Installation Guide with Azure (Advanced)

Step by step journey using Azure Virtual Machines Ubuntu 24.04

For this guide you need basic knowledge with Linux, SSH, Bash

Getting Started

Hello!
Welcome to Finmars, below you will find guidance of how to Install Everything

We also recommend you to obtain Finmars ID

Here is summary of what we will achieve during this tutorial
To complete this guide you will need **Mac** or **Linux**, it will require to use **Terminal**

- Register Azure account - Link
- Create Virtual Machine (VM) - Link
- Install Finmars Platform - Link
- Get to know our User Quick Start guide for next steps

If you have some troubles during Installation - reach for any support channel:

- Create a Github Issue
- Join our Discord Server
- Contact us at support@finmars.com

Register Azure Account

Here is a simple, step-by-step guide to make an AWS account:

1. **Open your web browser**
   (for example: Chrome, Firefox, or Edge).
2. **Go to the AWS website**

   Type https://azure.microsoft.com/en-us/ in the address bar and press Enter.
3. **Start the sign-up**
   Click the **“Get Started with Azure”** button at the top right.
4. Go to **Pay as you go** and press **Sign Up**
5. **Create new Microsoft Account or link Existing one**
   - Type your email address.
6. **Choose a password**
   - Make a password you can remember.
   - Re-type it to confirm.
7. **Fill in your contact details**
   - Select **“Professional”** or **“Personal”** account.
   - Type your full name, phone number, and address.
   - Click **“Continue”**.
8. **Add payment information**
   - AWS needs a credit or debit card to verify you.
   - Type your card number, month/year, and name on card.
   - Click **“Verify and Add”**.
9. **Confirm your phone number**
   - Choose your country code and type your phone number.
   - Click **“Send SMS”**.
   - You’ll get a text with a code. Type that code into the box.
10. **Pick a support plan**
    - You can choose the **Free Tier** plan (it has no monthly cost).
    - Click **“Continue”**.
11. **Finish and sign in**
    - After a few minutes, AWS will finish setting up.
    - Click **“Sign In to the Console”**.
    - Enter your email and password again.

You now have an Azure account! □□
You can log into the Azure Portal and start using services.

Go to next step: Register Domain Name

Create Virtual Machine

Sure! Let’s make your Virtual Machine and name it **finmars-platform-vm**. Follow these steps:

1. **Sign in to Azure**
   - Open your browser and go to https://portal.azure.com/.
   - Enter your Azure email and password or Log in with your Microsoft Account.
2. **Open Virtual Machines**
   - At the top, click the search box and type **Virtual machines**.
   - Click **Virtual machines** under “Services.”
3. **Launch a new instance**
   - Click the **Create** button and pick **Virtual Machine**.
4. **Pick your Resource Group (or create New One)**
5. **Pick Region (or leave default)**
6. **Name your instance**
   - In the **Virtual machine name** box, type **finmars-platform-vm**.
7. **Choose Image (Ubuntu 24.04)**
   - Scroll or search for **Ubuntu Server 24.04 LTS**.
   - Pick 64-bit (x86) (should be default)
   - Click **Select**.
8. **Select instance Size (2 vCPU, 8 GiB RAM)**
   - Find and click **B2ms** (it has 2 vCPU and 8 GiB).
9. **Create or select key pair**
   - Choose **Username - azureuser**.
   - SSH public key source - Generate new key pair
   - Key pair name - **finmars-platform-vm-key** - Do not Lose this file, if you lose it, you will not able to connect to your VM again
10. **Select Inbound Ports**
    - Turn on checkbox **SSH**
    - Turn on checkbox **HTTPS**
    - Turn on checkbox **HTTP**
    - Click **Next: Disks**
11. **Add storage (256 GiB)**
    - Change the size from **8** to **256** in the root volume row. (OS disk size)
    - Keep the volume type as **Premium SSD**
    - Click **Next: Networking**
12. **Networking**
    - Public IP: New Public IP **finmars-platform-vm-ip**
13. **Review and Create**
    - Check all your settings.
    - Click **Review + Create**.
14. **Wait for your VM**
    - Click **View Instances**.

- Wait until its status is **running** and checks pass.

15. **Connect to your VM**
    - Select the instance named **finmars-platform-vm**.
    - Click **Connect**.
    - Follow the instructions, for example:

```
# Move your Download key file to secure folder (~/Downloads not recommended)


# if this first connect
chmod 400 "finmars-platform-vm.pem"
ssh -i ./finmars-platform-vm.pem ubuntu@<Public-IP>



# if this first connect
# Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
# yes
```

16. When your Virtual Machine is created, go to Virtual Machine Details Page in Azure Portal
    - On Sidebar, go to **Networking**.
    - Open **Network Settings**
    - You should see **Network Security Group**
    - Press **Create Port Rule** button (Inbound Port Rule)
    - Follow this configuration:
        - Source: Any
        - Source Port Ranges: *
        - Destination: Any
        - Service: Custom
        - Destination Port Ranges: **8888** This is important
        - Protocol: TCP
        - Action: Allow
        - Priority: 420
        - Name: Allow8888Inbound
    - Then press **Add** button

Your Virtual Machine named **finmars-platform-vm** is ready! □□

Now you need to assign your Public IP of your freshly created VM to subdomain of your domain.

1. **Go to your DNS Provider**
2. **Create the first record**

- Click **“Create record.”**
- In **Record name**, type `finmars` (so full name is `finmars.example.com`). - It is Record for Actual Finmars Platform
- For **Record type**, choose **A – IPv4 address**.
- In **Value**, type your VM public IP (for example, `203.0.113.25`). You can find it in VM details
- Leave **TTL** as default (300).
- Click **“Create records.”**

3. **Create the second record**
   - Click **“Create record”** again.
   - In **Record name**, type `finmars-auth`(so full name is `finmars-auth.example.com`). - It is Record for Single-Sign-On (SSO) Finmars
   - For **Record type**, choose **A – IPv4 address**.
   - In **Value**, type the same VM public IP.
   - Click **“Create records.”**
4. **Wait a few minutes**
   DNS needs a little time to spread out. After about 5 minutes, both
   - `finmars.example.com`
   - `finmars-auth.example.com`
     will go to your VM’s public IP.

That’s it! Now both sub-domains point to your **finmars-platform-vm** server.

You can verify it by run following command in Terminal (On Mac or Linux)

```
dig finmars.example.com
dig finmars-auth.example.com
```

Output should be like:

```
; <<>> DiG 9.10.6 <<>> finmars.example.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 39082
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;finmars-platform-vm.finmars.com. IN A

;; ANSWER SECTION:
finmars.example.com. 300 IN A 203.0.113.25
```

```
;; Query time: 12 msec
;; SERVER: 192.168.178.1#53(192.168.178.1)
;; WHEN: Wed Jun 11 20:10:02 CEST 2025
;; MSG SIZE  rcvd: 76
```

Now go to next step: Install Finmars Platform

Install Finmars Platform

Here is a Full Guide to install Finmars on your Ubuntu VM:

Complete time of full installation is less than 30 minutes, by the end of it you will get a Finmars Platform Installed on your Linux Server

1. **Connect to your VM**
   Example:

```
# if this first connect
chmod 400 finmars-platform-vm.pem

ssh -i ./finmars-platform-vm.pem ubuntu@<Public-IP>

# if this first connect
# Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
# yes
```

2. **Install Docker**

```
sudo apt update
sudo apt install -y ca-certificates curl gnupg lsb-release ntp

wget -qO- https://get.docker.com/ | sh

sudo usermod -aG docker $USER
newgrp docker
```

   To check if Docker installed:
   `docker version`
   Should output:

```
Client: Docker Engine - Community
 Version:           28.2.2
...
```

3. **Install Make**

```
sudo apt install -y make git
```

4. **Create the finmars folder**

```
sudo mkdir -p /opt/finmars
sudo chown $USER:$USER /opt/finmars
```

5. **Clone the Finmars Platform Community Edition repository from Github**

   See https://github.com/finmars-platform/finmars-community-edition repository

```
cd /opt/finmars
git clone https://github.com/finmars-platform/finmars-community-edition.git .
```

6. **Create Storage folder**

```
mkdir ./storage
sudo chown -R 1000:1000 ./storage
```

7. **Configure env**

```
make generate-env
```

8. **(Optional) Check created env `cat .env`**

```
REALM_CODE=realm00000
BASE_API_URL=space00000
SECRET_KEY=2e849ee2
JWT_SECRET_KEY=f0d51adba17320c742fb1f046122ce1a8e22ca679bf7c7df28aa873ed5ca3d7a
ENCRYPTION_KEY=a594c6607a48629884753fe0a6b5a907c6d8be8d63e4c274c67be040c276b1c4

DOMAIN_NAME=ap-finmars.finmars.com
CSRF_COOKIE_DOMAIN=ap-finmars.finmars.com
CSRF_TRUSTED_ORIGINS=https://ap-finmars.finmars.com

PROD_APP_HOST=https://ap-finmars.finmars.com
APP_HOST=https://ap-finmars.finmars.com
PROD_API_HOST=https://ap-finmars.finmars.com
```

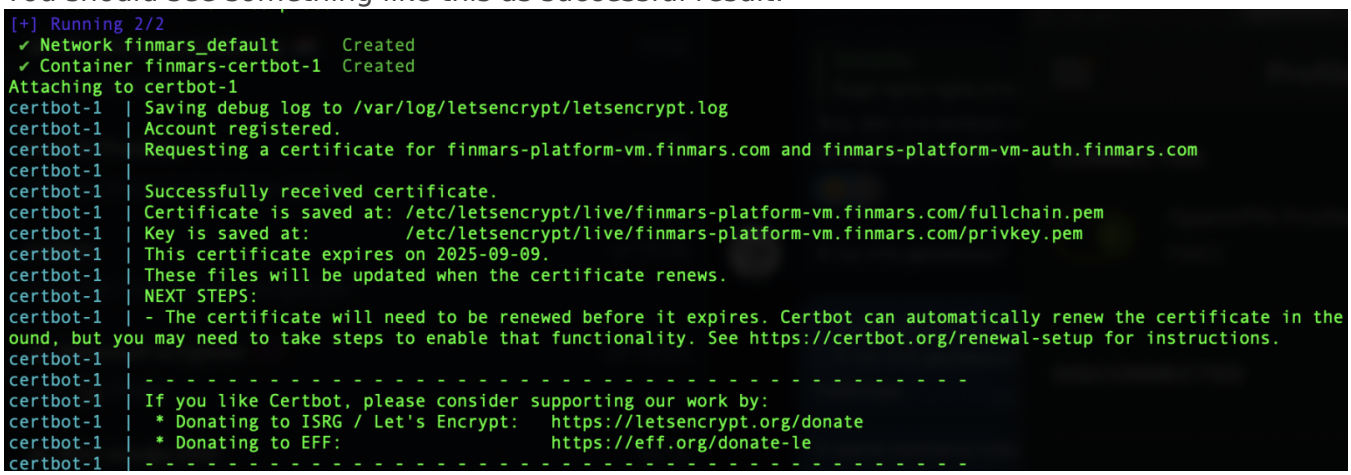
```
API_HOST=https://ap-finmars.finmars.com

KEYCLOAK_REALM=finmars
KEYCLOAK_SERVER_URL=https://ap-finmars-auth.finmars.com
KEYCLOAK_URL=https://ap-finmars-auth.finmars.com
PROD_KEYCLOAK_URL=https://ap-finmars-auth.finmars.com

NUXT_APP_BASE_URL=/

DB_HOST=db
DB_PORT=5432
DB_NAME=finmars_dev
DB_USER=finmars_dev
DB_PASSWORD=e21717b7ba0d4287dcdc292edc3c2164

KC_DB_URL_HOST=db_keycloak
KC_DB_PORT=5432
KC_DB_USERNAME=keycloak
KC_DB_PASSWORD=5de8131f84d79b68ba47d25a922dae92
KC_DB_URL_DATABASE=keycloak

RABBITMQ_HOST=rabbitmq

REDIS_HOST=redis

USE_FILESYSTEM_STORAGE=True

SERVER_TYPE=local
DEBUG=False
USE_DEBUGGER=False
DJANGO_LOG_LEVEL=INFO
PROFILER=False
ENABLE_DEV_DOCUMENTATION=False

EDITION_TYPE=community

ADMIN_USERNAME=test
ADMIN_PASSWORD=test
REDIRECT_PATH="/realm00000/space00000/a/#!/dashboard"
```

```
MAIN_DOMAIN_NAME=ap-finmars.finmars.com
AUTH_DOMAIN_NAME=ap-finmars-auth.finmars.com
```

9. **Release certs**

```
make init-cert
```

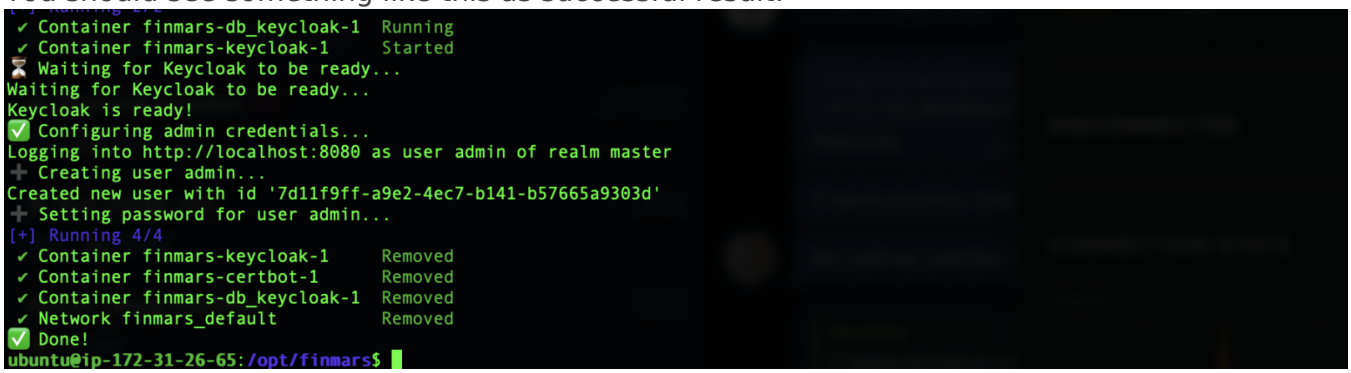
You should see something like this as successful result:



10. **Init keycloak**

```
make init-keycloak
```

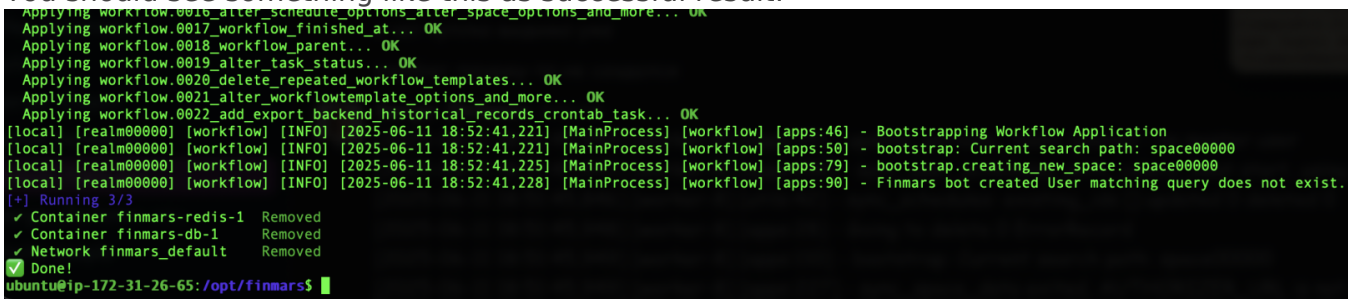
You should see something like this as successful result:



11. **Run database migrations**

```
make migrate
```

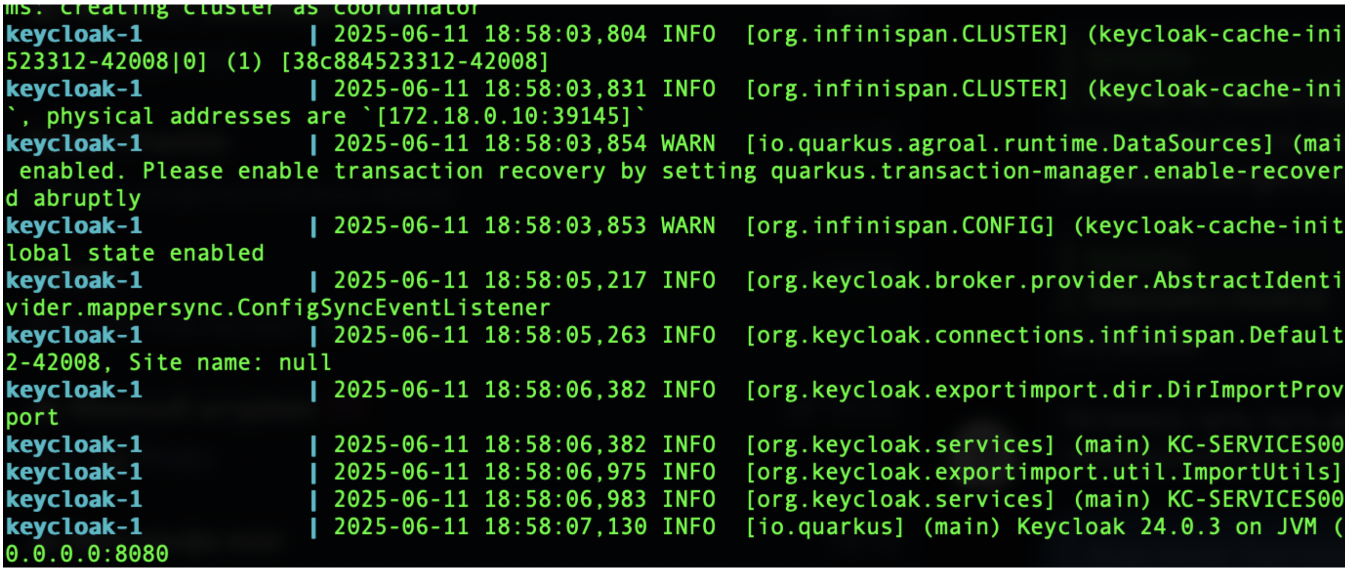
You should see something like this as successful result:



12. **Start all services**

```
make up
```

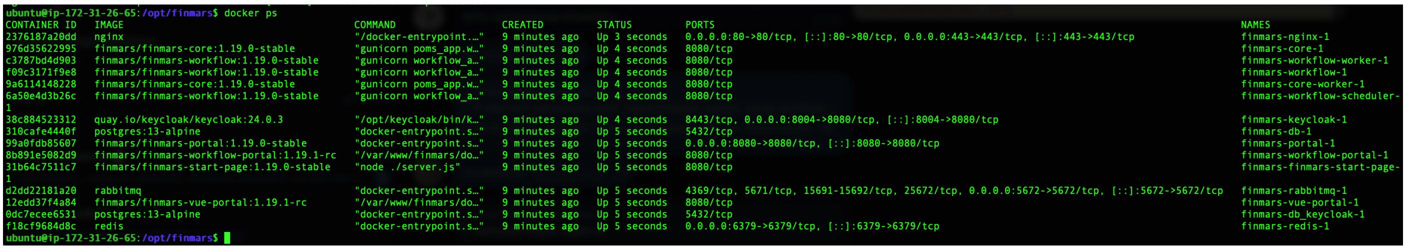
You should see something like this and other logs as successful result:



To Verify that is everything running

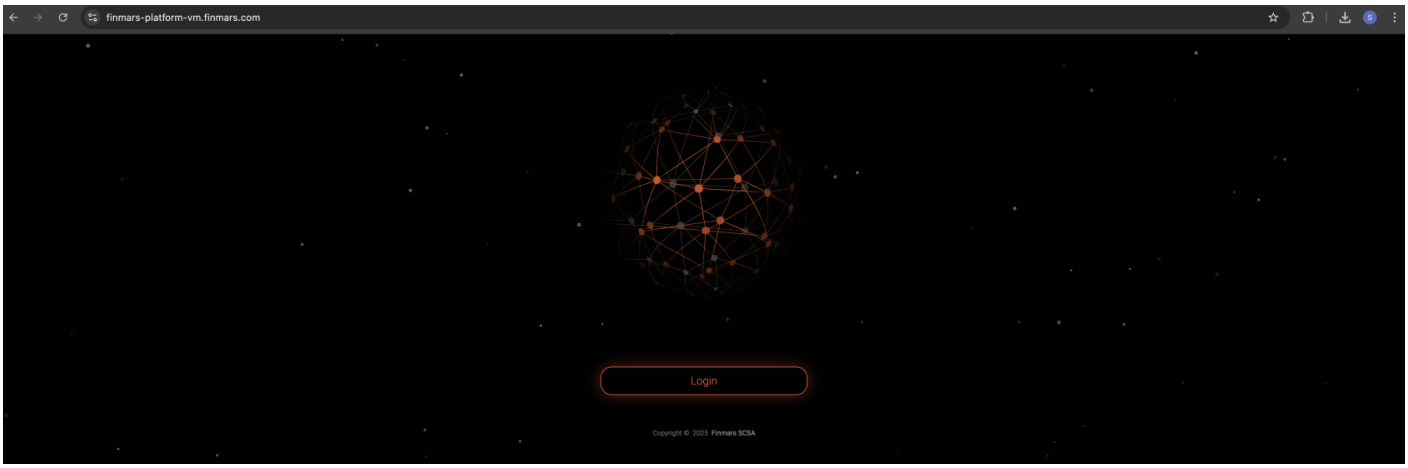
`docker ps`

And you should see something like:

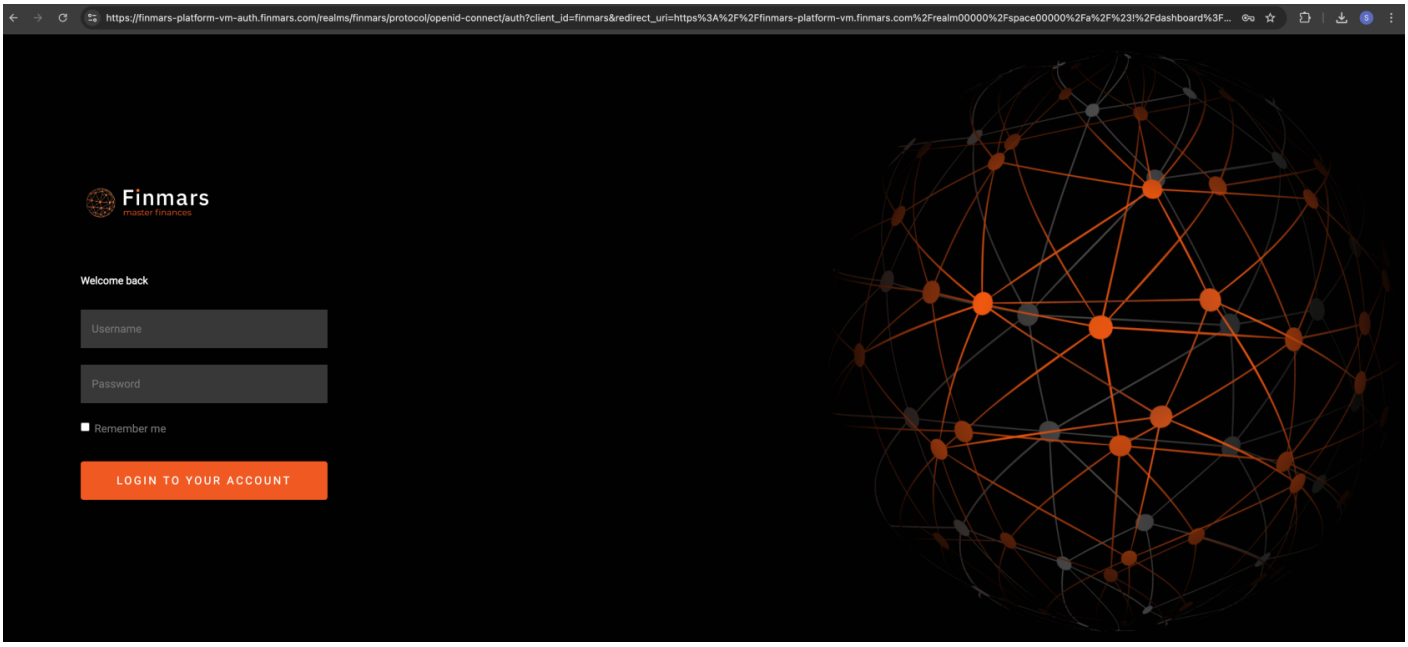


It means all the Docker Containers are running.

When all is done, you can Open Web Browser at **finmars.example.com** and you should see **Finmars Welcome Page**

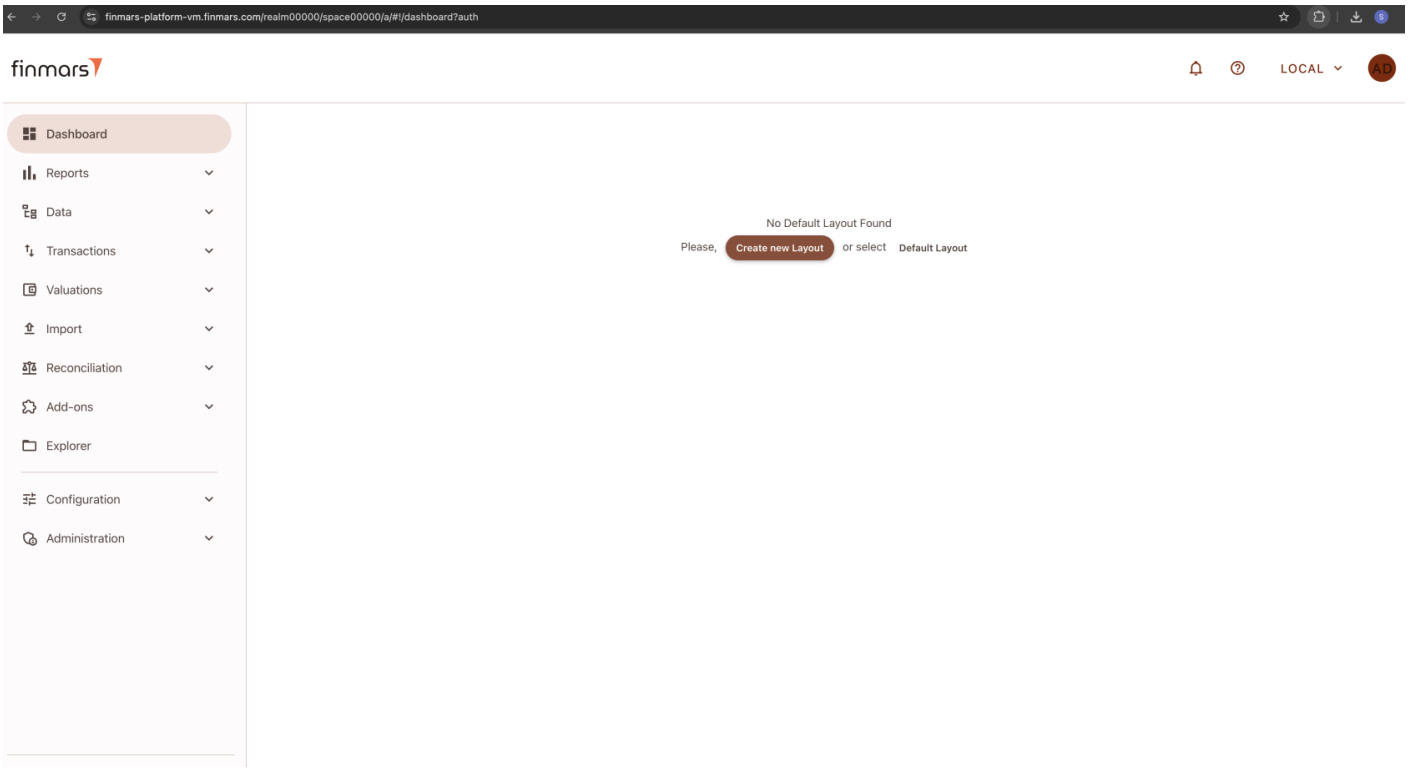


After you press **Login** you will be redirected to **Finmars Single-Sign-On** (SSO) to **finmars-auth.example.com**



Login with your Credentials that you provided in 6) **Configure env** step. It should be yours `ADMIN_USERNAME` and `ADMIN_PASSWORD`

After Login you will be redirected to **Dashboard page** in **Finmars Platform**



Congratulations you finished your **Finmars Platform** Installation **Successfully**! Well Done!

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