

ORACLE Cloud

Autonomous Data Warehouse

Autonomous Transaction Processing

Solutions, Platform and Edge

Email Delivery >

Application Integration >

Edge Services >

Monitoring >

Developer Services >

Governance and Administration

Billing >

Identity >

Security >

Governance >

Administration >

Users

Groups

Dynamic Groups

Policies

Compartment

Federation

balena.service

Description: Open Balena service user

Create/Reset Password Edit User Capabilities

User Information Tags

OCID: ...frj74a [Show](#) [Copy](#)

Created: Wed, 13 Feb 2019 16:01:18 GMT

Choose “Create Compartment” and create compartment named **balena**. Leave the “root” compartment as is.

Create Compartment [help](#) [cancel](#)

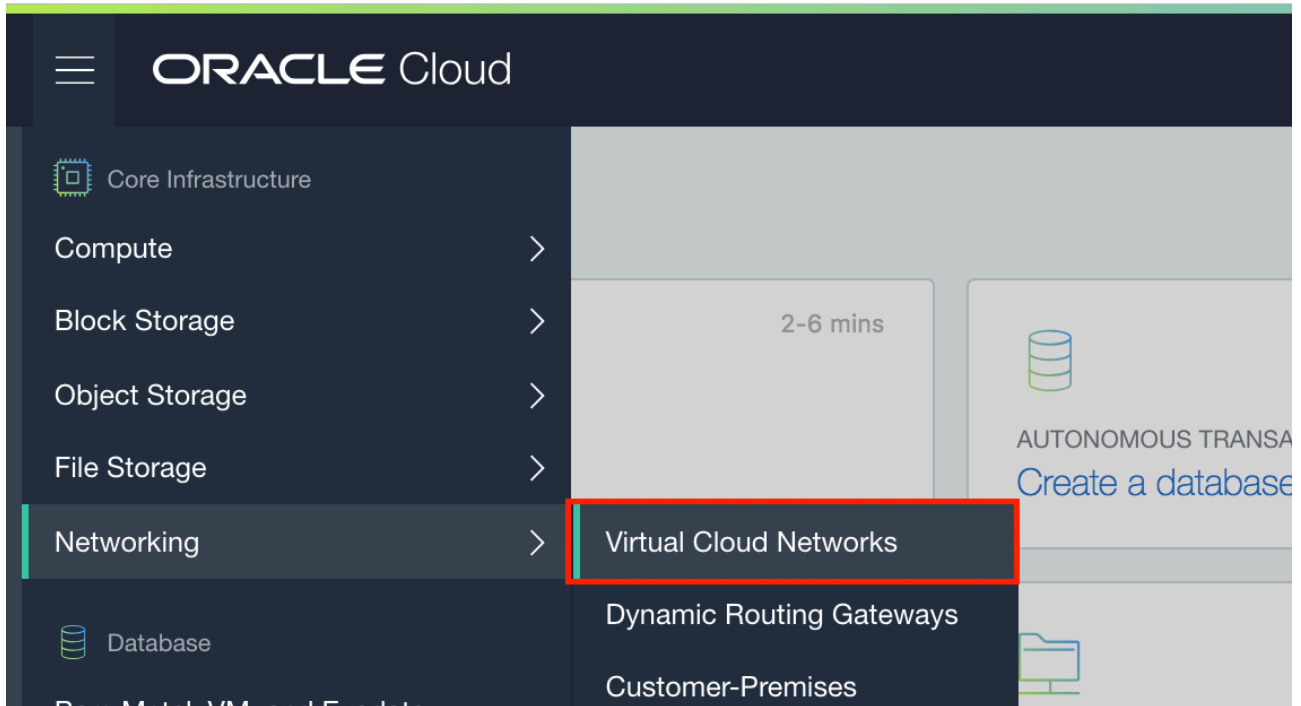
NAME

balena

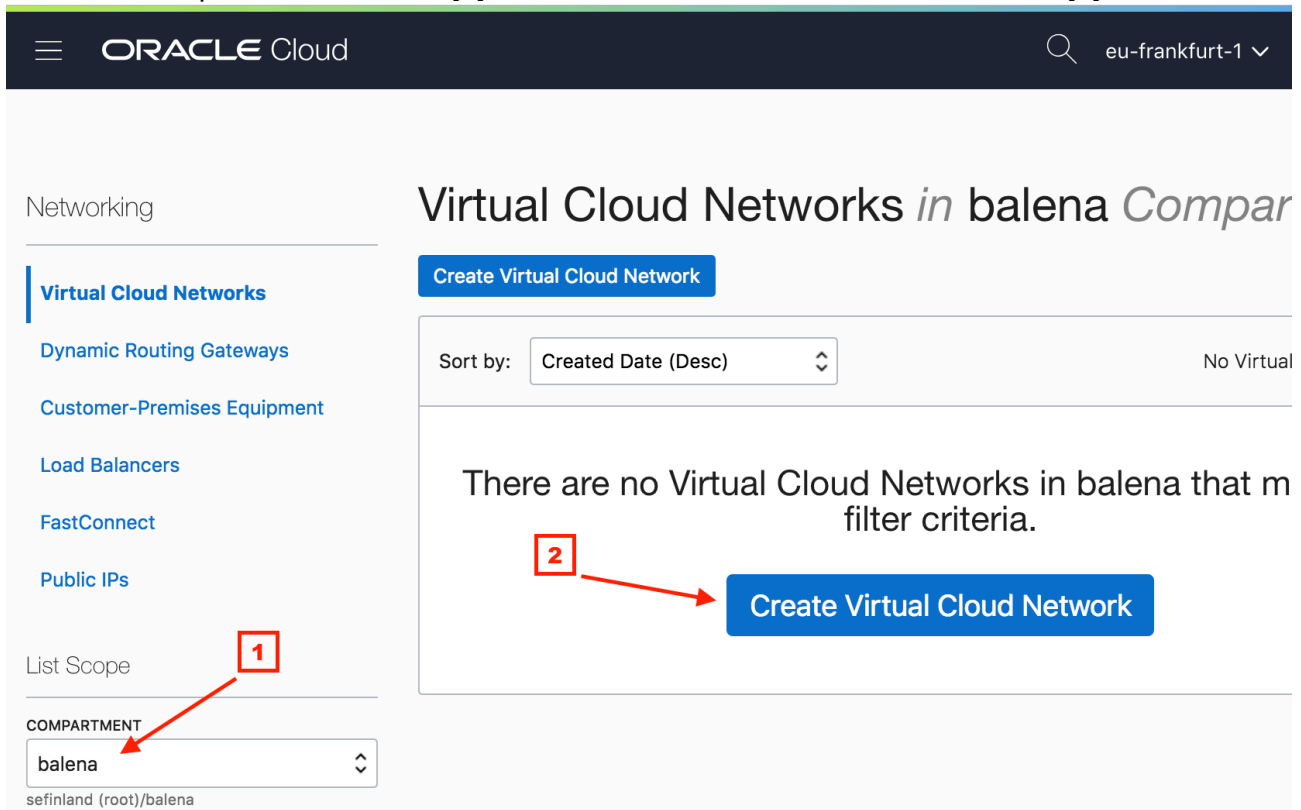
DESCRIPTION

Open Balena resources

Next we will create a Virtual Cloud Network (VCN) for our Open Balena VM with all the necessary resources to be able to access it from the public internet. From the “burger” –menu choose “Networking” -> “Virtual Cloud Networks”



Select the compartment “balena” [1] and choose “Create Virtual Cloud Network” [2]



Create in compartment “balena” [1], name it balena-vcn [2] and select the option “Create virtual cloud network and related resources” [3]. Click on “Create Virtual Network” at the bottom of the dialog. These settings automatically set up the network with necessary routing and firewall rules.

Create Virtual Cloud Network

[help](#) [cancel](#)

CREATE IN COMPARTMENT

balena

sefinland (root)/balena

NAME *OPTIONAL*


balena-vcn

☐ CREATE VIRTUAL CLOUD NETWORK ONLY

☒ CREATE VIRTUAL CLOUD NETWORK PLUS RELATED RESOURCES

Automatically sets up a Virtual Cloud Network with access to the internet. You can set up firewall rules and Security Lists to control ingress and egress traffic to your Instances. All related resources will be created in the same Compartment as the VCN. These actions will occur:

We have to add one additional firewall rule allow access to HTTPS port 443 to our Open Balena server. Click on the VCN we just created in the compartment “balena”

Sort by: Created Date (Desc)		Displaying 1 Virtual Cloud Networks < Page 1 >			
 AVAILABLE	balena-vcn OCID: ...vchlhq Show Copy	CIDR Block: 10.0.0.0/16	Default Route Table: Default Route Table for balena-vcn	DNS Domain Name: balenavcn... Show Copy	Created: Wed, 13 Feb 2019 16:31:43 GMT
Displaying 1 Virtual Cloud Networks < Page 1 >					

Select “Default Security List for balena-vcn” from any of the available subnets displayed.

VCN
AVAILABLE

balena-vcn

[Terminate](#) [Apply Tag\(s\)](#)

VCN Information [Tags](#)

CIDR Block: 10.0.0.0/16 **OCID:** ...vchlq [Show](#) [Copy](#)

Compartment: sefinland (root)/balena **Default Route Table:** [Default Route Table f](#)


Created: Wed, 13 Feb 2019 16:31:43 GMT **DNS Domain Name:** balenavcn... [Show](#) [Co](#)

Resources

- Subnets (3)**
- Route Tables (1)
- Internet Gateways (1)
- Dynamic Routing Gateways (0)
- Security Lists (1)
- DHCP Options (1)
- Local Peering Gateways (0)
- NAT Gateways (0)

Create Subnet

Sort by: [Created Date \(Desc\)](#) [Disp](#)

	Public Subnet	CIDR Block:	Availability Domain:	Route Table:	DHCP Option
 AVAILABLE	EAYH:EU-FRANKFURT-1-AD-3 OCID: ...gkrmaq Show Copy	10.0.2.0/24 Virtual Router MAC Address: 00:00:17:FC:56:05	EAYH:EU-FRANKFURT-1-AD-3 DNS Domain Name: sub0213163... Show Copy	Default Route Table for balena-vcn Security Lists: Default Security List for balena-vcn	DHCP Option for balena-vcn

Select “Edit All Rules” and on the following screen under “Allow Rules for Ingress” pane select “+ Another Ingress Rule”

SL
AVAILABLE

Default Security List for balena-vcn

[Edit All Rules](#) [Terminate](#) [Apply Tag\(s\)](#)

Security List Information [Tags](#)

OCID: ...j6isha [Show](#) [Copy](#)

Created: Wed, 13 Feb 2019 16:31:43 GMT

Instance traffic is controlled by firewall rules on

[+ Another Ingress Rule](#)

Create an ingress rule with the following options and click on “Save Security List Rules” at the bottom of the dialog

Ingress Rule 4

Allows TCP traffic for ports: 443 HTTPS

☐ STATELESS [\(more information\)](#)

SOURCE TYPE

CIDR

SOURCE CIDR

0.0.0.0/0

Specified IP addresses: 0.0.0.0-255.255.255.255 (4,294,967,296 IP addresses)

IP PROTOCOL

TCP

[\(more information\)](#)

SOURCE PORT RANGE (OPTIONAL)

All

Examples: 80, 20-22 or All
[\(more information\)](#)

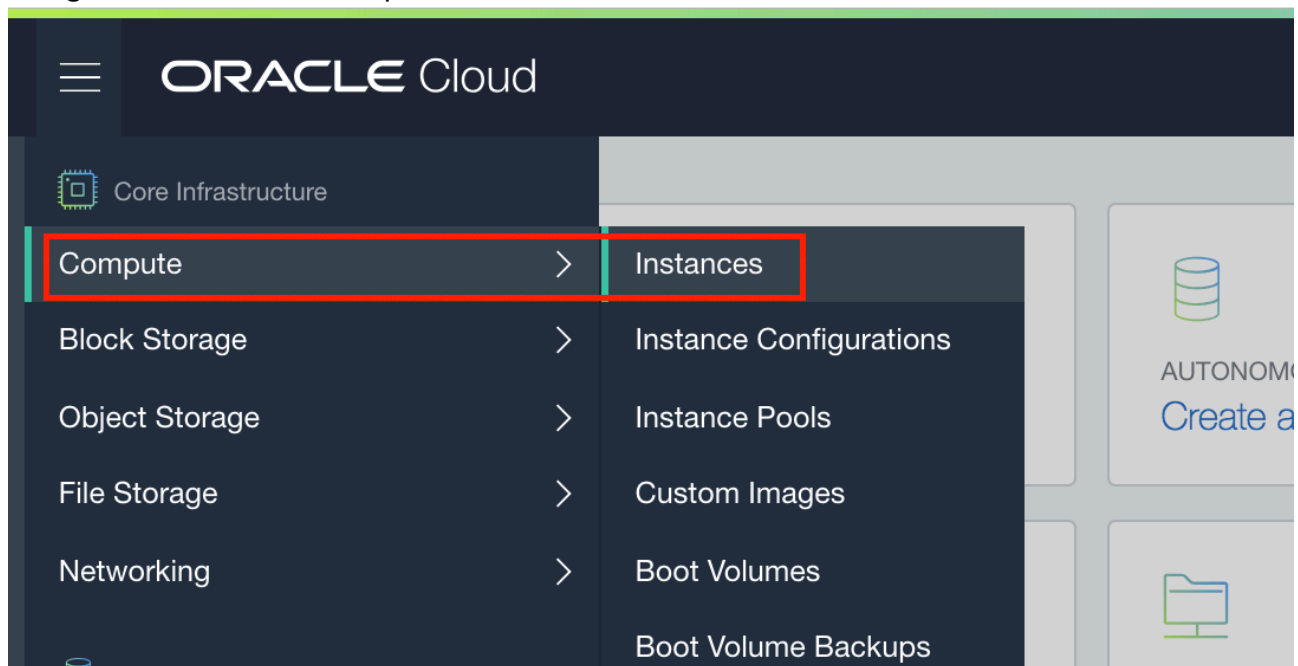
DESTINATION PORT RANGE (OPTIONAL)

443

Examples: 80, 20-22 or All
[\(more information\)](#)

Create ingress rules also for ports 80, 3000 and 8080

Next we proceed with creating a Virtual Machine instance to run our Open Balena server. From “burger” –menu select “Compute” -> “Instances”



In the “balena” compartment [1] select “Create Instance” [2]

Compute

Instances

Instance Configurations

Instance Pools

Custom Images

Boot Volumes

Boot Volume Backups

List Scope

COMPARTMENT

balena

sefinland (root)/balena

Create Instance

Sort by: Created Date (Desc)

There are no Instances in balena that match the criteria

Create Instance

Name your instance **balena-server** [1] and click on “Change Image Source” [2]

Name your instance

balena-server

Select an availability domain for your instance

AD 1
EAYH:EU-FRANKFURT-1-AD-1 ✓

AD 2
EAYH:EU-FRANKFURT-1-AD-2

AD 3
EAYH:EU-FRANKFURT-1-AD-3

Choose an operating system or image source

ORACLE LINUX

Oracle Linux 7.6
Image Build: 2019.01.17-0

Change Image Source

Choose instance type

Virtual Machine
A virtual machine is an independent computing environment that runs on top of physical bare metal hardware. ✓

Bare Metal Machine
A bare metal compute instance gives you dedicated physical server access for highest performance and strong isolation.

Select “Canonical Ubuntu 18.04” as the image and click on “Select Image”

Browse All Images

[Platform Images](#) [Oracle Images](#) [Partner Images](#) [Custom Images](#) [Boot Volumes](#) [Image OCID](#)

Pre-built images for Oracle Cloud Infrastructure. See [Oracle-Provided Images](#) for more information.

Operating System	
<input type="checkbox"/>	Canonical Ubuntu 14.04
<input type="checkbox"/>	Canonical Ubuntu 16.04
<input checked="" type="checkbox"/>	Canonical Ubuntu 18.04
<input type="checkbox"/>	CentOS 6.10
<input type="checkbox"/>	CentOS 7
<input type="checkbox"/>	Oracle Linux 6.10

You also need to add your SSH –key to be able to access the VM. More on SSH –keys in the following resource:

TODO

Select the following options for “Configure networking”

Configure networking

Virtual cloud network compartment

balena

sefinland (root)/balena

Virtual cloud network

balena-vcn

Subnet compartment

balena

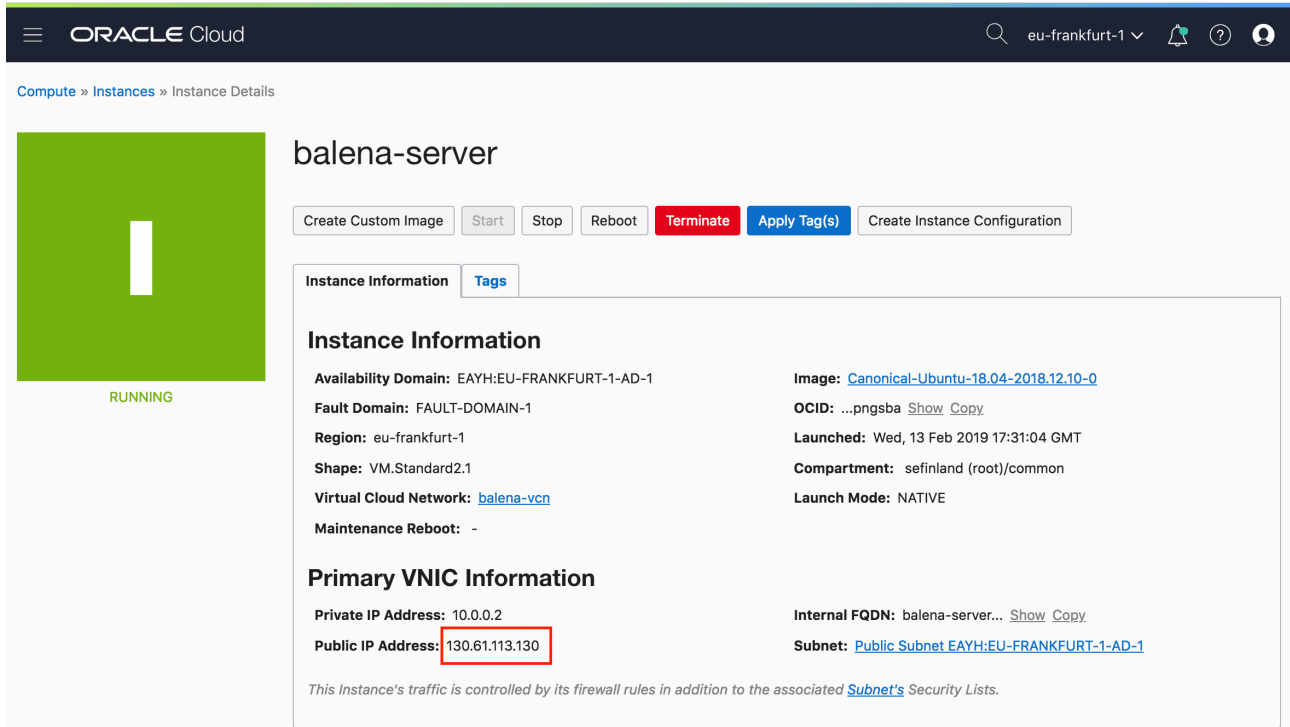
sefinland (root)/balena

Subnet

Public Subnet EAYH:EU-FRANKFURT-1-AD-1

Click on “Create” to finish the VM set up.

Once we have our instance of Open Balena server running, we can note down the public IP address and connect to the virtual machine with SSH.



The screenshot shows the Oracle Cloud console interface. At the top, there's a navigation bar with the Oracle Cloud logo and a search bar. Below the navigation bar, the breadcrumb trail reads "Compute » Instances » Instance Details". The main content area displays the details for an instance named "balena-server". On the left, there's a green square icon with a white vertical bar, and below it, the word "RUNNING" in green. To the right of the icon, there's a row of buttons: "Create Custom Image", "Start", "Stop", "Reboot", "Terminate" (highlighted in red), "Apply Tag(s)", and "Create Instance Configuration". Below these buttons, there's a tabbed interface with "Instance Information" and "Tags" tabs. The "Instance Information" tab is active, showing various details about the instance. The "Primary VNIC Information" section is highlighted, showing the Private IP Address as 10.0.0.2 and the Public IP Address as 130.61.113.130 (which is highlighted with a red box). Other details include Availability Domain, Fault Domain, Region, Shape, Virtual Cloud Network, Maintenance Reboot, Image, OCID, Launched time, Compartment, and Launch Mode.

balena-server

Create Custom Image Start Stop Reboot **Terminate** Apply Tag(s) Create Instance Configuration

Instance Information Tags

Instance Information

Availability Domain: EAYH:EU-FRANKFURT-1-AD-1
Fault Domain: FAULT-DOMAIN-1
Region: eu-frankfurt-1
Shape: VM.Standard2.1
Virtual Cloud Network: [balena-vcn](#)
Maintenance Reboot: -

Image: [Canonical-Ubuntu-18.04-2018.12.10-0](#)
OCID: ...pngsba [Show](#) [Copy](#)
Launched: Wed, 13 Feb 2019 17:31:04 GMT
Compartment: sefinland (root)/common
Launch Mode: NATIVE

Primary VNIC Information

Private IP Address: 10.0.0.2
Public IP Address: **130.61.113.130**

Internal FQDN: balena-server... [Show](#) [Copy](#)
Subnet: [Public Subnet EAYH:EU-FRANKFURT-1-AD-1](#)

This Instance's traffic is controlled by its firewall rules in addition to the associated [Subnet's](#) Security Lists.

For connecting use user Ubuntu

Open your ssh client or connect via command line

For example:

```
ssh ubuntu@130.61.113.130
```

Update initial software:

```
sudo apt-get update && apt-get install -y build-essential git
```

Install Docker:

```
sudo apt-get install docker.io
```

Add your current user to docker group:

```
sudo groupadd docker (the group should already exist)  
sudo usermod -aG docker $USER
```

Update firewall rules to allow access:

```
sudo ufw allow 80/tcp  
sudo ufw allow 443/tcp  
sudo ufw allow 3000/tcp  
sudo ufw allow 8080/tcp
```