

About the PassivEnergy platform API

The Passiv Platform has a stateless RESTful API secured using HTTPS and OAuth2.

The API protocol follows the HTTP RFC 2616: <http://www.ietf.org/rfc/rfc2616.txt>

Auth2 is a token based authentication mechanism: www.oauth.net/2.

All URIs defined in this document have the prefix <https://www.passivliving.com/api/v/1> (NB The host name quoted here is the final live host)

The API is currently at version /v/1. This is not likely to change in the near term, however, clients should be aware of the expected behaviour detailed in API versioning section.

Security and Authentication

Clients need to first log in to the API to obtain an access token. OAuth2 login requires a username and password to be sent as a www-url-encoded form along with a HTTP Basic authorisation header.

To login as user **fred** with password **1234**

```
POST "https://www.passivliving.com/oauth/token"
set Header "Content-type" "application/x-www-form-urlencoded"
set User "trusted";
set Password "secret";
end Request with entity body
"grant_type=password&username=fred&password=1234"
```

The trusted:secret should be Base64 encoded to result in the HTTP header Authorization: Basic dHJ1c3RlZDpzZWNYZXQ=

The POST request returns an access token JSON document, e.g.:

```
{"token_type": "Bearer", "access_token": "5bbfe978-c4a2-34d2-9de6-d0610ba7eaf1", "expires_in": 29903332}
```

Wherever an HTTP request is discussed subsequently in this document, it is assumed that the client has supplied a valid access token in the Authentication Bearer token HTTP header e.g.:

Authorization: Bearer 5bbfe978-c4a2-34d2-9de6-d0610ba7eae1

Curl example.

```
curl -X POST https://www.passivliving.com/oauth/token -d
grant_type=password -d username=oper_a -d password=pword -H
"Authorization:Basic dHJ1c3RlZDpzZWNYZXQ="
```

The Platform RESTful model

Each company or organisation registered with the platform is allocated an Agent.

This acts as a mechanism to restrict visibility of information and allows customers to manage their own collection of user accounts.

An initial Agent Admin user is created by Passiv and is granted access through an email invitation.

Each Agent Admin can then invite other users, manage visibility of their own information, and may create and submit New Installation monitoring orders.

The submission of an order creates a Home and associated service provisioning definitions within the Platform. Each Home is only visible within the scope of the Agent that created it.

A Home's service provisioning definitions direct the Automated Meter Reading service to collect telemetry data, and permit the calculation of insight, performance and fault management information against the Home.

The following mapping applies to all URIs (where the operation is supported).

Create HTTP POST

Read HTTP GET

Update HTTP PUT

Delete HTTP DELETE

API Versioning

The version identifier `/v/{version_id}` is a single monotonically increasing integer.

If the API changes the version number will be increased

API servers will continue to support historic API versions for as long as possible to avoid unnecessary client upgrades

If a backwards compatible change is introduced, the API server will either issue a 301 Moved Permanently for all requests to resources under the old version with a Location: header pointing to the updated version, or alternatively continue to make the resources directly available under the old version path as well as the new

Clients MUST handle 301 Moved Permanently redirects and SHOULD remember them where possible

In the event that an API version can no longer be supported, the server will return 410 Gone for all requests to resources under that version

Clients MUST handle 410 Gone responses by informing the user. Clients SHOULD help the user to upgrade if possible