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1 Easy Connect AS directory information API

The directory information API is Easy Connects search interface for integration in websites or applications. It searches in our complete directory of private persons and businesses in Norway. It is a multi-purpose API suited to many different use cases: directory information website, form auto-fill for e-commerce, CRM software and more.

Our own directory service at <http://1890.no> is 100% backed by our APIs.

The API is a HTTP REST API where queries are GET queries and responses are JSON documents.

For access contact us at post@easyconnect.no or call 53 20 53 00.

1.1 Authentication

Access to the service is controlled with HTTP Basic Authentication¹ and optionally limited by IP address.

In this document the following URL scheme is used: <https://accountname:key@api.easyconnect.no>. The links use a demo user with the username "demo" and the API key "3505cee9f9d34b4baf59bf60dbb0f9d5". Note that this account is only to be used for demonstration purposes and has strict usage limits. To make these requests with a user agent that does not support username/password in URL set the following Authorization header:

```
Authorization: Basic ZGVtbzozNTA1Y2VlOWY5ZDM0YjRiYWY1OWJmNjBkYmIwZjlkNjQ==
```

1.1.1 Account name and API key

In the notation used in RFC 7617 the account name is used as user-id and the API key as password.

Example request: [https://account:key@api.easyconnect.no/...](https://account:key@api.easyconnect.no/)

¹See RFC 7617

1.1.2 Password-less

Optionally the account can be configured without an API key but with access limited by IP address/subnet (IPv4 and/or IPv6).

Example request: [https://account@api.easyconnect.no/...](https://account@api.easyconnect.no/)

1.2 Response codes

The API responds with the following HTTP response codes:

200 OK. The request was successful.

400 Bad Request. Invalid request parameters or headers.

401 The request did not contain an `Authorization` header.

403 Access denied. Either the account name or key is invalid or the IP address does not have access.

404 Not Found. Requested endpoint does not exist or (for some endpoints) the requested entity does not exist.

429 Too Many Requests. Either the account has exceeded contractually defined usage limits or the API service is overloaded.

500 - 599 Internal error.

1.3 Instances

There are two public instances of the API: `api.easyconnect.no` and `beta.api.easyconnect.no`. All endpoints under these are identical, the main difference is SLA. Unless explicitly directed to by Easy Connect AS customers should use `api.easyconnect.no`.

Select customers with special customization, capacity or SLA requirements can get dedicated instances.

1.4 Stability

All endpoints, parameters and response structures documented in this document are considered stable. Customers will be notified about breaking changes well in advance.

Some endpoints may return more fields than what is documented. Undocumented fields may be changed or removed at any time. New fields can also be added.

2 Listings API

2.1 API endpoints

2.1.1 /listings

Full text search in directory listings. We have developed a set of techniques for full text search well suited for directory service data and typical user queries.

Parameter	Data type	Required	Description
fulltext	string	true	Search string. Name, phone number, address, ...
page_size	integer [0-1000]	false (default: 20)	Maximum number of results per request.
page	integer	false	The pagination index.
zip	string	false	Filter results by postal code.
city	string	false	Filter results by postal city.
municipality_code	string	false	Filter results by municipality code (kommunenr.).
county_code	string	false	Filter results by county code (fylkesr.).
housetno	integer	false	Filter results by house number.
letter	string	false	Filter results by house letter (bokstav i husnr.).
sector	string	false	Filter results by sector (business or consumer).

Returns a [Listing search results response structure](#).

Example: `/listings?fulltext=Easy%20Connect%20AS%2C%20Bergen2`

```
GET /listings?fulltext=Easy%20Connect%20AS%2C%20Bergen HTTP/1.1
Host: api.easyconnect.no
Authorization: Basic ZGVtbzozNTA1Y2VlOWY5ZDM0YjRiYWY1OWJmNjBkYmIwZjlkNQ==

HTTP/1.1 200 OK
Content-Type: application/json; charset=utf-8
```

```
{
  "result_size": 1,
  "page_size": 20,
  "next_page": "/listings?fulltext=Easy+Connect+AS%2C+Bergen&page=1",
  "listings": [
    {
      "sector": "business",
      "link": "Easy-Connect-AS",
      "displayname": "Easy Connect AS",
      "teleniumbers": [
        {
          "usage_type": "normal",
          "terminal_type": "phone",
          "number": "53205300"
        }
      ],
      "street": "Midtunhaugen",
      "housetno": 10,
      "zip": "5224",
      "city": "Nesttun",
      "municipality": "Bergen",
      "county": "Hordaland",
      "street_id": "120133828",
      "municipality_code": "1201",
      "county_code": "12",
      "geoquality": "A",
      "displayaddress": "Midtunhaugen 10, 5224 Nesttun",
      "lat": 60.3189882162208,
      "lon": 5.36295661961305,
      "email": "post@easyconnect.no",
      "nace_1": "63.120",
      "nacetitle_1": "Drift av web-portaler",
      "orgno": "981176553",
      "website": "http://www.easyconnect.no/",
    }
  ]
}
```

²<https://demo:3505cee9f9d34b4baf59bf60dbb0f9d5@api.easyconnect.no/listings?fulltext=Easy%20Connect%20AS%2C%20Bergen>

```

    "more": {
      "listings_on_address": "/listings/address?houseNo=10&letter=&street_id=120133
    }
  },
  "more": {
    "search_suggestions": "/listings/search_suggestions?fulltext=Easy+Connect+AS%2C+H
  }
}

```

2.1.2 /listings/phone

Lookup of a listing by phone number. The phone number can be specified as just a local Norwegian number ("53205300", "53 20 53 00") or with an international prefix ("4753205300", "+4753205300", "004753205300").

Returns a [Listing search results response structure](#).

Example: [/listings/phone?number=53205300³](#)

```

GET /listings/phone?number=53205300 HTTP/1.1
Host: api.easyconnect.no
Authorization: Basic ZGVtbzozNTA1Y2VlOWY5ZDM0YjRiYWY1OWJmNjBkYmIwZjlknQ==

```

```

HTTP/1.1 200 OK
Content-Type: application/json; charset=utf-8

```

```

{
  "next_page": "/listings/phone?number=53205300&page=1",
  "page_size": 20,
  "result_size": 1,
  "listings": [
    {
      "sector": "business",
      "link": "Easy-Connect-AS",
      "displayname": "Easy Connect AS",
      "telenumbers": [
        {
          "usage_type": "normal",
          "terminal_type": "phone",
          "number": "53205300"
        }
      ],
      "street": "Midtunhaugen",
      "houseNo": 10,
      "zip": "5224",
      "city": "Nesttun",
      "municipality": "Bergen",
      "county": "Hordaland",
      "street_id": "120133828",
      "municipality_code": "1201",
      "county_code": "12",
      "geoquality": "A",
      "displayaddress": "Midtunhaugen 10, 5224 Nesttun",
      "lat": 60.3189882162208,
      "lon": 5.36295661961305,
      "email": "post@easyconnect.no",
    }
  ]
}

```

³<https://demo:3505cee9f9d34b4baf59bf60dbb0f9d5@api.easyconnect.no/listings/phone?number=53205300>

```

    "nace_1": "63.120",
    "nacetitle_1": "Drift av web-portaler",
    "orgno": "981176553",
    "website": "http://www.easyconnect.no/",
    "more": {
      "listings_on_address": "/listings/address?housetno=10&letter=&street_id=120133"
    }
  }
]
}

```

2.1.3 /listings/address

Search for directory listings by address.

Parameter	Data type	Required	Description
street	string	Either street or street_id	Street name
street_id	string	Either street or street_id	Street ID
page	integer	false	The pagination index.
zip	string	false	Filter results by postal code.
city	string	false	Filter results by postal city.
municipality_code	string	false	Filter results by municipality code (kommunenr.).
county_code	string	false	Filter results by county code (fylkesnr.).
housetno	integer	false	Filter results by house number.
letter	string	false	Filter results by house letter (bokstav i husnr.).
sector	string	false	Filter results by sector (business or consumer).

Returns a [Listing search results response structure](#).

Example: [/listings/address?street=Midtunhaugen&housetno=10&zip=5224](#)⁴

2.1.4 /listings/search_suggestions

Lists suggestions for alternative search terms, most useful if a full text search did not return any hits.

Example: [/listings/search_suggestions?fulltext=eazy%20conect](#)⁵

```

GET /listings/search_suggestions?fulltext=eazy%20conect HTTP/1.1
Host: api.easyconnect.no
Authorization: Basic ZGVtbzozNTA1Y2VlOWY5ZDM0YjRiYWY1OWJmNjBkYmIwZjlkNQ==

```

```

HTTP/1.1 200 OK
Content-Type: application/json; charset=utf-8

```

```

{
  "search_suggestions": [
    "Easy Connect AS",
    "Eazycom AS",
    "Care Connect AS"
  ]
}

```

⁴<https://demo:3505cee9f9d34b4baf59bf60dbb0f9d5@api.easyconnect.no/listings/address?street=Midtunhaugen&housetno=10&zip=5224>

⁵https://demo:3505cee9f9d34b4baf59bf60dbb0f9d5@api.easyconnect.no/listings/search_suggestions?fulltext=eazy%20conect

2.1.5 /listings/{link}

Fetches a single listing by it's link attribute.

Returns a [Listing response structure](#) on success, if no listing with that link attribute exists it returns 404.

Example: [/listings/Easy-Connect-AS](#)⁶

```
GET /listings/Easy-Connect-AS HTTP/1.1
Host: api.easyconnect.no
Authorization: Basic ZGVtbzozNTA1Y2VlOWY5ZDM0YjRiYWY1OWJmNjBkYmIwZjlkNQ==
```

```
HTTP/1.1 200 OK
Content-Type: application/json; charset=utf-8
```

```
{
  "listing": {
    "sector": "business",
    "link": "Easy-Connect-AS",
    "displayname": "Easy Connect AS",
    "telenumbers": [
      {
        "usage_type": "normal",
        "terminal_type": "phone",
        "number": "53205300"
      }
    ],
    "street": "Midtunhaugen",
    "housetno": 10,
    "zip": "5224",
    "city": "Nesttun",
    "municipality": "Bergen",
    "county": "Hordaland",
    "street_id": "120133828",
    "municipality_code": "1201",
    "county_code": "12",
    "geoquality": "A",
    "displayaddress": "Midtunhaugen 10, 5224 Nesttun",
    "lat": 60.3189882162208,
    "lon": 5.36295661961305,
    "email": "post@easyconnect.no",
    "nace_1": "63.120",
    "nacetitle_1": "Drift av web-portaler",
    "orgno": "981176553",
    "website": "http://www.easyconnect.no/",
    "more": {
      "listings_on_address": "/listings/address?housetno=10&letter=&street_id=120133828"
    }
  }
}
```

Example: [/listings/foobar](#)⁷

```
GET /listings/foobar HTTP/1.1
Host: api.easyconnect.no
Authorization: Basic ZGVtbzozNTA1Y2VlOWY5ZDM0YjRiYWY1OWJmNjBkYmIwZjlkNQ==
```

⁶<https://demo:3505cee9f9d34b4baf59bf60dbb0f9d5@api.easyconnect.no/listings/Easy-Connect-AS>

⁷<https://demo:3505cee9f9d34b4baf59bf60dbb0f9d5@api.easyconnect.no/listings/foobar>

HTTP/1.1 404 Not Found
 Content-Type: application/json; charset=utf-8

```
{
  "error": "Not found."
}
```

2.2 Response structures

2.2.1 Listing search results

All the `listings` search endpoints have a common response format:

- `result_size` Integer
 The total number of results. This is not limited to the pagination limit, so the number of listings returned can be less than this.
- `page_size` Integer, defaults to 20
 The listings APIs are paginated and return a maximum number of results per call.
 The actual number of returned listings is the smaller of `page_size` and `result_size`.
- `next_page` URL
 The URL to fetch the next page of results.
- `listings` Array of listings
 The actual results. See the listing documentation below.
- `more/search_suggestions` URL
 For full text searches this is a URL to the `listings/search_suggestions` endpoint for this full text search.

2.2.2 Listing

- `sector` String: "business" or "consumer"
- `displayname` String
 For `sector=consumer` this contains the persons full name. For `sector=business` this is the marketing name (if any) or legal name.
- `displaynamesub` String
 For `sector=business` this contains the legal name or any other secondary name.
- `telenumbers` Array of telenumbers
 Contains the phone numbers with metadata. See the Telenummer documentation below.
- `email` String
 The company contact email address. Only used for `sector=business`.
- `website` String
 URL to company website. Only used for `sector=business`.
- `nace_1` String
 NACE code 1 (SN/SIC 2007)⁸.

⁸<https://www.ssb.no/klasse/klassifikasjoner/6>

- `nacetime_1` String
Description/name of the code in `nace_1`.
- `orgno` String (9 digits)
Organization number from the national business registry.
- `displayaddress` String
Address (street, house number, postal code etc) as a single string for easy display to end users.
- `street` String
Address: Street. Can also contain other address parts like *c/o* or complete foreign addresses.
- `street_id` String
Address: Street ID.
- `houmeno` Int
Address: House number.
- `letter` String
Address: House letter. E.g. «B» in Storgata 1B.
- `zip` String
Address: Post code.
- `city` String
Address: City (poststed).
- `municipality_code` String
Address: Municipality code (kommunennummer). We use an extended municipality code definition from SSB that also includes regional special codes⁹.
- `municipality` String
Address: Municipality name.
- `county_code` String
Address: County code (fylkesnummer). We use an extended municipality code definition from SSB that also includes regional special codes⁹.
- `county` String
Address: County name.
- `lat` Floating point
Latitude. Coordinates are given in EPSG:4326, WGS 84 planar coordinates.
- `lon` Floating point
Longitude.
- `geoquality` String
Level of address standardization.
A Address match, coordinate points to an address from the cadastre.
S Street match, coordinate of a constructed point central to the street.
L Location match, coordinate is from the Central Register of Place Names (SSR)
Z Zip match, coordinate of a constructed point in the center of the postal code area.

⁹<https://www.ssb.no/klasse/klassifikasjoner/4>

M Municipality match, coordinate points at administrative centre.

U No match against official Norwegian address data

2.2.3 Telenumber

This is an extensible format for phone numbers with extra metadata where each entry contains the following fields:

- **number** The phone number. Norwegian numbers are represented without any

country prefix, any non-norwegian numbers that are present is returned in full E.164 format with + prefix.

- **usage_type**
 - normal
 - subnumber
 - switchboard
 - data
- **terminal_type**
 - ip
 - landline
 - phone generic fallback when no more specific information is available
 - mobile
 - fax

- Example 1: Company contact number

```
{
  "number": "53205300",
  "usage_type": "normal",
  "terminal_type": "phone"
}
```

- Example 2: Mobile phone

```
{
  "number": "47041198",
  "usage_type": "normal",
  "terminal_type": "phone"
}
```

- Example 3: Fax

```
{
  "number": "67892432",
  "usage_type": "normal",
  "terminal_type": "fax"
}
```

- Example 3: International number

```
{
  "number": "+46123456789",
  "usage_type": "normal",
  "terminal_type": "phone"
}
```

3 Document version

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