data of POIs within a given bounding box.

Parameters

north (Required, number)

Latitude of the northern edge of the bounding box [degrees]

south (Required, number)

Latitude of the southern edge of the bounding box [degrees]

east (Required, number)

Longitude of the eastern edge of the bounding box [degrees]

west (Required, number)

Longitude of the western edge of the bounding box [degrees]

category (Optional, string)

POI category/categories to be included to results. Several categories can be given by separating them with commas. If this parameter is not given, all categories are included.

component (Optional, string)

POI data component names to be included to results. Several component names can be given by separating them with commas. If this parameter is not given, all components are included.

max_results (Optional, number)

Maximum number of POIs returned.

begin_time (Optional, string)

When time of interest begins. ISO 8601 adaptation format is used for times. However, it is allowed to leave the time zone definition out. If time zone is missing, the local time zone of the POI is used.

end_time (string, optional) - When time of interest ends. Format as for begin_time.

Required, if begin_time is defined. (Required)

min_minutes (number, optional) - Minimum time of availability in minutes. Optional. If begin_time is defined, default (Required)

Response 200 (application/json)

[Go to example](#)

[View in Apiary \(http://docs.fiwarepoi.apiary.io/#reference/query/bounding-box-search/bounding-box-search\)](http://docs.fiwarepoi.apiary.io/#reference/query/bounding-box-search/bounding-box-search)

Get POIs [/get_pois]

Get POIs - GET /get_pois

Return the data of POIs listed in the query. This is intended to get additional information - other components - about interesting POIs.

Parameters

poi_id (Required, string)

UUID of the POI. Several UUIDs can be given by separating them with commas.

component (Optional, string)

POI data component names to be included to results. Several component names can be given by separating them with commas. If this parameter is not given, all components are included.

get_for_update (Optional, boolean)

The components requested are returned with all language and other variants and possible metadata for inspection and edit.

Response 200 (application/json)

[Go to example](#)

[View in Apiary \(http://docs.fiwarepoi.apiary.io/#reference/query/get-pois/get-pois\)](http://docs.fiwarepoi.apiary.io/#reference/query/get-pois/get-pois)

Update

Update operations should require authorization in order to prevent misuse. The details of the authorization mechanism are out of the scope of this specification.

Add POI [/add_poi]

Add POI - POST /add_poi

This function is used for adding a new POI entity into a database. The POI data is given as JSON in HTTP POST request. It generates a UUID for the new POI and returns it to the client in JSON format including the timestamp of the POI creation. The client can include different data components to the new POI by sending them along with the request.

The POSTed JSON must include only the content of a single POI, i.e. it must not contain a UUID as key as it is automatically generated by the server.

Request (application/json)

Response 200 (application/json)

[Go to example](#)

[View in Apiary \(http://docs.fiwarepoi.apiary.io/#reference/update/add-poi/add-poi\)](http://docs.fiwarepoi.apiary.io/#reference/update/add-poi/add-poi)

Update POI [/update_poi]

Update POI - POST /update_poi

This function is used for updating data of an existing POI entity. Existing data components can be modified or new ones can be added. Each data component contains a 'last modified' timestamp in order to prevent concurrency issues.

The updated POI data is given as JSON in HTTP POST request. The server responds with HTTP status messages indicating the success or failure of the operation.

Request (application/json)

Response 200 (text/plain)

[Go to example](#)

[View in Apiary \(http://docs.fiwarepoi.apiary.io/#reference/update/update-poi/update-poi\)](http://docs.fiwarepoi.apiary.io/#reference/update/update-poi/update-poi)

Delete POI [/delete_poi]

Delete POI - DELETE /delete_poi

Delete existing POI using HTTP DELETE request. The UUID of the POI to be deleted is given in the request as a URL parameter

Parameters

id (Required, string)

The UUID of the POI to be deleted

Response 200 (text/plain)

[Go to example](#)

[View in Apiary \(http://docs.fiwarepoi.apiary.io/#reference/update/delete-poi/delete-poi\)](http://docs.fiwarepoi.apiary.io/#reference/update/delete-poi/delete-poi)

Examples

Platform

Get Components [/get_components]

Get Components - GET /get_components

Response 200 (application/json)

Headers

Content-Type: application/json

Body

```
{
  "components": [
    "fw_core"
  ]
}
```

[Go to specification](#)

Query

Radial Search [/radial_search]

Radial Search - GET /radial_search

Parameters

lat (Required, number)

Latitude of the center of the search circle [degrees]

lon (Required, number)

Longitude of the center of the search circle [degrees]

radius (Optional, number)

Radius of the search circle [meters], default is implementation dependent

category (Optional, string)

POI category/categories to be included to results. Several categories can be given by separating them with commas. If this parameter is not given, all categories are included.

component (Optional, string)

POI data component names to be included to results. Several component names can be given by separating them with commas. If this parameter is not given, all components are included.

max_results (Optional, number)

Maximum number of POIs returned.

begin_time (Optional, string)

When time of interest begins. ISO 8601 adaptation format is used for times. However, it is allowed to leave the time zone definition out. If time zone is missing, the local time zone of the POI is used.

end_time (string, optional) - When time of interest ends. Format as for begin_time.

Required, if begin_time is defined. (Required)

min_minutes (number, optional) - Minimum time of availability in minutes. Optional.

If begin_time is defined, default (Required)

Response 200 (application/json)

Headers

Content-Type: application/json

Body

```
{
  "pois": {
    "6be4752b-fe6f-4c3a-98c1-13e5ccf01721": {
      "fw_core": {
        "category": "cafe",
        "location": {
          "wgs84": {
            "latitude": 65.059334,
            "longitude": 25.4664775
          }
        },
        "name": {
          "": "Aulakahvila"
        }
      }
    },
    "4c6754d9-0bb1-4962-b604-6f3fcc08a9ec": {
      "fw_core": {
        "category": "restaurant",
        "location": {
          "wgs84": {
            "latitude": 65.0581807,
            "longitude": 25.4667163
          }
        },
        "name": {
          "": "Discus"
        }
      }
    }
  }
}
```

[Go to specification](#)

Bounding Box Search [/bbox_search]

Bounding Box Search - GET /bbox_search

Parameters

north (Required, number)

Latitude of the northern edge of the bounding box [degrees]

south (Required, number)

Latitude of the southern edge of the bounding box [degrees]

east (Required, number)

Longitude of the eastern edge of the bounding box [degrees]

west (Required, number)

Longitude of the western edge of the bounding box [degrees]

category (Optional, string)

POI category/categories to be included to results. Several categories can be given by separating them with commas. If this parameter is not given, all categories are included.

component (Optional, string)

POI data component names to be included to results. Several component names can be given by separating them with commas. If this parameter is not given, all components are included.

max_results (Optional, number)

Maximum number of POIs returned.

begin_time (Optional, string)

When time of interest begins. ISO 8601 adaptation format is used for times. However, it is allowed to leave the time zone definition out. If time zone is missing, the local time zone of the POI is used.

end_time (string, optional) - When time of interest ends. Format as for begin_time.

Required, if begin_time is defined. (Required)

min_minutes (number, optional) - Minimum time of availability in minutes. Optional.

If begin_time is defined, default (Required)

Response 200 (application/json)

Headers

Content-Type: application/json

Body

```
{
  "pois": {
    "6be4752b-fe6f-4c3a-98c1-13e5ccf01721": {
      "fw_core": {
        "category": "cafe",
        "location": {
          "wgs84": {
            "latitude": 65.059334,
            "longitude": 25.4664775
          }
        },
        "name": {
          "": "Aulakahvila"
        }
      }
    },
    "4c6754d9-0bb1-4962-b604-6f3fcc08a9ec": {
      "fw_core": {
        "category": "restaurant",
        "location": {
          "wgs84": {
```

[Go to specification](#)

```
}  
}  
}  
}  
}
```

[Go to specification](#)

Update

Add POI [/add_poi]

Add POI - POST /add_poi

Request (application/json)

Headers

Content-Type: application/json

Body

```
{  
  "fw_core": {  
    "category": "cafe",  
    "location": {  
      "wgs84" {  
        "latitude": 65.059334,  
        "longitude": 25.4664775  
      }  
    },  
    "name": {  
      "": "Aulakahvila"  
    }  
  }  
}
```

Response 200 (application/json)

Headers

Content-Type: application/json

Body

```
{  
  "created_poi": {
```

```
"uuid": "30ddf703-59f5-4448-8918-0f625a7e1122",  
"timestamp": 1394525977  
}  
}
```

[Go to specification](#)

Update POI [/update_poi]

Update POI - POST /update_poi

Request (application/json)

Headers

Content-Type: application/json

Body

```
{  
  "30ddf703-59f5-4448-8918-0f625a7e1122": {  
    "fw_core": {  
      "category": "cafe",  
      "location": {  
        "wgs84" {  
          "latitude": 65.059334,  
          "longitude": 25.4664775  
        }  
      },  
      "name": {  
        "": "Aulakahvila"  
      },  
      "description": {  
        "": "Cafe at the Univesity of Oulu"  
      }  
    }  
  }  
}
```

Response 200 (text/plain)

Headers

Content-Type: text/plain

Body

POI data updated succesfully

[Go to specification](#)

Delete POI [/delete_poi]

Delete POI - DELETE /delete_poi

Parameters

id (Required, string)

The UUID of the POI to be deleted

Response 200 (text/plain)

Headers

Content-Type: text/plain

Body

POI entity deleted succesfully

[Go to specification](#)