Service Layer API

The service layer is divided in subsections. This document contains the endpoints to all the service layer modules.

Account management

Description	Login
Method	POST
URI	/user/login
Headers	Content-type: application/json

Body Request	{
	  username: 'joaomartins',
	  password: '1234567'
	}

Body Response	Session token
HTTP Status Code	200 Login Successful 400 Bad Request (invalid field given) 401 Unauthorized (invalid credential pair username/password) 500 Internal Server Error
Attributes	- Username - Username of the user - Password - Password of the user

Description	Logout
Method	GET
URI	/user/logout
Headers	Content-type: application/json Authorization: <token>
Body Request	No request body
Body Response	The user that logged out
HTTP Status Code	● 200 Login Successful ● 401 Unauthorized (user not logged in) ● 500 Internal Server Error

Description	Authenticated user
Method	GET
URI	/user/me
Headers	Content-type: application/json Authorization: <token>
Body Request	The authenticated user
Body Response	200 Created
HTTP Status Code	● 200 Login Successful ● 401 Unauthorized (no user logged in) ● 500 Internal Server Error

Description	Create a user
Method	POST
URI	/user
Headers	Content-type: application/json Authorization: <token>

Body Request	{
	    name: 'André Oliveira',
	    username: 'andreoliveira98',
	    email: 'andreoliveira@gmail.com',
	    password: '1234567'
	}

Body Response	201 Created
HTTP Status Code	● 201 Created user ● 400 Bad Request (invalid field given) ● 500 Internal Server Error

Description	Gets the list of users whose attributes match the ones in the queries
Method	GET
URI	/user?name=Andre&email=andremartins@gmail.com
Headers	Content-type: application/json Authorization: <token>
Body Request	No req
Body Response	Returns the list of users whose name is Andre and email is andremartins@gmail.com
HTTP Status Code	● 200 Success ● 500 Internal Server Error

Description	Gets a user by it's id
Method	GET
URI	/user/:id
Headers	Content-type: application/json Authorization: <token>
Body Request	No req
Body Response	Returns the user with the given id
HTTP Status Code	● 200 Successfully returned user ● 400 Bad request ● 404 User not found ● 500 Internal Server Error

Description	Deletes a user by it's id
Method	DELETE
URI	/user/:id
Headers	Content-type: application/json Authorization: <token>
Body Request	No req
Body Response	Returns the user with the given id
HTTP Status Code	● 200 Successfully deleted the user ● 400 Bad request ● 404 User not found ● 500 Internal Server Error

Description	Modify a user by it's id
Method	PATCH
URI	/user/:id
Headers	Content-type: application/json Authorization: <token>

Body Request	{
	   Password: 'ABcd123!.''
	}

Body Response	Returns the modified user with the given id. The password was modified in the example above
HTTP Status Code	● 200 Successfully modified the user ● 400 Bad request ● 404 User not found ● 500 Internal Server Error

Stream management

Description	Get all streams
Method	GET
URI	/streams?interval_start=<begin_mark>&interval_end=<end_mark>
Headers	Content-type: application/json Authorization: <token>
Body Request	
Body Response	{ "total_streams": <total_streams>, "size": <size_of_user_streams_array> (string), "start": <start_time_mark> (string),

	“end”: <end_time_mark> (string),
	“user_streams”: [
	  “stream_id”: <stream_ID> (string),
	  “stream_name”: <stream_name> (string),
	  “created_at”: <creation_time_mark> (string),
	  “device_id”: <device_id> (string),
	  “type”: <stream_type> (string),
	  “description”: <description> (string)
	],
	  ...
	}

HTTP Status Code	● 200 Success ● 400 Bad request ● 401 Unauthorized ● 500 Internal Server Error
Attributes	
Notes	In response size, start and end will only show up if interval is specified

Description	Read stream details
Method	GET
URI	/streams/:stream_ID
Headers	Content-type: application/json Authorization: <token>
Body Request	

Body Response	{
	 “stream_ID”: <stream_ID> (string),
	 “stream_name”: <stream_name> (string),
	 “created_at”: <creation_time_mark> (string),
	 “device_id”: <device_id> (string),
	 “type”: <stream_type> (string),
	 “description”: <description> (string),
	 }

HTTP Status	● 200 Success ● 400 Bad request

Code	● 401 Unauthorized ● 500 Internal Server Error
Attributes	
Notes	

Description	Read stream values
Method	GET
URI	/streams/:stream_id:/values?interval_start=<begin_mark>&interval_end=<end_mark>
Headers	Content-type: application/json "TOKEN": <account_token>
Body Request	

Body Response	```
	[
	  {
	    "value": <value> (real),
	    "timestamp": <timestamp> (long),
	    "latitude": <latitude> (real),
	    "longitude": <longitude> (real)
	  },...
	]
	``

HTTP Status Code	● 200 OK ● 401 Unauthorized ● 404 Not Found ● 500 Internal Server Error

Device management

Description		Creates a device

Method		POST
URI		/devices
Headers		Content-type: application/json Authorization: <token>

Body Request		{
		  "device_ID": <device_ID> (string)
		  "device_name" : <device_name> (string),
		  "description": <device_description> (string),
		  "vertical": <vertical> (string),
		  "mobile": <is_mobile> (boolean),
		  "provider" : <provider-name> (string),
		  "municipality": <municipality> (string)
		}

Body Response		Content-type: application/json
		{
		  "status": "Creation successful",
		  "device_ID": <device_ID>,
		  "device_name": <device_name>,
		  "created_at": <timestamp>,
		  "mobile": <mobile>
		}

HTTP Status Code		● 201 Successfully created device ● 400 Bad request ● 401 Unauthorized ● 409 Conflict with already existent ● 500 Internal Server Error
Attributes		Obligatory: ● device_name - Name of the device ● device_ID - Device ID ● vertical - vertical of the device ● mobile - if the device is mobile or not Optional: ● description - brief description about the stream

Description	Get device by ID
Method	GET

URI	/devices/:device_id
Headers	Content-type: application/json "TOKEN": <account_token>
Body Request	

Body Response	{
	   "device_id": <device_ID> (string),
	   "device_name": <device_name> (string),
	   "created_at": <creation_time_mark> (string),
	   "vertical": <device_vertical> (string),
	   "mobile": <mobile> (boolean),
	   "description": <description> (string),
	   "locations":[{ timestamp: 12312321, latitude: 40.1231, longitude: -8.232 }, ...
	],
	   "streams": [
	     <stream_1>,...
	   ]
	 }

HTTP Status Code	● 200 Success ● 401 Unauthorized ● 404 Not Found ● 409 Conflict with already existent ● 500 Internal Server Error
Attributes	
Notes	

Description	Delete device by ID
Method	DELETE
URI	/devices/:device_id
Headers	Content-type: application/json "TOKEN": <account_token>
Body Request	
Body	

Response	
HTTP Status Code	● 204 No Content ● 400 Bad request ● 401 Unauthorized ● 409 Conflict with already existent ● 500 Internal Server Error
Attributes	
Notes	

Description	List all devices
Method	GET
URI	/devices?interval_start=<begin_mark>&interval_end=<end_mark>
Headers	Content-type: application/json "TOKEN": <account_token>
Body Request	

Body Response	{
	  "total_devices": <total_devices>,
	  "start": <start_time_mark> (string),
	  "end": <end_time_mark> (string),
	  "user_devices": [
	    "device_id": <device_ID> (string),
	    "device_name": <device_name> (string),
	    "created_at": <creation_time_mark> (string),
	    "vertical": <device_vertical> (string),
	    "mobile": <mobile> (boolean),
	    "description": <description> (string),
	    "latitude": <latitude> (double),
	    "longitude": <longitude> (double),
	    "streams": [
	      <stream_1>,...
	    ]

	], ...
HTTP Status Code	● 200 Success ● 400 Bad request ● 401 Unauthorized ● 500 Internal Server Error

Description	Get device values
Method	GET
URI	/devices/:id/values
Headers	Content-type: application/json Authorization: <token>
Body Request	

Body
Response
	{
	    "co2":[{lat:..,long:..,value:99}],
	    "ozone":[{lat:..,long:..,value:99}]
	}

HTTP Status Code	● 201 Success ● 400 Bad request ● 401 Unauthorized ● 500 Internal Server Error
Attributes	

Vertical management

Description	Gets all verticals
Method	GET
URI	/verticals
Headers	Content-type: application/json Authorization: <token>

Body Request	
Body Response	Returns the existing verticals
HTTP Status Code	201 Success 400 Bad request 401 Unauthorized 500 Internal Server Error