

# APISIX Setup

## Finmars APISIX Setup Guide

### Abstract

As result of that instruction you will have proxy to Exante Broker e.g. <https://exante-proxy.client.com> where client.com your domain

### Prerequisites

Before starting make sure you have the following:

1. A machine running Linux with Ubuntu 22.04.
2. Docker installed on your machine.
3. A public IP address.
4. Generated API keys in Exante Account Page
5. You need to convert `API Key` and `Secret Key` to Basic Auth Token String (Use any public base64 encoder, in other words it should be `base64(api_key + ":" + secret_key)` )

### Steps to Set Up APISIX

#### 1. Run the APISIX Docker Container:

```
docker run -d --name apache-apisix -p 9080:9080 -p 9443:9443 -e APISIX_STAND_ALONE=true  
apache/apisix
```

#### 2. Create the `apisix.yaml` Configuration File:

Create a file named `apisix.yaml` with your desired configuration.

#### 3. Copy the `apisix.yaml` File to the APISIX Container:

```
docker cp apisix.yaml apache-apisix:/var/tmp/
```

#### 4. Move the `apisix.yaml` File to the APISIX Configuration Directory:

```
docker exec -i apache-apisix sh -c 'cp /var/tmp/apisix.yaml /usr/local/apisix/conf/'
```

## 5. Reload the APISIX Configuration:

```
docker exec -it apache-apisix apisix reload
```

# Setting Up HTTPS

If you want your APISIX instance to listen for HTTPS connections, follow these additional steps:

### 1. Obtain an SSL Certificate:

Get or create an SSL certificate and export it along with its private key to PEM format.

### 2. Update `ssl.yaml`:

Put the PEM contents into the corresponding sections of `ssl.yaml`.

### 3. Include SSL Configuration in `apisix.yaml`:

Add the contents of `ssl.yaml` to `apisix.yaml` before the `#END` instruction.

```
apisix:
  node_listen: 9080      # HTTP inbound port
  ssl:
    enable: true
    listen:
      - port: 9443        # HTTPS inbound port
        enable_http3: false

consumers:
  - username: finmars    # client name
  plugins:
    basic-auth:
      username: foo      # inbound credentials, that you will pass to Finmars IT Team
      password: bar

# upstream.yaml

upstreams:
  - id: 1
    nodes:
```

```
  api-demo.exante.eu:443: 1
scheme: https
pass_host: node
type: roundrobin
```

```
- id: 2
```

```
nodes:
```

```
  api-live.exante.eu:443: 1
scheme: https
pass_host: node
type: roundrobin
```

```
# plugin_config.yaml
```

```
plugin_configs:
```

```
- id: 1
```

```
plugins:
```

```
  basic-auth: {}
```

```
  proxy-rewrite:
```

```
    headers:
```

```
      set: # credentials used to connect to api-demo.exante.eu # Basic Auth string from API key and Secret
```

```
Key
```

```
      Authorization: "Basic
```

```
NDQ3YTIxNzEtYWnkMi00N2Q0LWEyOWYtOTk4ZTA5YzQ2Njk0OkJSMUpEQk9NUGdXVmxpN2wyeDBW"
```

```
    regex_uri:
```

```
      - "^/demo/(.*)"
```

```
      - "$1"
```

```
- id: 2
```

```
plugins:
```

```
  basic-auth: {}
```

```
  proxy-rewrite:
```

```
    headers:
```

```
      set: # credentials used to connect to api-live.exante.eu # Basic Auth string from API key and Secret Key
```

```
      Authorization: "Basic
```

```
NDQ3YTIxNzEtYWnkMi00N2Q0LWEyOWYtOTk4ZTA5YzQ2Njk0OkJSMUpEQk9NUGdXVmxpN2wyeDBW"
```

```
    regex_uri:
```

```
      - "^/live/(.*)"
```

```
      - "$1"
```

```
# routes.yaml

routes:
  - uris:
    - /demo/md/*/accounts
    - /demo/md/*/symbols/*
    - /demo/md/*/summary/*
    - /demo/md/*/ohlc/*
    - /demo/md/*/transactions
    - /demo/trade/*/orders/*
    upstream_id: 1
    plugin_config_id: 1
  - uris:
    - /live/md/*/accounts
    - /live/md/*/symbols/*
    - /live/md/*/summary/*
    - /live/md/*/ohlc/*
    - /live/md/*/transactions
    - /live/trade/*/orders/*
    upstream_id: 2
    plugin_config_id: 2
#END
```

# Also part if you dont have nginx proxy

```
# ssls.yaml

ssls:
  - id: 1
    snis:
      - test.com      # hostname where apisix instance is running
    cert: |
```

-----BEGIN CERTIFICATE-----

MIICojCCAYoCCQDoby1LjeWcZzANBgkqhkiG9w0BAQsFADARMQ8wDQYDVQQDDAZS  
T09UQ0EwIBcNMjQwNzEyMjE1MjEzWhgPMjEyNDA2MTgyMTUyMTNaMBMxETAPBgNV  
BAMMCHRlc3QuY29tMIIIBjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAzs5Y  
uQvVwF3CFbNIJPK8OO7QIKA8UuapWdSKgT59Vqnkk0/7dfUHfP6pOFG8kxQexZBG  
uxbID+nCM175pJyJXjd2mZngtj2E1I3vUHOH6hhE0o5xLAgrDbBxgHnMZHyh/4xz  
quXgho0nv1R0i+Oclou4viyDp4BsIYBJUONskEihOyUTJaSUS6zR6Q1aABEVEgYi  
OF9Wyr2tj58jTlrRvFgrsDXeOoyf81diAmWePg4mETanejbaDBhtCQH8PIIFfU1b  
TeqqZXRAdeOkbV23o4BfPYPB73Px1bdo0u/wGZTTY2DKQwd9QPg8fg0dT8dvegke  
3dUUx/XozqekMt3w2QIDAQABMA0GCSqGSIb3DQEBCwUAA4IBAQAAnBUBhEnk2zjP5  
P9AJ/2cwfrQSBj/Bti5vW/xAAEAWxOWqpcdsenr9/T8D4n1g5SZJeXhmRWdvSdB  
pYbUrOa4ISjpvotxe4dCOhQo2EO9XupQZPKbioyZTWJczwgxmcccdKLH8uJD2IIZ  
e/JKVfFH7AxO9Cz9I3+oyfEehPjemb5dJg/HQa+nWCC7ic7tC4mvd72GyGqAUb4e  
omhzWfmSsDxQpmJauA6uW0swfH+Ws+id6YhwArsxgMYcwURQ6L1YeaXKs3kTRnrN  
9XVOTt1NQ0aHPIBo4kGDuj+aCfH9bReFbwa1CV6nS6wDqXuOSWEkKa69hXI3Wzp  
gv0mZ+28

-----END CERTIFICATE-----

key: |

-----BEGIN RSA PRIVATE KEY-----

MIIEpAIBAACAQEAzs5YuQvVwF3CFbNIJPK8OO7QIKA8UuapWdSKgT59Vqnkk0/7  
dfUHfP6pOFG8kxQexZBGuxbID+nCM175pJyJXjd2mZngtj2E1I3vUHOH6hhE0o5x  
LAgrDbBxgHnMZHyh/4xzquXgho0nv1R0i+Oclou4viyDp4BsIYBJUONskEihOyUT  
JaSUS6zR6Q1aABEVEgYiOF9Wyr2tj58jTlrRvFgrsDXeOoyf81diAmWePg4mETan  
ejbaDBhtCQH8PIIFfU1bTeqqZXRAdeOkbV23o4BfPYPB73Px1bdo0u/wGZTTY2DK  
Qwd9QPg8fg0dT8dvegke3dUUx/XozqekMt3w2QIDAQABAoIBAHZaPQhZr5CRI7tX  
mXDZeg+TDKeiNCO1ggG40zM4Ef8A56EuytgszLZKL4ndrS/2+c1SzkfPt9rzioJf  
vjrosc3/q84n9CQXfOg5hfXiyEu+a9ScVERAwHLrIWnHSqPPd96KAMAZlpWePrsO  
mExejEjw999OFmjL6th8PHkgTkcbYRKv8K7WnNDIHUK6iSg0rtyvg2YDgRDDiRv  
GS3ofHdO5WxQsrqxYdle8aThuKV31gjt3nlFDNinWKHGEmvXbSGu7HGCK61NIK+j  
py3lKTZLeoxVaoZ5fljdA/aOWDgv9HQBxtiCjd4VGC6xAsLT9gBy9c6cJFdb52Nc  
w/jjn6ECgYEA/gx6UrCcp2TuZYU/xkEIMi6mVe7d60w7672pK6FxcNrBiV0T/+F1  
o2CwdOiq0X9IjKBLDIGM2fFTptIER60f8P/RnfzIX7GenOX+voR9zpYePuyIKaf  
UW6n4ZB4wlt7ZloRwTAwo/Whhx+XGL4iVosw2DIf6tFXRWI0+8dCew0CgYEA0GT6  
Xp0yi/D9UjZ1vM/fpojbZh6gZaK6zQjWi5CrcMzC2FyDOK9BTS2BWe28gmgV2Sab  
9/fZJmXnpAn1eil2Co8b4p+44QAPtPUpCslAiVROS1vaEv/S+0ag682jDFWnOR5C  
VYSg4hyCOF3KAOJb9mgL/B/vFEnq1YBER3P6af0CgYEAqeFOkt1O4+DqSZjA/KGg  
CW6IbA4+94kSyKEa7sIWSZD+ugwzw3fQYI/Vn1e2YkDqzilQBhzbQyHMuMreRhRy  
Pr2hhk3P5LfRoTCLAJkYSmoJn10v0AWbo6iLOpqRJeZmrORm2viOjhVC3kiRkUoT

```
TCvnjap3DV7PLOZu565nFkECgYEAtVC2Wi3RtdqWvboulHoU8HOw2Nga3HNKrmxb
JxFXaQxvFwrfDSnG2lyWZ+UmGBxxrf8ewxA9OmB9u8cCcyJi/KrpKzOnCvUftWV9
MSpLYXEdsgmX4uH88q3QA3pmu6umIFbUhk2glTuGvugmosBQHUMH8nTicjeh/+Lb
YAC7xw0CgYA8rePgM3xCn5U7zZPbvraYa7UZKvmrBAJpnh+oaYVpF4B1SCVJI23V
Ym/xVKzR3K0Q8eKiUOUTV23CeZ1CSIDeDS5Y3yjVmfbBaBxIGmF/Z4kuvfTpk2Lns
AjX3slshjCQjfNtVfelqXW+9QDyZbDZpNs5Cfl8/awj0+Mwv/isxVA==
-----END RSA PRIVATE KEY-----
```

# How To Test

Make a CURL request to APISIX proxy

```
curl -u foo:bar 0.0.0.0:9080/demo/md/3.0/accounts
```

or open `0.0.0.0:9080/demo/md/3.0/accounts` in browser and pass Basic Auth Credentials

## Get help

- APISIX Documentation [<https://apisix.apache.org/docs/apisix/getting-started/README/>]
- Exante Documentation [<https://api-live.exante.eu/api-docs/>]
- Finmars IT Help: [s.zhitenev@finmars.com](mailto:s.zhitenev@finmars.com)

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