

# Application registration and authentication

## Summary

- You need to register a client on [MyPage](#) before you can access the API.
- Create an access token using `client_credentials`, and send this as a bearer token header.

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## Intended audience

This page is intended for software developers who would like to access our API in order to build their own applications based on data gathered and combined by BarentsWatch.

## Prerequisites, licencing and crediting

This link contains information about the data BarentsWatch gathers and provides access to via our APIs: <https://www.barentswatch.no/om/apndata/> (Norwegian)

Information about requirements for using the BarentsWatch API can be found here: [www.barentswatch.no/om/api-vilkar](http://www.barentswatch.no/om/api-vilkar) (Norwegian).

If you have any questions or problems connecting (after reading the rest of this page), contact us at [post@barentswatch.no](mailto:post@barentswatch.no)

## How to connect to the BarentsWatch API.

The BarentsWatch API supports **Open ID Connect** flows (client credentials, authorization code, and device code). You will need to register a client with us in order to access the APIs. The OpenID discovery document is here: <https://id.barentswatch.no/.well-known/openid-configuration>

## Registering a Client

In order to access the BarentsWatch API you need an **Api Client**. You can register your own API Client connected to your user. To do so you must first create a user and log in at <https://www.barentswatch.no/minside/>. Here you can self register clients for use with your application.

When registering a client you need to choose between API-client and AIS-client, depending on the API you want to access. This also affects the 'scope' you must use when obtaining an access token.

Self registered clients only supports Open ID Connect's `client_credentials` flow. If you need to use something other than credentials flow, you will have to contact BarentsWatch ([post@barentswatch.no](mailto:post@barentswatch.no)) to set up other types of clients.

## Obtaining an Access Token

Once you have a client (either from self-registration on [MyPage/Minside](#), or obtained from BarentsWatch) you can use the clients **ClientID** and **ClientSecret** to obtain an **Access Token**. The Access Token is used for granting access to endpoints providing data.

An application can obtain a token for use with the BarentsWatch API by posting a token request via HTTPS to <https://id.barentswatch.no/connect/token>:

- Use HTTPS POST
- URL must be [id.barentswatch.no/connect/token](https://id.barentswatch.no/connect/token)
- Header 'content-type' must be 'application/x-www-form-urlencoded'
- Body must have four key-value pairs, separated by ampersand (&):
  - Key 'grant\_type' must have value 'client\_credentials'
  - Key 'client\_id' must have your full client ID as value, which is often written like this: **myusername@example.com:myclient**. If your client does not url-encode automatically, you must url-encode it like this: **myusername%40example.com%3Amyclient**
  - Key 'client\_secret' must have a client secret you have created, as value.
  - Key 'scope' must have value 'api' or 'ais' depending on the type of API you want access

*Note that the `client_id`, `client_secret`, `scope` (and `grant_type`) need to be sent in the body – not as headers!*

Example request, using curl:

```
curl -X POST --header "Content-Type: application/x-www-form-urlencoded" -d
"client_id=YOUR_CLIENT_ID&scope=api&client_secret=YOUR_CLIENT_SECRET&grant_type=client_credentials" https://id.
barentswatch.no/connect/token
```

Example success response:

```
{
  "access_token": "MTQ0NjJkZmQ5OTM2NDElZTZjNGZmZjI3",
  "token_type": "bearer",
  "expires_in": 3600
}
```

More information: <https://www.oauth.com/oauth2-servers/access-tokens/access-token-response/>

Example request/response, using postman:



## Using your access token to access the API

This is an example request to the BarentsWatch API to get available forecast times for a particular fairway.

```
GET /bwapi/v1/geodata/waveforecast/available/?modelname=folda&fairwayid=1 HTTP/1.1
Host: www.barentswatch.no
User-Agent: My Application Name
Content-Type: application/x-www-form-urlencoded
Authorization: bearer MTQ0NjJkZmQ5OTM2NDElZTZjNGZmZjI3
```

The same request using curl:

```
curl -X GET "https://www.barentswatch.no/bwapi/v1/geodata/waveforecast/available?modelname=folda&fairwayid=1" --
header "accept: text/plain" --header "Authorization: Bearer MTQ0NjJkZmQ5OTM2NDElZTZjNGZmZjI3"
```

These external websites might be useful for developers:

- List of OAuth libraries: <https://oauth.net/code/>
- About client\_credentials grant <https://www.oauth.com/oauth2-servers/access-tokens/client-credentials/>

## Using your registered client to access the OpenAPI documentation

You can log in to the OpenAPI-documentation with your own client.

- Go to <https://www.barentswatch.no/bwapi/openapi/index.html>
- Click 'Authorize'
- Below the headline "**oauth2 (OAuth2, clientCredentials)**":
  - Replace client\_id with your own client\_id. *It has to be URL-encoded like this: myusername%40example.com%3Amyclient.* You can copy your URL-encoded client\_id by expanding My clients/Mine klienter in [MyPage/Minside](#).
  - Enter your client\_secret
  - Select 'api' scope (tick the box)
- Click 'Authorize', and then 'Close'

You are now logged in.

You can select the API documentation in the dropdown-menu in the upper-right corner.