

# Tugas Konfigurasi Magento

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## Bagian 1 Membangun VPC dengan 2 Subnet

1. VPC yang digunakan merupakan VPC yang telah dibangun sebelumnya. Pada konsol VPC <https://console.aws.amazon.com/vpc/> seperti berikut

The screenshot shows the AWS VPC console. At the top, there are buttons for 'Create VPC' and 'Actions'. Below is a search bar and a table of VPCs. The table has columns: Name, VPC ID, State, IPv4 CIDR, IPv6 CIDR, DHCP options set, and Main Route table. Two VPCs are listed: 'MyVPC' (vpc-01223c2168a3a0167) and 'vpc-119ff36b'. Below the table, the details for 'VPC: vpc-01223c2168a3a0167' are shown under the 'Description' tab. The details are organized into two columns.

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	DHCP options set	Main Route table
MyVPC	vpc-01223c2168a3a0167	available	10.0.0.0/16	-	dopt-51d8d12a	rtb-093c3192f67ef0876
	vpc-119ff36b	available	172.31.0.0/16	-	dopt-51d8d12a	rtb-7211fa0c

**VPC: vpc-01223c2168a3a0167**

Description	
VPC ID	vpc-01223c2168a3a0167
State	available
IPv4 CIDR	10.0.0.0/16
IPv6 CIDR	-
Network ACL	acl-0969de332231f431d
DHCP options set	dopt-51d8d12a
Route table	rtb-093c3192f67ef0876
Tenancy	default
Default VPC	No
Classic link	Disabled
DNS resolution	Enabled
DNS hostnames	Enabled
ClassicLink DNS Support	Disabled
Owner	942339016034

2. Selanjutnya membangun 2 subnet yang mana menggunakan subnet yang telah dibangun sebelumnya.

### Subnet 1

The screenshot shows the AWS VPC console. At the top, there are buttons for 'Create subnet' and 'Actions'. Below is a search bar and a table of subnets. The table has columns: Name, Subnet ID, State, VPC, IPv4 CIDR, and Available IPv4. Three subnets are listed: 'subnet-28f1a14f', 'Subnet1' (subnet-091c6bb1f7ca15479), and 'Subnet2' (subnet-0643c67a7dc55bc4b). Below the table, the details for 'Subnet: subnet-091c6bb1f7ca15479' are shown under the 'Description' tab. The details are organized into two columns.

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4
	subnet-28f1a14f	available	vpc-119ff36b	172.31.0.0/20	4091
Subnet1	subnet-091c6bb1f7ca15479	available	vpc-01223c2168a3a0167 ...	10.0.1.0/24	251
Subnet2	subnet-0643c67a7dc55bc4b	available	vpc-01223c2168a3a0167 ...	10.0.2.0/24	251

**Subnet: subnet-091c6bb1f7ca15479**

Description	
Subnet ID	subnet-091c6bb1f7ca15479
VPC	vpc-01223c2168a3a0167   MyVPC
Available IPv4 Addresses	251
Availability Zone	us-east-1a (use1-az2)
Network ACL	acl-0969de332231f431d
Auto-assign public IPv4 address	Yes
Owner	942339016034
State	available
IPv4 CIDR	10.0.1.0/24
IPv6 CIDR	-
Route Table	rtb-06ea8f2bd5e4ba429
Default subnet	No
Auto-assign IPv6 address	No

### Subnet 2

**Create subnet** **Actions** ▾

Filter by tags and attributes or search by keyword

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4
<input type="checkbox"/>		subnet-28f1a14f	available	vpc-119ff36b	172.31.0.0/20	4091
<input type="checkbox"/>	Subnet1	subnet-091c6bb1f7ca15479	available	vpc-01223c2168a3a0167 ...	10.0.1.0/24	251
<input checked="" type="checkbox"/>	Subnet2	subnet-0643c67a7dc55bc4b	available	vpc-01223c2168a3a0167 ...	10.0.2.0/24	251

**Subnet:** subnet-0643c67a7dc55bc4b

**Description** | Flow Logs | Route Table | Network ACL | Tags | Sharing

Subnet ID	subnet-0643c67a7dc55bc4b	State	available
VPC	vpc-01223c2168a3a0167   MyVPC	IPv4 CIDR	10.0.2.0/24
Available IPv4 Addresses	251	IPv6 CIDR	-
Availability Zone	us-east-1a (use1-az2)	Route Table	rtb-06ea8f2bd5e4ba429
Network ACL	acl-0969de332231f431d	Default subnet	No
Auto-assign public IPv4 address	Yes	Auto-assign IPv6 address	No
Owner	942339016034		

3. Kemudian membangun Route Table, juga menggunakan Route Table yang telah dibangun sebelumnya. Pada bagian Subnet Associations ditambahkan subnet yang digunakan.

**Create route table** **Actions** ▾

Filter by tags and attributes or search by keyword

<input type="checkbox"/>	Name	Route Table ID	Explicitly Associated with	Main	VPC ID	Owner
<input checked="" type="checkbox"/>		rtb-06ea8f2bd5e4ba429	2 subnets	No	vpc-01223c2168a3a0167 ...	942339016034
<input type="checkbox"/>		rtb-093c3192f67ef0876	-	Yes	vpc-01223c2168a3a0167 ...	942339016034
<input type="checkbox"/>		rtb-7211fa0c	-	Yes	vpc-119ff36b	942339016034

**Route Table:** rtb-06ea8f2bd5e4ba429

Summary | Routes | **Subnet Associations** | Route Propagation | Tags

Edit subnet associations

Subnet ID	IPv4 CIDR	IPv6 CIDR
subnet-0643c67a7dc55bc...	10.0.2.0/24	-
subnet-091c6bb1f7ca154...	10.0.1.0/24	-

4. Selanjutnya membangun Network ACL untuk VPC tersebut

Create network ACL

Actions

Filter by tags and attributes or search by keyword

< 1 to 2 of 2 >

<input type="checkbox"/>	Name	Network ACL ID	Associated with	Default	VPC	Owner
<input checked="" type="checkbox"/>		acl-0969de332231...	2 Subnets	Yes	vpc-01223c2168a3a0167   MyVPC	942339016034
<input type="checkbox"/>		acl-b25087cf	subnet-28f1a14f	Yes	vpc-119ff36b	942339016034

Network ACL: acl-0969de332231f431d

Details

Inbound Rules

Outbound Rules

Subnet associations

Tags

Edit subnet associations

Filter by tags and attributes or search by keyword

< 1 to 2 of 2 >

Subnet ID	IPv4 CIDR	IPv6 CIDR
subnet-0643c67a7d...	10.0.2.0/24	-
subnet-091c6bb1f7...	10.0.1.0/24	-

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## Bagian 2 Membangun DB Subnet Group dan Master Slave RDS

### Membangun DB Subnet

1. Pada console <https://console.aws.amazon.com/rds/> pilih **Subnet groups** dan Pilih **Create DB Subnet Group**.
2. Pada **Create DB Subnet group**, isi bagian **Subnet Group details** dan pilih VPC yang telah dibuat.

**Subnet group details**

**Name**  
You won't be able to modify the name after your subnet group has been created.

Must contain from 1 to 255 characters. Alphanumeric characters, spaces, hyphens, underscores, and periods are allowed.

**Description**

**VPC**  
Choose a VPC identifier that corresponds to the subnets you want to use for your DB subnet group. You won't be able to choose a different VPC identifier after your subnet group has been created.

MyVPC (vpc-01223c2168a3a0167) ▼

3. Pada bagian **Add subnets**, pilih **Add all the subnets related to this VPC**, kemudian pilih **next**.

### Add subnets

Add subnet(s) to this subnet group. You may add subnets one at a time below or add all the subnets related to this VPC. You may make additions/edits after this group is created. A minimum of 2 subnets is required.

**Add all the subnets related to this VPC**

Availability zone

Choose an availability zone ▼

Subnet

Choose a subnet ▼

**Add subnet**

---

**Subnets in this subnet group (3)**

Availability zone	Subnet ID	CIDR block	Action
us-east-1a	subnet-0643c67a7dc55bc4b	10.0.2.0/24	<b>Remove</b>
us-east-1b	subnet-097858fd6368da1ab	10.0.3.0/24	<b>Remove</b>
us-east-1a	subnet-091c6bb1f7ca15479	10.0.1.0/24	<b>Remove</b>

Cancel
**Create**

## Membangun RDS Master

- Selanjutnya masuk ke konsol RDS <https://console.aws.amazon.com/rds/>, pada bagian **dashboard** pilih **Create Database**.

The screenshot shows the AWS Management Console for Amazon RDS. The left sidebar contains navigation links: Dashboard, Databases, Query Editor, Performance Insights, Snapshots, Automated backups, Reserved instances, Subnet groups, Parameter groups, Option groups, Events, Event subscriptions, and Recommendations. The main content area features a notification for Amazon Aurora, a 'Resources' section showing usage for DB Instances, Parameter groups, Option groups, Snapshots, and Events in the US East (N. Virginia) region, and an 'Additional information' section with links to documentation and guides.

- Pada bagian **Select Engine** pilih MySQL, kemudian pilih **Next**

## Select engine

### Engine options

☐ Amazon Aurora

Amazon  
Aurora

☒ MySQL



☐ MariaDB



☐ PostgreSQL



☐ Oracle

ORACLE®

☐ Microsoft SQL Server



3. Pada bagian **Choose use case**, pilih **Dev/Test – MySQL** kemudian pilih **Next**

## Choose use case

### Use case

Do you plan to use this database for production purposes?

#### Use case

☐ **Production - Amazon Aurora**

**Recommended**

MySQL-compatible, enterprise-class database at 1/10th the cost of commercial databases.

☐ **Production - MySQL**

Use [Multi-AZ Deployment](#) and [Provisioned IOPS Storage](#) as defaults for high availability and fast, consistent performance.

☒ **Dev/Test - MySQL**

This instance is intended for use outside of production or under the [RDS Free Usage Tier](#).

Billing is based on [RDS pricing](#).

Cancel

Previous

Next

4. Masih di **Specify DB details**, pada bagian **Settings** masukkan nama DB dan username serta password yang akan digunakan. Kemudian pilih **next**.

## Settings

### DB instance identifier [Info](#)

Specify a name that is unique for all DB instances owned by your AWS account in the current region.

myrdsdb

DB instance identifier is case insensitive, but stored as all lower-case, as in "mydbinstance". Must contain from 1 to 63 alphanumeric characters or hyphens (1 to 15 for SQL Server). First character must be a letter. Cannot end with a hyphen or contain two consecutive hyphens.

### Master username [Info](#)

Specify an alphanumeric string that defines the login ID for the master user.

rdsuser

Master Username must start with a letter. Must contain 1 to 16 alphanumeric characters.

### Master password [Info](#)

.....

### Confirm password [Info](#)

.....

Master Password must be at least eight characters long, as in "mypassword". Can be any printable ASCII character except "/", "", or "@".

5. Pada **Configure advanced settings** bagian **Network & Security** pilih VPC yang telah dibuat, pilih subnet group, pilih AZ dan pilih VPC Security Group.

## Network & Security

### Virtual Private Cloud (VPC) [Info](#)

VPC defines the virtual networking environment for this DB instance.

MyVPC (vpc-01223c2168a3a0167)



Only VPCs with a corresponding DB subnet group are listed.

### Subnet group [Info](#)

DB subnet group that defines which subnets and IP ranges the DB instance can use in the VPC you selected.

magento-subnet-group

### Public accessibility [Info](#)

☐ Yes

EC2 instances and devices outside of the VPC hosting the DB instance will connect to the DB instances. You must also select one or more VPC security groups that specify which EC2 instances and devices can connect to the DB instance.

☒ No

DB instance will not have a public IP address assigned. No EC2 instance or devices outside of the VPC will be able to connect.

### Availability zone [Info](#)

us-east-1a

### VPC security groups

Security groups have rules authorizing connections from all the EC2 instances and devices that need to access the DB instance.

☐ Create new VPC security group

☒ Choose existing VPC security groups

Choose VPC security groups

database-SG X



- Selanjutnya di bagian **Database Options**, dimasukkan nama database. Biarkan lainnya terisi secara default kemudian pilih **Create Database**.

### Database options

Database name [Info](#)

Note: if no database name is specified then no initial MySQL database will be created on the DB Instance.

Port [Info](#)

TCP/IP port the DB instance will use for application connections.

DB parameter group [Info](#)

Option group [Info](#)

IAM DB authentication [Info](#)

☐ Enable IAM DB authentication  
 Manage your database user credentials through AWS IAM users and roles.

☒ Disable

- Pada databases tunggu proses pembuatan hingga status menjadi **Available**.

Databases						
<input checked="" type="radio"/> Group resources		<input type="button" value="Refresh"/>	<input type="button" value="Modify"/>	<input type="button" value="Actions ▼"/>	<input type="button" value="Restore from S3"/>	<input type="button" value="Create database"/>
<input type="text" value="Filter databases"/>						
	DB identifier	Role	Engine	Region & AZ	Size	Status
<input checked="" type="radio"/>	myrdsdb	Instance	MySQL	us-east-1a	db.t2.micro	Available

## Membangun RDS Replica

- Selanjutnya membuat **Slave** dari master RDS dengan memilih DB sebagai master kemudian pilih **Actions – Create read replica**.

RDS > Databases > myrdsdb

## myrdsdb

Summary

DB identifier myrdsdb	CPU 1.69%	Info Available	Class db.t2
Role Instance	Current activity 0 Connections	Engine MySQL	Region us-east-1

Modify

Actions

- Stop
- Reboot
- Delete
- Create read replica
- Create Aurora read replica
- Promote
- Take snapshot
- Restore to point in time
- Migrate snapshot
- Tags

Connectivity & security

Monitoring

Logs & events

Configuration

Maintenance & backups

2. Pada **Create read replica DB instance**, pilih region dan DB subnet group yang sama dengan Master. Pada kasus ini availability zone yang digunakan berbeda dengan master (master az 1a, slave az 1b)

### Network & Security

**Destination region**  
The region in which the replica will be launched

US East (N. Virginia)

**Destination DB subnet group**

magento-subnet-group

**Availability zone**  
The EC2 Availability Zone that the database instance will be created in.

us-east-1b

**Publicly accessible**

☐ Yes  
EC2 instances and devices outside of the VPC hosting the DB instance will connect to the DB instances. You must also select one or more VPC security groups that specify which EC2 instances and devices can connect to the DB instance.

☒ No  
DB instance will not have a public IP address assigned. No EC2 instance or devices outside of the VPC will be able to connect.

3. Pada bagian **settings** isikan DB identify, dan biarkan lainnya secara default. Kemudian pilih **Create replica**.

### Settings

**Read replica source**  
Source DB instance Identifier

mymagentodb

**DB instance identifier**  
DB instance identifier. This is the unique key that identifies a DB instance. This parameter is stored as a lowercase string (e.g. mydbinstance).

mymagentodbrep

4. Pada bagian **Databases** akan ada 2 database yaitu **Master** pada az 1a dan **Replica** pada az 1b. Tunggu hingga Status berubah menjadi Available.

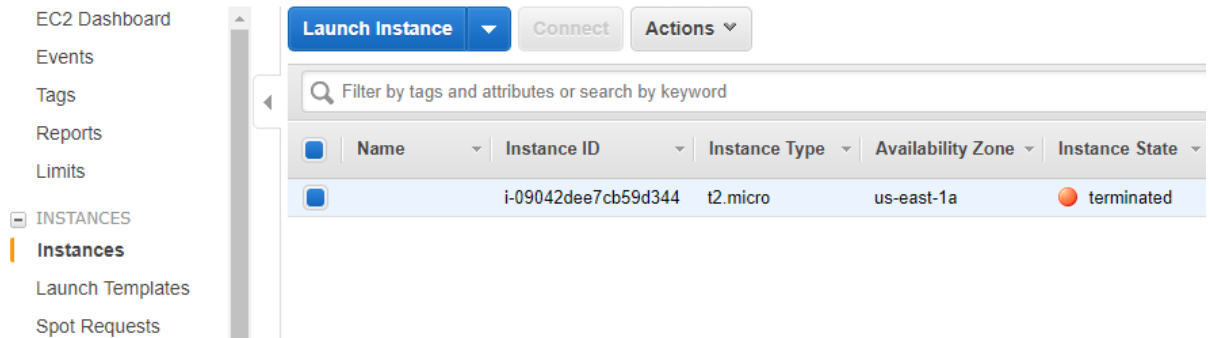
The screenshot shows the AWS RDS 'Databases' console. At the top, there's a 'Databases' header with a 'Group resources' toggle, a refresh button, and buttons for 'Modify', 'Actions', 'Restore from S3', and 'Create database'. Below the header is a search bar labeled 'Filter databases'. The main content is a table with columns: DB identifier, Role, Engine, Region & AZ, Size, and Status. There are two rows: 'mymagentodb' with Role 'Master', Engine 'MySQL', Region & AZ 'us-east-1a', Size 'db.t2.micro', and Status 'Modifying'; and 'mymagentodbrep' with Role 'Replica', Engine 'MySQL', Region & AZ 'us-east-1b', Size 'db.t2.micro', and Status 'Creating'.

DB identifier	Role	Engine	Region & AZ	Size	Status
mymagentodb	Master	MySQL	us-east-1a	db.t2.micro	Modifying
mymagentodbrep	Replica	MySQL	us-east-1b	db.t2.micro	Creating

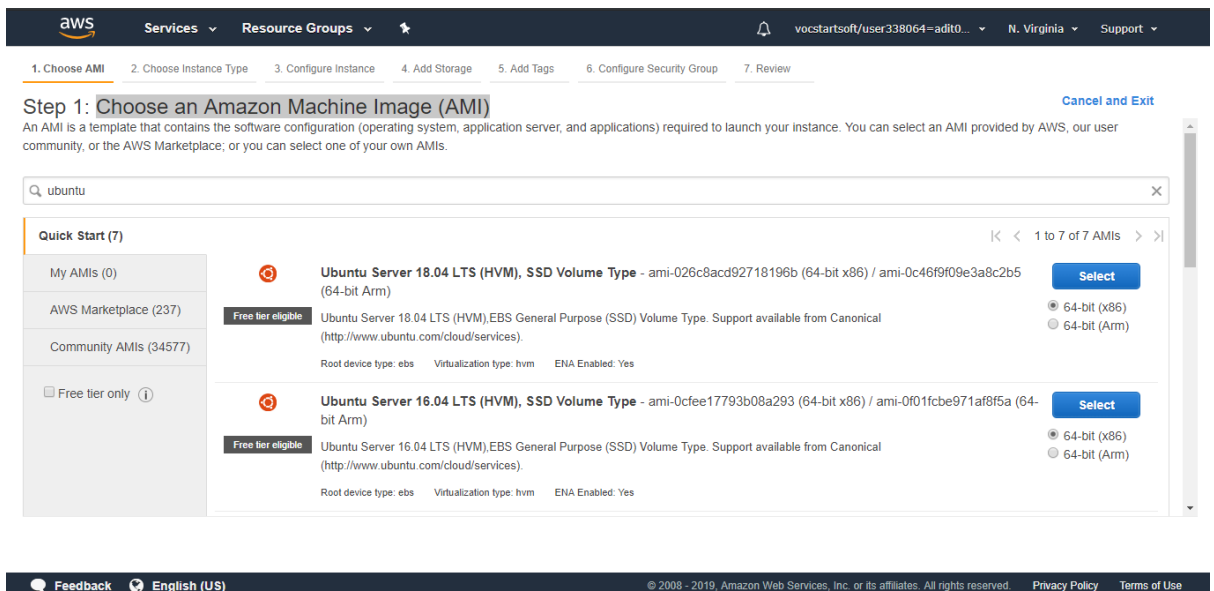
## Bagian 3 Membangun EC2 dan Instalasi Magento

### Membangun EC2

1. Pada konsol <https://console.aws.amazon.com/ec2/>, masuk ke **instances** kemudian pilih **Launch Instance**.



2. Pada **Step 1: Choose an Amazon Machine Image (AMI)**, search ubuntu kemudian pilih Ubuntu Server 18.04 dengan menekan **select**.



3. Pada **Step 2: Choose an Instance Type**, pilih tipe instance t2.micro kemudian pilih **Next: Configure Instance Details**

**Step 2: Choose an Instance Type**

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: **All instance types** **Current generation** [Show/Hide Columns](#)

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro <small>Free tier eligible</small>	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Instance Details](#)

4. Pada **Step 3: Configure Instance Details**, bagian **network** pilih VPC yang telah dibuat sebelumnya lalu pilih subnet. Subnet yang digunakan pada EC2 ini merupakan **Subnet1**. Biarkan lainnya secara default kemudian pilih **Next** hingga ke **Step 6**.

**Step 3: Configure Instance Details**

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances:  [Launch into Auto Scaling Group](#)

Purchasing option: ☐ Request Spot Instances

Network:  [Create new VPC](#)

Subnet:  [Create new subnet](#)  
251 IP Addresses available

Auto-assign Public IP:

Placement group: ☐ Add instance to placement group

Capacity Reservation:  [Create new Capacity Reservation](#)

IAM role:  [Create new IAM role](#)

Shutdown behavior:

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

5. Pada **Step 6: Configure Security Group**, Security Group yang digunakan merupakan SG yang telah dibangun sebelumnya yang memiliki spesifikasi port inbound 80 dan 22 untuk HTTP dan SSH. Kemudian pilih **Review and Launch**.

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☐ Create a new security group  
☒ Select an existing security group

Security Group ID	Name	Description	Actions
sg-044940beb426e96d1	database-SG	database-SG	<a href="#">Copy to new</a>
sg-0a2a4c53f85dfbb59	default	default VPC security group	<a href="#">Copy to new</a>
<input checked="" type="checkbox"/> sg-021d858214ee96189	WebServer-SG	Web Server Security Group	<a href="#">Copy to new</a>

Type	Protocol	Port Range	Source	Description
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	:::0	
SSH	TCP	22	0.0.0.0/0	
SSH	TCP	22	:::0	

[Cancel](#) [Previous](#) [Review and Launch](#)

6. Pada **Step 7: Review Instance Launch**, merupakan summary dari instance yang akan dibuat. Jika sudah benar pilih **Launch**.

Step 7: Review Instance Launch

AMI Details [Edit AMI](#)

Ubuntu Server 18.04 LTS (HVM), SSD Volume Type - ami-026c8acd92718196b

**Free tier eligible** Ubuntu Server 18.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).  
 Root Device Type: ebs Virtualization type: hvm

Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups [Edit security groups](#)

Security Group ID	Name	Description
sg-021d858214ee96189	WebServer-SG	Web Server Security Group

All selected security groups inbound rules

[Cancel](#) [Previous](#) [Launch](#)

7. Akan muncul window yang menampilkan **key pair**, di kasus ini akan digunakan key yang telah dibuat sebelumnya. Kemudian pilih **Launch Instance**.

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#) .

Choose an existing key pair

Select a key pair
secretKey

☒ I acknowledge that I have access to the selected private key file (secretKey.pem), and that without this file, I won't be able to log into my instance.

Cancel
Launch Instances

- Akan ditampilkan info bahwa instance telah berhasil dibuat, kemudian pilih **View instance** untuk melihat.

Launch Instance
Connect
Actions

Filter by tags and attributes or search by keyword

	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status
<input checked="" type="checkbox"/>	WebServer1	i-0d607eebdf9c953d8	t2.micro	us-east-1a	running	Initializing	None
<input type="checkbox"/>		i-09042dee7cb59d344	t2.micro	us-east-1a	terminated		None

## Instalasi Magento

- Selanjutnya melakukan konfigurasi ke Instance menggunakan SSH. Setelah terhubung, dilakukan update dan upgrade pada instance.
- Kemudian melakukan instalasi dan konfigurasi Magento dengan mengikuti tutorial berikut: <https://www.linode.com/docs/websites/ecommerce/install-magento-on-ubuntu-18-04/>
- Selanjutnya masuk ke user magento, pindah ke directory bin dan jalankan perintah:

```

sudo su magento

cd bin

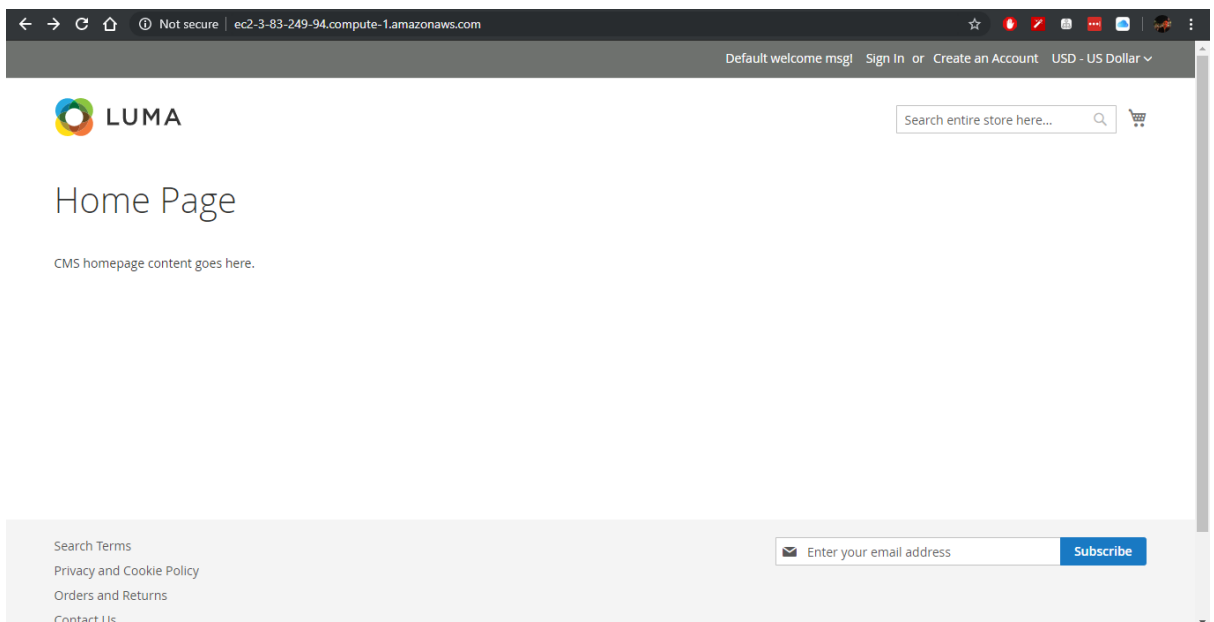
./magento setup:install --admin-firstname="Aditya" --admin-lastname="Pratama"
--admin-email="aditya@mail.com" --admin-user="aditya" --admin-
password="q1q2q3q4" --db-name="magentodb" --db-

```

```
host="myrdsdb.cdajxjwgby5t.us-east-1.rds.amazonaws.com" --db-user="rdsuser" -  
-db-password="password"
```

```
ubuntu@ip-10-0-1-37: /var/www/html/magento/public_html  
[Progress: 854 / 865]  
Module 'Klarna_Kp':  
[Progress: 855 / 865]  
Module 'Magento_PaypalReCaptcha':  
[Progress: 856 / 865]  
Module 'MSP_TwoFactorAuth':  
[Progress: 857 / 865]  
Module 'Temando_Shipping':  
[Progress: 858 / 865]  
Module 'Vertex_Tax':  
[Progress: 859 / 865]  
[Progress: 860 / 865]  
Installing admin user...  
[Progress: 861 / 865]  
Caches clearing:  
Cache cleared successfully  
[Progress: 862 / 865]  
Disabling Maintenance Mode:  
[Progress: 863 / 865]  
Post installation file permissions check...  
For security, remove write permissions from these directories: '/var/www/html/magento/public_html/app/etc'  
[Progress: 864 / 865]  
Write installation date...  
[Progress: 865 / 865]  
[SUCCESS]: Magento installation complete.  
[SUCCESS]: Magento Admin URI: /admin_8x9dli  
Nothing to import.  
magento@ip-10-0-1-37:/var/www/html/magento/public_html/bin$ exit  
exit  
ubuntu@ip-10-0-1-37:/var/www/html/magento/public_html$ sudo crontab -u magento -e
```

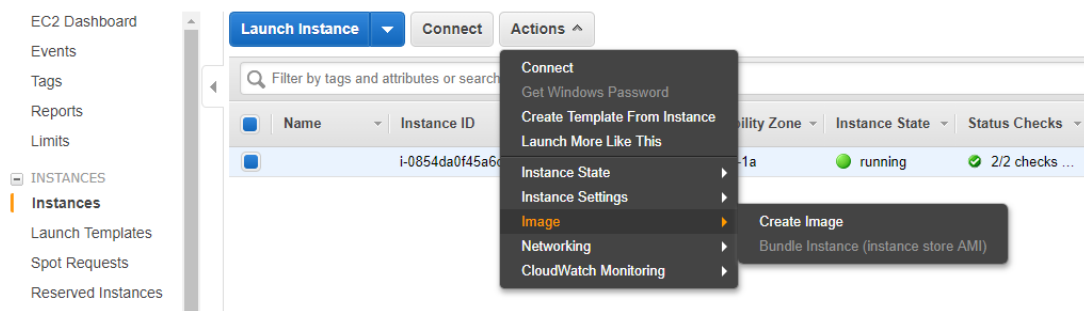
4. Setelah melalui proses dari tutorial diatas, dilakukan pengecekan dengan mengakses alamat URL atau IP dari instance melalui web browser. Halaman awal berhasil ditampilkan



## Membuat AMI atau Golde Image

1. Pada konsol EC2 <https://console.aws.amazon.com/ec2>, pada bagian **Instances** pilih **instance** yang akan dibuat image. Lalu pilih **Image – Create Image**.





2. Akan muncul window **Create Image**, isikan **image name** dan **image description** kemudian pilih **Create Image**.

The screenshot shows the 'Create Image' window. It has a title bar 'Create Image' with a close button. Below the title bar, there are several input fields: 'Instance ID' (i-0854da0f45a6c6e0f), 'Image name' (magento-ubuntu-16.04), 'Image description' (magento-ubuntu-16.04), and 'No reboot' (checked). Below these fields is a section titled 'Instance Volumes'. It contains a table with columns: Volume Type, Device, Snapshot, Size (GiB), Volume Type, IOPS, Throughput (MB/s), Delete on Termination, and Encrypted. The table has one row for the 'Root' volume. Below the table is an 'Add New Volume' button. At the bottom, there is a note: 'Total size of EBS Volumes: 8 GiB. When you create an EBS image, an EBS snapshot will also be created for each of the above volumes.' At the bottom right, there are 'Cancel' and 'Create Image' buttons.

3. Masih di konsol EC2, pada bagian **Images** pilih **AMIs** untuk melihat image yang telah dibuat dari instance pertama. Tunggu status hingga **available**.

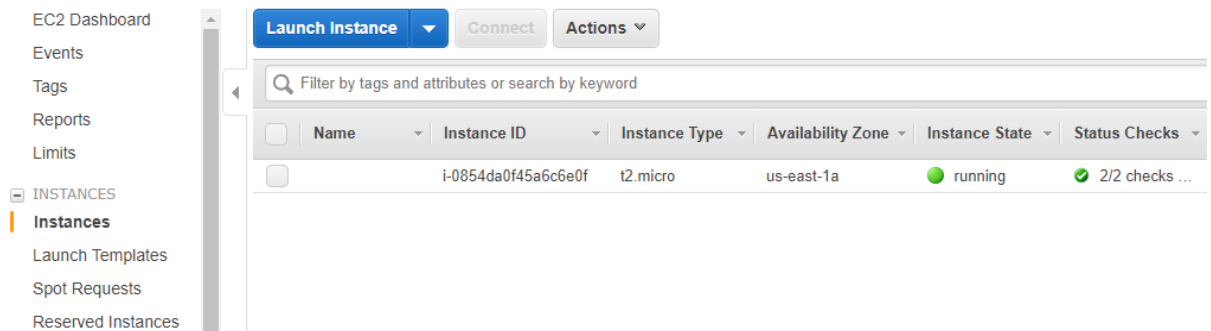
The screenshot shows the 'Images' section of the AWS Management Console. At the top, there are 'Launch' and 'Actions' buttons. Below them is a search bar and a table of AMIs. The table has columns: Name, AMI Name, AMI ID, Source, Owner, Visibility, Status, and Creation Date. Two AMIs are listed: 'Amazon-Word...' and 'magento-ubuntu-16.04'. The 'magento-ubuntu-16.04' AMI is selected. Below the table, there is a section titled 'Image: ami-043d98411ec3df164'. It has tabs for 'Details', 'Permissions', and 'Tags'. The 'Details' tab is active, showing a table of details for the selected AMI.

AMI ID	ami-043d98411ec3df164	AMI Name	magento-ubuntu-16.04
Owner	942339016034	Source	942339016034/magento-ubuntu-16.04
Status	available	State Reason	-
Creation date	July 17, 2019 at 8:38:39 PM UTC+7	Platform	Ubuntu
Architecture	x86_64	Image Type	machine

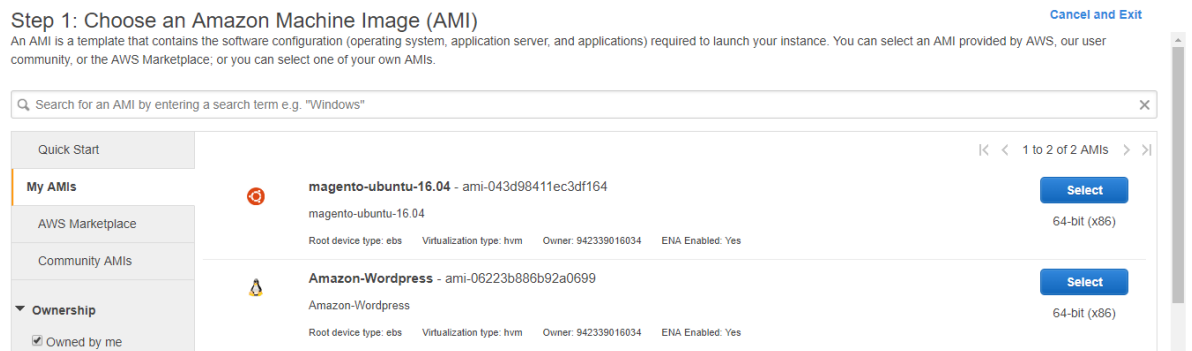
4. Selanjutnya membuat Instance EC2 kedua menggunakan AMI yang telah dibuat tadi, gunanya agar tidak melakukan instalasi magento ulang.

## Membangun EC2 menggunakan AMI sendiri

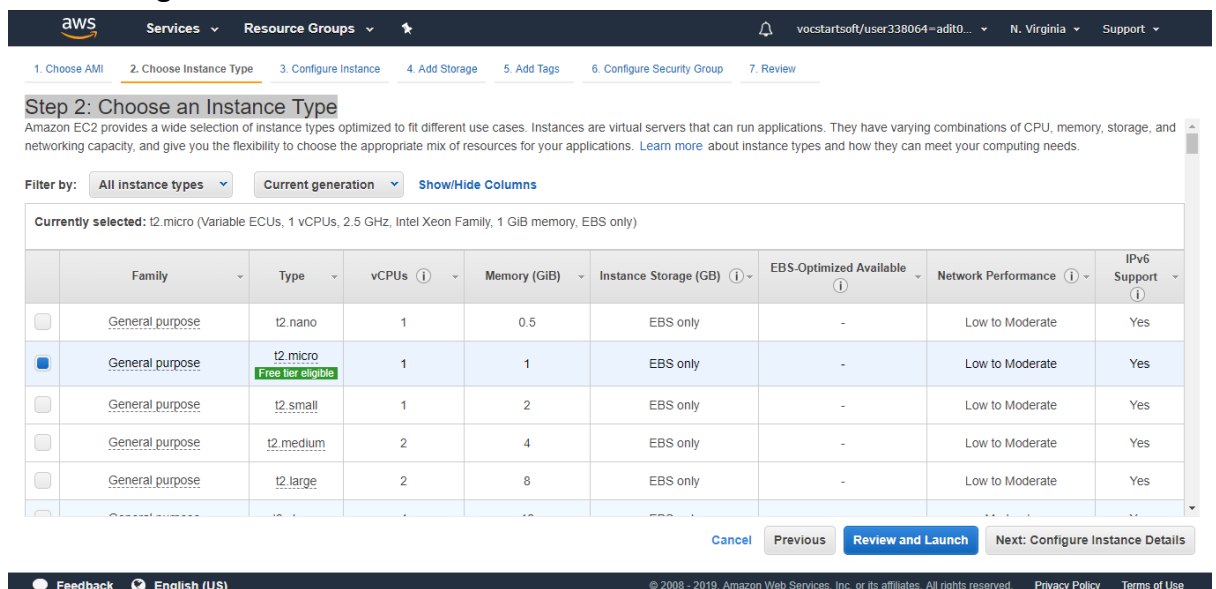
1. Pada konsol <https://console.aws.amazon.com/ec2/>, masuk ke **instances** kemudian pilih **Launch Instance**.



2. Pada **Step 1: Choose an Amazon Machine Image (AMI)**, pada bagian My AMIs pilih AMI yang telah dibuat (magento-ubuntu) kemudian menekan **select**.



3. Pada **Step 2: Choose an Instance Type**, pilih tipe instance t2.micro kemudian pilih **Next: Configure Instance Details**



4. Pada **Step 3: Configure Instance Details**, bagian **network** pilih VPC yang telah dibuat sebelumnya lalu pilih subnet. Subnet yang digunakan pada EC2 ini merupakan **Subnet2**. Biarkan lainnya secara default kemudian pilih **Next** hingga ke **Step 6**.

Network ⓘ vpc-01223c2168a3a0167 | MyVPC [Create new VPC](#)

Subnet ⓘ subnet-0643c67a7dc55bc4b | Subnet2 | us-east-1a [Create new subnet](#)  
250 IP Addresses available

Auto-assign Public IP ⓘ Use subnet setting (Enable)

5. Pada **Step 6: Configure Security Group**, Security Group yang digunakan merupakan SG yang telah dibangun sebelumnya yang memiliki spesifikasi port inbound 80 dan 22 untuk HTTP dan SSH. Kemudian pilih **Review and Launch**.

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☐ Create a new security group  
☒ Select an existing security group

Security Group ID	Name	Description	Actions
sg-044940beb426e96d1	database-SG	database-SG	<a href="#">Copy to new</a>
sg-0a2a4c53f85dfbb59	default	default VPC security group	<a href="#">Copy to new</a>
sg-021d858214ee96189	WebServer-SG	Web Server Security Group	<a href="#">Copy to new</a>

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ	Description ⓘ
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	:::/0	
SSH	TCP	22	0.0.0.0/0	
SSH	TCP	22	:::/0	

[Cancel](#) [Previous](#) [Review and Launch](#)

6. Pada **Step 7: Review Instance Launch**, merupakan summary dari instance yang akan dibuat. Jika sudah benar pilih **Launch**.

Step 7: Review Instance Launch

AMI Details [Edit AMI](#)

magento-ubuntu-16.04 - ami-043d98411ec3dff164  
magento-ubuntu-16.04  
Root Device Type: ebs Virtualization type: hvm

Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups [Edit security groups](#)

Security Group ID	Name	Description
sg-021d858214ee96189	WebServer-SG	Web Server Security Group

All selected security groups inbound rules

[Cancel](#) [Previous](#) [Launch](#)

7. Akan muncul window yang menampilkan **key pair**, di kasus ini akan digunakan key yang telah dibuat sebelumnya. Kemudian pilih **Launch Instance**.

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair

Select a key pair

secretKey

☒ I acknowledge that I have access to the selected private key file (secretKey.pem), and that without this file, I won't be able to log into my instance.

Cancel

Launch Instances

8. Akan ditampilkan info bahwa instance telah berhasil dibuat, kemudian pilih **View instance** untuk melihat.

Launch Instance

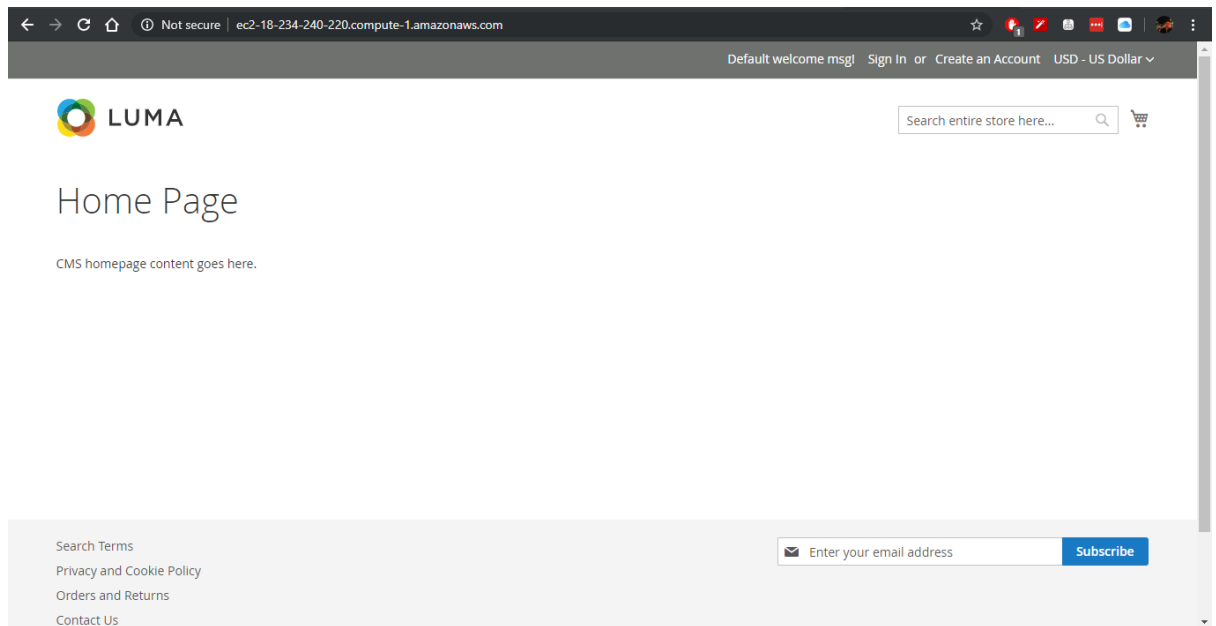
Connect

Actions

Filter by tags and attributes or search by keyword

	Name	Instance ID	Instance Type	Availability Zone	Instance State
<input checked="" type="checkbox"/>	WebServer2	i-0b40dddd341ca75e5	t2.micro	us-east-1a	<span>●</span> running
<input checked="" type="checkbox"/>	WebServer1	i-0854da0f45a6c6e0f	t2.micro	us-east-1a	<span>●</span> running

9. Cek apakah ada error pada magento di instance yang baru dibuat dengan mengakses URL atau IP melalui web browser.

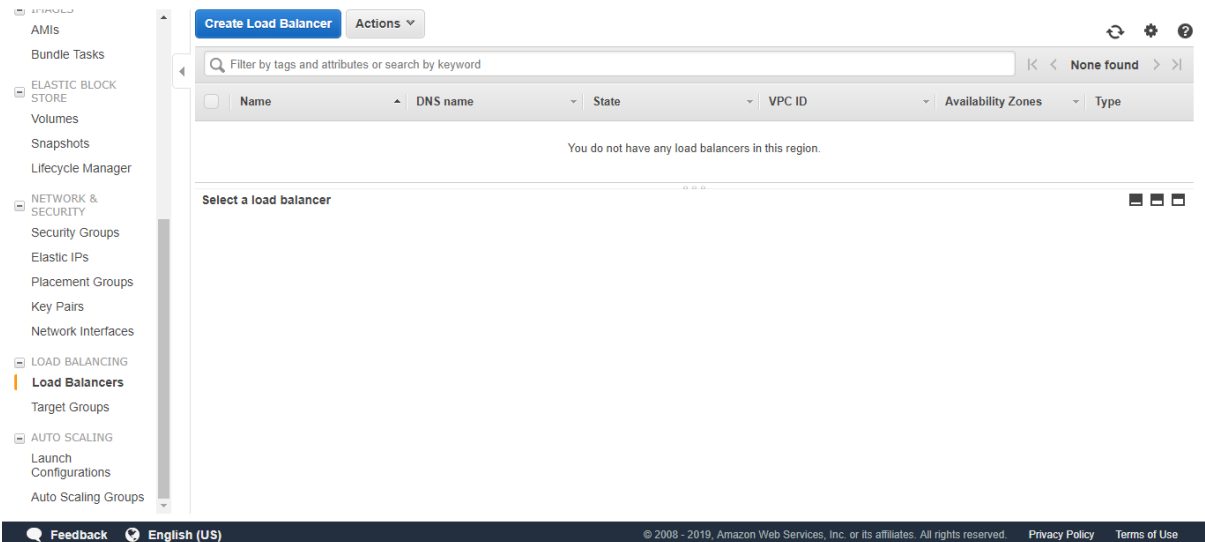


10. Kedua instance telah berhasil menampilkan magento.

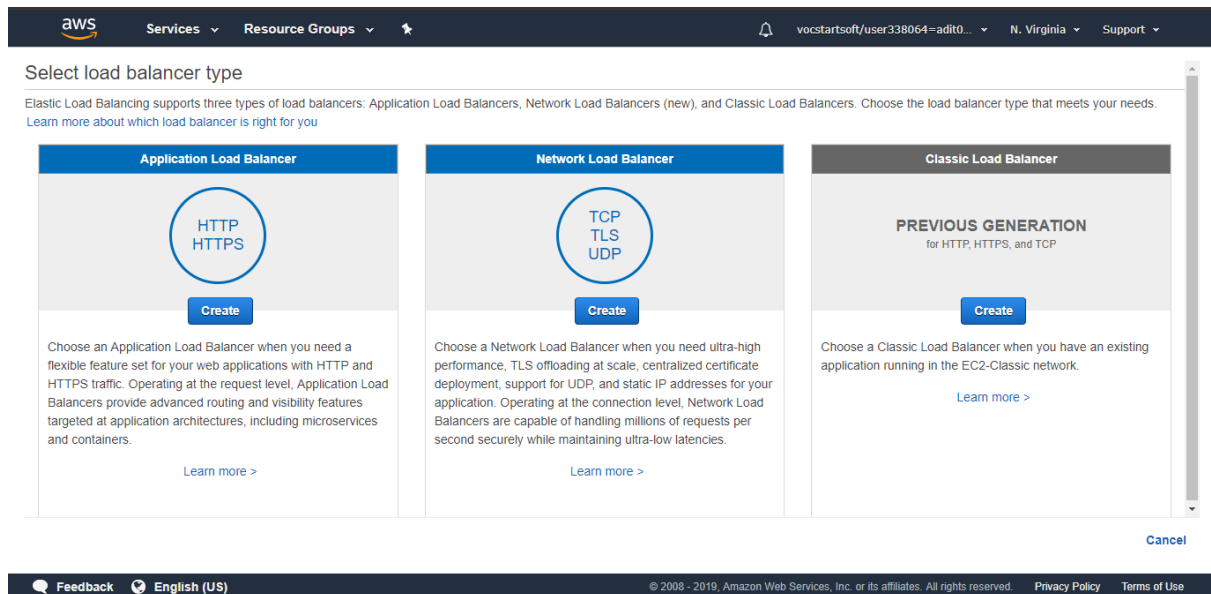
## Bagian 4 Membangun ALB

### Memilih Tipe Load balancer

1. Buka konsol Amazon EC2 di: <https://console.aws.amazon.com/ec2/>. Di panel navigasi, di bawah **LOAD BALANCING**, pilih **Load Balancers**.



2. Pilih **Create Load Balancer** kemudian **Application Load Balancer**, pilih **Create**.



### Konfigurasi Load Balancer dan listener

1. Untuk **Name**, tuliskan nama unik untuk **Load Balancer** Anda. Untuk **Scheme** dan **IP address type**, pakai nilai **default**.

## Step 1: Configure Load Balancer

### Basic Configuration

To configure your load balancer, provide a name, select a scheme, specify one or more listeners, and select a network. The default configuration is listener that receives HTTP traffic on port 80.

Name	<input type="text" value="magento-load-balancer"/>
Scheme	<input checked="" type="radio"/> internet-facing <input type="radio"/> internal
IP address type	<input type="text" value="ipv4"/>

- Untuk **Listener**, pertahankan **default**, yaitu **listener** yang menerima trafik **HTTP** pada port **80**.

### Listeners

A listener is a process that checks for connection requests, using the protocol and port that you configured.

Load Balancer Protocol	Load Balancer Port
<input type="text" value="HTTP"/>	<input type="text" value="80"/>
<input type="button" value="Add listener"/>	

- Untuk **Availability Zone**, pilih **VPC** yang Anda gunakan untuk **instance EC2** Anda. Untuk setiap Availability Zone yang Anda gunakan untuk meluncurkan instance EC2 Anda, pilih Availability Zone dan kemudian pilih subnet publik untuk Availability Zone tersebut.

### Availability Zones

Specify the Availability Zones to enable for your load balancer. The load balancer routes traffic to the targets in these Availability Zones c subnets from at least two Availability Zones to increase the availability of your load balancer.

VPC	<input type="text" value="vpc-01223c2168a3a0167 (10.0.0.0/16)   MyVPC"/>
Availability Zones	<input checked="" type="checkbox"/> <b>us-east-1a</b> <input type="text" value="subnet-091c6bb1f7ca15479 (Subnet1)"/>
	IPv4 address <input type="text" value="Assigned by AWS"/>
	<input checked="" type="checkbox"/> <b>us-east-1b</b> <input type="text" value="subnet-097858fd6368da1ab (Subnet3)"/>
	IPv4 address <input type="text" value="Assigned by AWS"/>

- Pilih **Next: Configure Security Settings**.
- Untuk tutorial ini, Anda tidak membuat listener HTTPS. Pilih Next: Configure Security Groups.

## Konfigurasi Security Group load balancer

- Pada percobaan ini dibuat Security Group baru dengan port 80.

### Step 3: Configure Security Groups

A security group is a set of firewall rules that control the traffic to your load balancer. On this page, you can add rules to allow specific traffic to reach your load balancer. First, decide whether to create a new security group or select an existing one.

Assign a security group: ☒ Create a new security group  
☐ Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source
Custom TCP	TCP	80	Custom 0.0.0.0/0, ::/0

[Add Rule](#)

## 2. Pilih **Next: Configure Routing**.

### Konfigurasi Target Load balancer

1. Untuk **Target group**, gunakan **default, New target group**.
2. Untuk **Name**, ketikkan nama untuk target group baru.
3. Gunakan default target type (**IP**), protocol (**HTTP**), dan port (**80**).  
Target type berupa IP dikarenakan agar EC2 hanya diakses oleh private IP
4. Untuk **Health checks**, gunakan pengaturan **default**.
5. Pilih **Next: Register Targets**.

aws Services Resource Groups

1. Configure Load Balancer 2. Configure Security Settings 3. Configure Security Groups 4. Configure Routing 5. Register Targets 6. Review

### Step 4: Configure Routing

Your load balancer routes requests to the targets in this target group using the protocol and port that you specify, and performs health checks on the targets using these health check settings. Note that each target group can be associated with only one load balancer.

Target group

Target group:

Name:

Target type: ☒ Instance ☐ IP ☐ Lambda function

Protocol:

Port:

Health checks

Protocol:

Path:

[Cancel](#) [Previous](#) [Next: Register Targets](#)

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### Pendaftaran Target Load balancer

1. Karena pada konfigurasi sebelumnya target typenya adalah IP, masukan IP private dari kedua EC2 sebagai webserver.
2. Gunakan port default (**80**) dan pilih **Add to registered**.
3. Setelah selesai memilih instance, pilih **Next: Review**.



**Step 5: Register Targets**

magento-group-target (target group)

Specify one or more IP addresses to register as targets

Network IP (allowed ranges) Port

vpc-01223c2168a3a0167 (10.0.0.0/16) : 80 Add to list

To be registered

2 total IP addresses. Clear all ✕

10.0.2.56	: 80	us-east-1a	Instance ( i-0b40ddd341ca75e5 )	✕
10.0.1.37	: 80	us-east-1a	Instance ( i-0854da0f45a6c8e0f )	✕

Cancel Previous Next: Review

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## Buat dan uji load balancer

1. Pada halaman **Review**, pilih **Create**.

**Step 6: Review**

Please review the load balancer details before continuing

Load balancer [Edit](#)

Name my-load-balancer  
Scheme internet-facing  
Listeners Port:80 - Protocol:HTTP  
IP address type ipv4  
VPC vpc-01223c2168a3a0167 (MyVPC)  
Subnets subnet-091c6bb1f7ca15479 (Subnet1), subnet-097858fd6368da1ab (Subnet3)  
Tags

Security groups [Edit](#)

Security groups load-balancer-magento

Routing [Edit](#)

Target group New target group  
Target group name my-target-group  
Port 80  
Target type instance  
Protocol HTTP

Cancel Previous **Create**

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2. Setelah Anda diberitahu bahwa **Load Balancer** Anda berhasil dibuat, pilih **Close**.

Load Balancer Creation Status

✓ Successfully created load balancer  
Load balancer my-load-balancer was successfully created.  
Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic, and for the targets to complete the registration process and pass the initial health checks.

Close

3. Di panel **navigasi**, di bawah **LOAD BALANCING**, pilih **Target Groups**. Pilih **target group** yang baru dibuat.

**Target group: my-target-group**

**Description** | **Targets** | **Health checks** | **Monitoring** | **Tags**

**Basic Configuration**

Name	my-target-group
ARN	arn:aws:elasticloadbalancing:us-east-1:942339016034:targetgroup/my-target-group/eb57b5ea86a9494f
Protocol	HTTP
Port	80
Target type	instance
VPC	vpc-01223c2168a3a0167
Load balancer	my-load-balancer

4. Pada tab **Targets**, pastikan **instance** siap, hingga status **healty**.

**Target group: magento-group-target**

**Description** | **Targets** | **Health checks** | **Monitoring** | **Tags**

The load balancer starts routing requests to a newly registered target as soon as the registration process completes and the target passes the initial health checks. If demand on your targets increases, you can register additional targets. If demand on your targets decreases, you can deregister targets.

**Registered targets**

IP address	Port	Availability Zone	Status
10.0.1.37	80	us-east-1a	healthy
10.0.2.56	80	us-east-1a	healthy

**Availability Zones**

Availability Zone	Target count	Healthy?
us-east-1a	2	Yes

5. Di panel **navigasi**, di bawah **LOAD BALANCING**, pilih **Load Balancers**. Pilih **Load Balancer** yang baru dibuat. Pada tab **Description**, salin nama **DNS Load Balancer**. Paste nama DNS ke dalam field alamat web browser yang terhubung ke Internet.

The screenshot shows the AWS Management Console interface. On the left is a navigation menu with categories like 'Compute', 'Elastic Block Store', 'Network & Security', and 'Load Balancing'. The 'Load Balancers' option is selected. The main panel displays a table with one entry: 'my-load-balancer' in the 'us-east-1a' availability zone, with a state of 'active'. Below the table, the 'Basic Configuration' tab is active, showing details for the 'my-load-balancer' instance, including its ARN, DNS name, state, type (application), scheme (internet-facing), and IP address type (IPv4).

6. Tampilan ketika mengakses load balancer menampilkan halaman dari webserver magento

The screenshot shows a web browser window with the URL 'magento-load-balancer-178706922.us-east-1.elb.amazonaws.com'. The page displays the 'LUMA' logo and a search bar. The main content area shows 'Home Page' and a placeholder text 'CMS homepage content goes here.' At the bottom, there is a search bar and a 'Subscribe' button. A status bar at the very bottom indicates 'Waiting for magento-load-balancer-178706922.us-east-1.elb.amazonaws.com...'.

## Note:

Pada pengerjaan yang saya lakukan, tidak dapat menghapus IP publik dari instance EC2 yang berfungsi sebagai Web Server. Hal tersebut dikarenakan subnet yang dibuat bersifat publik. EC2 disetting publik agar dapat dikonfigurasi dan testing dengan mudah.

Namun load balancer tetap menggunakan IP private dari target.