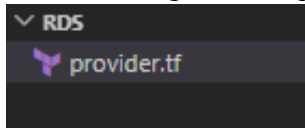
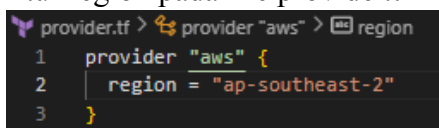


Laporan Pertemuan 11 Workshop Aplikasi dan Komputasi Awan
A HAIDAR HAFIZ
R.P.A. LEXY MANGKU SAPUTRA
RAHADYAN DANANG SUSETYO PRAMONO
AQIL YOGA PRAMONO

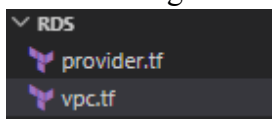
Buat file dengan nama provider.tf



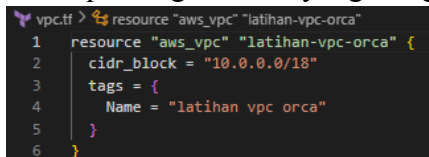
Atur region pada file provider.tf



Buat file dengan nama vpc.tf



Buat vpc dengan nama yang diinginkan



Buat access control list untuk mengatur lalu lintas subnet

```
vpc.tf > resource "aws_network_acl" "latihan-acl-orca"
8 resource "aws_network_acl" "latihan-acl-orca"
9   vpc_id = aws_vpc.latihan-vpc-orca.id
10 ingress {
11   protocol = "tcp"
12   rule_no = 100
13   action = "allow"
14   cidr_block = "0.0.0.0/0"
15   from_port = 3306
16   to_port = 3306
17 }
18 ingress {
19   protocol = "tcp"
20   rule_no = 101
21   action = "allow"
22   cidr_block = "0.0.0.0/0"
23   from_port = 22
24   to_port = 22
25 }
26
27 egress {
28   protocol = "-1"
29   rule_no = 100
30   action = "allow"
31   cidr_block = "0.0.0.0/0"
32   from_port = 0
33   to_port = 0
34 }
35 tags = {
36   Name = "latihan acl orca"
37 }
38 }
```

Membuat zona A subnet

```

vpc.tf > resource "aws_subnet" "latihan-public-subnet-orca"
40 resource "aws_subnet" "latihan-public-subnet-orca" {
41   vpc_id = aws_vpc.latihan-vpc-orca.id
42   cidr_block = "10.0.0.0/24"
43   map_public_ip_on_launch = "true"
44   availability_zone = "ap-southeast-2a"
45   tags = {
46     Name = "latihan public subnet orca"
47   }
48 }
49
50 resource "aws_subnet" "latihan-private-subnet-orca" {
51   vpc_id = aws_vpc.latihan-vpc-orca.id
52   cidr_block = "10.0.1.0/24"
53   map_public_ip_on_launch = "false"
54   availability_zone = "ap-southeast-2a"
55   tags = {
56     Name = "latihan private subnet orca"
57   }
58 }

```

Membuat zona B subnet

```

vpc.tf > resource "aws_subnet" "latihan-private-subnet-orca2"
60 resource "aws_subnet" "latihan-private-subnet-orca2" {
61   vpc_id = aws_vpc.latihan-vpc-orca.id
62   cidr_block = "10.0.2.0/24"
63   map_public_ip_on_launch = "false"
64   availability_zone = "ap-southeast-2b"
65   tags = {
66     Name = "latihan private subnet orca2"
67   }
68 }

```

Membuat internet gateway

```

vpc.tf > resource "aws_internet_gateway" "latihan-igw-orca"
70 resource "aws_internet_gateway" "latihan-igw-orca" {
71   vpc_id = aws_vpc.latihan-vpc-orca.id
72   tags = {
73     Name = "latihan igw orca"
74   }
75 }

```

Membuat association access control list

```

vpc.tf > resource "aws_network_acl_association" "latihan-acl-assoc-orca"
77 resource "aws_network_acl_association" "latihan-acl-assoc-orca" {
78   network_acl_id = aws_network_acl.latihan-acl-orca.id
79   subnet_id = aws_subnet.latihan-private-subnet-orca.id
80 }
81
82 resource "aws_network_acl_association" "latihan-acl-assoc-orca2" {
83   network_acl_id = aws_network_acl.latihan-acl-orca.id
84   subnet_id = aws_subnet.latihan-private-subnet-orca2.id
85 }

```

Membuat route table public

```

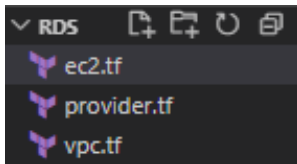
vpc.tf > resource "aws_route_table" "latihan-public-rt-orca"
87 resource "aws_route_table" "latihan-public-rt-orca" {
88   vpc_id = aws_vpc.latihan-vpc-orca.id
89   route {
90     cidr_block = "0.0.0.0/0"
91     gateway_id = aws_internet_gateway.latihan-igw-orca.id
92   }
93   tags = {
94     Name = "latihan publice rt orca"
95   }
96 }

```

Membuat association public dan router public

```
vpc.tf > resource "aws_route_table_association" "latihan-public-rt-orca"
98 resource "aws_route_table_association" "latihan-public-rt-orca"
99     subnet_id = aws_subnet.latihan-private-subnet-orca.id
100     route_table_id = aws_route_table.latihan-public-rt-orca.id
101
```

Buat file dengan nama ec2.tf



Buat security group

```
ec2.tf > resource "aws_security_group" "latihan-security-group-orca"
1 resource "aws_security_group" "latihan-security-group-orca"
2   description = "Allow limited inbound external traffic"
3   vpc_id = "${aws_vpc.latihan-vpc-orca.id}"
4   name = "latihan-sg-orca"
5   ingress {
6     protocol = "tcp"
7     cidr_blocks = ["0.0.0.0/0"]
8     from_port = 22
9     to_port = 22
10  }
11  ingress {
12    protocol = "tcp"
13    cidr_blocks = ["0.0.0.0/0"]
14    from_port = 3000
15    to_port = 3000
16  }
17  ingress {
18    protocol = "tcp"
19    cidr_blocks = ["0.0.0.0/0"]
20    from_port = 3006
21    to_port = 3006
22  }
23  ingress {
24    protocol = "icmp"
25    cidr_blocks = ["0.0.0.0/0"]
26    from_port = -1
27    to_port = -1
28  }
29  egress {
30    protocol = "-1"
31    cidr_blocks = ["0.0.0.0/0"]
32    from_port = 0
33    to_port = 0
34  }
35  tags = {
36    Name = "latihan-sg-orca"
37  }
38 }
```

Buat key pair

```
ec2.tf > resource "tls_private_key" "rsa-orca"
40 resource "tls_private_key" "rsa-orca"
41   algorithm = "RSA"
42   rsa_bits = 4096
43 }
44
45 resource "local_file" "LatihanPrivateKeyPairOrca" {
46   filename = "LatihanPrivateKeyPair"
47   content = tls_private_key.rsa-orca.private_key_pem
48 }
49
50 resource "aws_key_pair" "LatihanPublicKeyPair" {
51   key_name = "LatihanPublicKeyPair"
52   public_key = tls_private_key.rsa-orca.public_key_openssh
53 }
```

Buat data untuk digunakan memasukkan variable ke file scriptku.sh

```
ec2.tf > data "template_file" "user_data_orca"
55 data "template_file" "user_data_orca" {
56   template = "${file("scriptku.sh")}"
57   vars = {
58     rds_address = "${aws_db_instance.latihan_db_rds.address}"
59     rds_username = "${aws_db_instance.latihan_db_rds.username}"
60     rds_password = "${aws_db_instance.latihan_db_rds.password}"
61     rds_db_name = "${aws_db_instance.latihan_db_rds.db_name}"
62   }
63 }
```

Buat instance

```

ec2.tf > resource "aws_instance" "latihan-ec2"
65 resource "aws_instance" "latihan-ec2" {
66   depends_on = [ aws_db_instance.latihan_db_rds ]
67   ami = "ami-08ea97f528e500b62"
68   instance_type = "t2.micro"
69   key_name = aws_key_pair.LatihanPublicKeyPair.key_name
70   vpc_security_group_ids = ["${aws_security_group.latihan-security-group-orca.id}"]
71   subnet_id = "${aws_subnet.latihan-public-subnet-orca.id}"
72   #user_data = "${file("scriptku.sh")}"
73   user_data = data.template_file.user_data_orca.rendered
74   tags = {
75     Name = "Latihan-ec2-orca"
76   }
77 }

```

Scriptku

Buat file dengan nama scriptku.sh

```

RDS
ec2.tf
provider.tf
$ scriptku.sh
vpc.tf

```

Isi dari file scriptku.sh

```

$ scriptku.sh
1 #!/bin/bash
2 sudo apt-get update
3 sudo apt install default-mysql-client-y
4 #sudo mysql -u "${rds_username}" --password="${rds_password}" --host "${rds_address}" -e "CREATE DATABASE ${rds_db_name} /\148100 DEFAULT CHARACTER SET utf8 /;"
5 sudo apt install nodejs npm -y
6 cd /home/admin
7 sudo mkdir myapp
8 cd myapp
9 git clone https://github.com/jokoprsty/latihan_rds.git
10 cd latihan_rds
11 echo "DB_USER=${rds_username}" >> .env
12 echo "DB_PASS=${rds_password}" >> .env
13 echo "DB_NAME=${rds_db_name}" >> .env
14 echo "DB_HOST=${rds_address}" >> .env
15 sudo npm install
16 sudo npm install pm2 -g
17 sudo pm2 start /home/admin/myapp/latihan_rds/app.js -u admin --watch
18 sudo pm2 save
19 pm2 startup

```

RDS

Buat file dengan nama rds.tf

```

RDS
ec2.tf
provider.tf
rds.tf
$ scriptku.sh
vpc.tf

```

Buat subnet group rds

```

rds.tf > resource "aws_db_subnet_group" "latihan_subnet_db"
1 resource "aws_db_subnet_group" "latihan_subnet_db" {
2   name = "latihan_subnet_db"
3   subnet_ids = [aws_subnet.latihan-private-subnet-orca,aws_subnet.latihan-private-subnet-orca2.id]
4   tags = {
5     Name = "latihan_subnet_db"
6   }
7 }

```

Buat security group untuk rds

```

rds.tf > resource "aws_security_group" "rds"
9  resource "aws_security_group" "rds"
10     name = "latihan_rds_sg-orca"
11     vpc_id = aws_vpc.latihan-vpc-orca.id
12     ingress {
13         from_port = 3306
14         to_port = 3306
15         protocol = "tcp"
16         cidr_blocks = ["0.0.0.0/0"]
17     }
18     egress {
19         from_port = 3306
20         to_port = 3306
21         protocol = "tcp"
22         cidr_blocks = ["0.0.0.0/0"]
23     }
24     tags = {
25         Name = "latihan_rds_sg"
26     }
27 }

```

Buat instance rds

```

rds.tf > resource "aws_db_instance" "latihan_db_rds"
29  resource "aws_db_instance" "latihan_db_rds"
30     identifier = "latihan-db-rds"
31     instance_class = "db.t3.micro"
32     allocated_storage = 20
33     engine = "mysql"
34     engine_version = "8.0.28"
35     username = "latihan"
36     password = "12345678"
37     db_name = "my_project"
38     db_subnet_group_name = aws_db_subnet_group.latihan_subnet_db.name
39     vpc_security_group_ids = [aws_security_group.rds.id]
40     publicly_accessible = false
41     skip_final_snapshot = true
42 }

```

Menjalankan Terraform

Jalankan “terraform init” di command prompt direktori project

```

C:\Users\ibamq\OneDrive\Documents\Kuliah\Semester 4\Workshop Aplikasi Dan Komputasi Awan\Pertemuan Ke-11\rds>terraform init
Initializing the backend...
Initializing provider plugins...
- Finding latest version of hashicorp/template...
- Finding latest version of hashicorp/aws...
- Finding latest version of hashicorp/local...
- Finding latest version of hashicorp/tls...
- Installing hashicorp/template v2.2.0...
- Installed hashicorp/template v2.2.0 (signed by HashiCorp)
- Installing hashicorp/aws v5.97.0...
- Installed hashicorp/aws v5.97.0 (signed by HashiCorp)
- Installing hashicorp/local v2.5.3...
- Installed hashicorp/local v2.5.3 (signed by HashiCorp)
- Installing hashicorp/tls v4.1.0...
- Installed hashicorp/tls v4.1.0 (signed by HashiCorp)
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.

```

Jika “terraform init” berhasil dijalankan, selanjutnya jalankan “terraform plan”


```

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the
following symbols:
+ create
<= read (data resources)

Terraform will perform the following actions:

# data.template_file.user_data_orca will be read during apply
# (config refers to values not yet known)
<= data "template_file" "user_data_orca" {
+ id          = (known after apply)
+ rendered    = (known after apply)
+ template    = <<-EOT
    #!/bin/bash
    sudo apt-get update
    sudo apt install default-mysql-client-y
    #sudo mysql -u "${rds_username}" --password="${rds_password}" --host "${rds_address}" -e "CREATE DATABASE ${rds_db_na
me} /*!40100 DEFAULT CHARACTER SET utf8 */;"
    sudo apt install nodejs npm -y
    cd /home/admin
    sudo mkdir myapp
    cd myapp
    git clone https://github.com/jokoprsty/latihan_rds.git
    cd latihan_rds
    echo "DB_USER=${rds_username}" >> .env
    echo "DB_PASS=${rds_password}" >> .env
    echo "DB_NAME=${rds_db_name}" >> .env
    echo "DB_HOST=${rds_address}" >> .env
    sudo npm install
    sudo npm install pm2 -g
    sudo pm2 start /home/admin/myapp/latihan_rds/app.js -u admin --watch
    sudo pm2 save
+ content_sha1      = (known after apply)
+ content_sha256    = (known after apply)
+ content_sha512    = (known after apply)
+ directory_permission = "0777"
+ file_permission   = "0777"
+ filename          = "LatihanPrivateKeyPair"
+ id                = (known after apply)
}

# tls_private_key.rsa-orca will be created
+ resource "tls_private_key" "rsa-orca" {
+ algorithm          = "RSA"
+ ecdsa_curve        = "P224"
+ id                 = (known after apply)
+ private_key_openssh = (sensitive value)
+ private_key_pem     = (sensitive value)
+ private_key_pem_pkcs8 = (sensitive value)
+ public_key_fingerprint_md5 = (known after apply)
+ public_key_fingerprint_sha256 = (known after apply)
+ public_key_openssh  = (known after apply)
+ public_key_pem      = (known after apply)
+ rsa_bits            = 4096
}

Plan: 18 to add, 0 to change, 0 to destroy.

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run
"terraform apply" now.

```

Ketika “terraform plan” berhasil, maka jalankan “terraform apply”

```

C:\Users\ibamq\OneDrive\Documents\Kuliah\Semester 4\Workshop Aplikasi Dan Komputasi Awan\Pertemuan ke-11\rds>terraform apply

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the
following symbols:
+ create
<= read (data resources)

Terraform will perform the following actions:

# data.template_file.user_data_orca will be read during apply
# (config refers to values not yet known)
<= data "template_file" "user_data_orca" {
+ id          = (known after apply)
+ rendered    = (known after apply)
+ template    = <<-EOT
    #!/bin/bash
    sudo apt-get update
    sudo apt install default-mysql-client-y
    #sudo mysql -u "${rds_username}" --password="${rds_password}" --host "${rds_address}" -e "CREATE DATABASE ${rds_db_na
me} /*!40100 DEFAULT CHARACTER SET utf8 */;"
    sudo apt install nodejs npm -y
    cd /home/admin
    sudo mkdir myapp
    cd myapp
    git clone https://github.com/jokoprsty/latihan_rds.git
    cd latihan_rds
    echo "DB_USER=${rds_username}" >> .env
    echo "DB_PASS=${rds_password}" >> .env
    echo "DB_NAME=${rds_db_name}" >> .env
    echo "DB_HOST=${rds_address}" >> .env
    sudo npm install
    sudo npm install pm2 -g

```

```

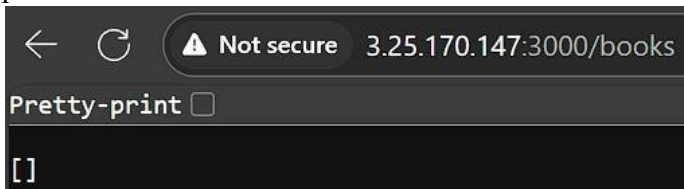
aws_subnet.latihan-public-subnet-orca: Still creating... [10s elapsed]
aws_subnet.latihan-public-subnet-orca: Creation complete after 13s [id=subnet-0c789f735b7c5c39e]
aws_db_instance.latihan_db_rds: Still creating... [10s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [20s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [30s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [40s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [50s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [1m0s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [1m10s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [1m20s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [1m30s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [1m40s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [1m50s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [2m0s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [2m10s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [2m20s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [2m30s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [2m40s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [2m50s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [3m0s elapsed]
aws_db_instance.latihan_db_rds: Still creating... [3m10s elapsed]
aws_db_instance.latihan_db_rds: Creation complete after 3m17s [id=db-YLFXYG73XZDEGEKZOVJCKMXH74]
data.template_file.user_data_orca: Reading...
data.template_file.user_data_orca: Read complete after 0s [id=caa249a624d1365e3b857bb346e3b94e59381a0454445cf4903e8b0290f1b0c5]
aws_instance.latihan-ec2: Creating...
aws_instance.latihan-ec2: Still creating... [10s elapsed]
aws_instance.latihan-ec2: Still creating... [20s elapsed]
aws_instance.latihan-ec2: Creation complete after 26s [id=i-0f6b702bdbb3b5aff]

Apply complete! Resources: 18 added, 0 changed, 0 destroyed.

```

Tugas

Buka browser, kemudian copy alamat ipv4 public ec2 di aws ke browser, buka dengan port 3000



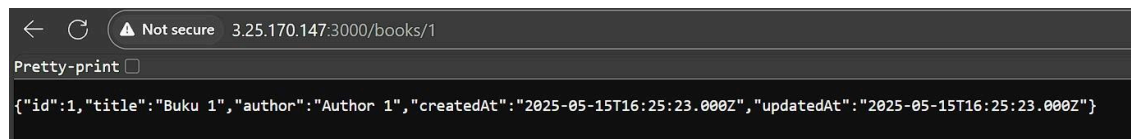
Insert data kedalam mysql melalui ec2(gunakan ssh), insert data dengan menggunakan alamat mysql yang ada di

/home/admin/myapp/latihan_rds/.env, kemudian buka di browser

```

MariaDB [my_project]> INSERT INTO Books SET title="Buku 1",author="Author 1",createdAt=NOW(),updatedAt=NOW();
Query OK, 1 row affected (0.002 sec)

```



Screenshot VPC

Subnet

Subnets (6) info

Find subnets by attribute or tag

<input type="checkbox"/>	Name	Subnet ID	State	VPC	Block Public...	IPv4 CIDR
<input type="checkbox"/>	-	subnet-009b3805751923a0d	Available	vpc-057b47779cee81e12	Off	172.31.32.0/20
<input type="checkbox"/>	latihan private subnet orca2	subnet-0aad270f73568ff78	Available	vpc-0fa3a8c61bc4d8745 latih...	Off	10.0.2.0/24
<input type="checkbox"/>	latihan private subnet orca	subnet-03d4fc773cda8e192	Available	vpc-0fa3a8c61bc4d8745 latih...	Off	10.0.1.0/24
<input type="checkbox"/>	-	subnet-05c8d834792224f10	Available	vpc-057b47779cee81e12	Off	172.31.16.0/20
<input type="checkbox"/>	latihan public subnet orca	subnet-06344eec33c677917	Available	vpc-0fa3a8c61bc4d8745 latih...	Off	10.0.0.0/24
<input type="checkbox"/>	-	subnet-05fa0e0da4766e45f	Available	vpc-057b47779cee81e12	Off	172.31.0.0/20

Select a subnet

Route

Route tables (3) info

Find route tables by attribute or tag

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC
<input type="checkbox"/>	latihan public rt orca	rtb-0b9d2df08652ae8c9	subnet-06344eec33c677...	-	No	vpc-0fa3a8c61bc4d8745 latih...
<input type="checkbox"/>	-	rtb-02b4940f01a53c782	-	-	Yes	vpc-0fa3a8c61bc4d8745 latih...
<input type="checkbox"/>	-	rtb-0140252a8fb4facda	-	-	Yes	vpc-057b47779cee81e12

Select a route table

Route association

Route tables (1/3) info

Find route tables by attribute or tag

<input checked="" type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC
<input checked="" type="checkbox"/>	latihan public rt orca	rtb-0b9d2df08652ae8c9	subnet-06344eec33c677...	-	No	vpc-0fa3a8c61bc4d8745 latih...
<input type="checkbox"/>	-	rtb-02b4940f01a53c782	-	-	Yes	vpc-0fa3a8c61bc4d8745 latih...
<input type="checkbox"/>	-	rtb-0140252a8fb4facda	-	-	Yes	vpc-057b47779cee81e12

Name Subnet ID IPv4 CIDR IPv6 CIDR

latihan public subnet orca	subnet-06344eec33c677917	10.0.0.0/24	-
----------------------------	--------------------------	-------------	---

Subnets without explicit associations (2)

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:

Find subnet association

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
latihan private subnet orca2	subnet-0aad270f73568ff78	10.0.2.0/24	-
latihan private subnet orca	subnet-03d4fc773cda8e192	10.0.1.0/24	-

Screenshot EC2
Instance

aws Search [Alt+S]

EC2 > Instances

Instances (1/3) Info

Find Instance by attribute or tag (case-sensitive)

All states

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elast
Latihan-ec2-orca	i-0f6b702bdbb3b5a9f	Terminated	t2.micro	-	View alarms +	ap-southeast-2a	-	-	-
Latihan-ec2-orca	i-07b796279867e9017	Terminated	t2.micro	-	View alarms +	ap-southeast-2a	-	-	-
Latihan-ec2-orca	i-01cef4394bb13454d	Running	t2.micro	2/2 checks passed	View alarms +	ap-southeast-2a	-	3.25.170.147	-

Last updated 17 minutes ago

Connect Instance state Actions Launch instances

i-01cef4394bb13454d (Latihan-ec2-orca)

Details Status and alarms Monitoring Security Networking Storage Tags

▼ Instance summary Info

Instance ID
i-01cef4394bb13454d

IPv6 address
-

Hostname type
IP name: ip-10-0-0-17-ap-southeast-2.compute.internal

Answer private resource DNS name
-

Public IPv4 address
3.25.170.147 | open address

Instance state
Running

Private IP DNS name (IPv4 only)
ip-10-0-0-17-ap-southeast-2.compute.internal

Instance type
t2.micro

Private IPv4 addresses
10.0.0.17

Public IPv4 DNS
-

Elastic IP addresses
-

Security group

aws Search [Alt+S]

Security Groups (7) Info

Find security groups by attribute or tag

Actions Export security groups to CSV Create security group

Name	Security group ID	Security group name	VPC ID	Description
-	sg-030cc75a678129a91	launch-wizard-1	vpc-057b47779cee81e12	launch-wizard-1 created 202
-	sg-0118efc10519773b3	default	vpc-057b47779cee81e12	default VPC security group
-	sg-081ee5d66ac94d97f	launch-wizard-2	vpc-057b47779cee81e12	launch-wizard-2 created 202
-	sg-0f6169aa148e68bc7	launch-wizard-3	vpc-057b47779cee81e12	launch-wizard-3 created 202
latihan_rds_sg	sg-03fcd3a6217165899	latihan_rds_sg-orca	vpc-0fa3a8c61bc4d8745	Managed by Terraform
-	sg-09fafaba122368ff8	default	vpc-0fa3a8c61bc4d8745	default VPC security group
latihan-sg-orca	sg-04a1e07174493de33	latihan-sg-orca	vpc-0fa3a8c61bc4d8745	Allow limited inbound exte

Select a security group

Screenshot RDS Database

Aurora and RDS

- Dashboard
- Databases
- Query editor
- Performance insights
- Snapshots
- Exports in Amazon S3
- Automated backups
- Reserved instances
- Proxies
- Subnet groups
- Parameter groups
- Option groups
- Custom engine versions
- Zero-ETL integrations [New](#)
- Events
- Event subscriptions
- Recommendations **0**
- Certificate update

Databases (1)

Filter by databases

DB Identifier	Status	Role	Engine	Region ...	Size	Recommen
latihan-db-rds	Available	Instance	MariaDB	ap-southe...	db.t3.micro	

Subnet group

The screenshot shows the AWS Aurora and RDS console page for Subnet groups. The left sidebar contains navigation links for Aurora and RDS, Subnet groups, Parameter groups, Option groups, Custom engine versions, Zero-ETL integrations, Events, Event subscriptions, Recommendations, and Certificate update. The main content area is titled 'Subnet groups (1)' and includes a search bar, 'Filter by subnet group', and buttons for 'Edit', 'Delete', and 'Create DB subnet group'. A table lists the subnet groups:

<input type="checkbox"/>	Name	Description	Status	VPC
<input type="checkbox"/>	lathian_subnet_db	Managed by Terraform	Complete	vpc-0fa3a8c61bc4d8745

Security group

The screenshot shows the AWS EC2 console page for Security Groups. The left sidebar contains navigation links for EC2, Instances, Images, Elastic Block Store, and Network & Security. The main content area is titled 'Security Groups (1)' and includes a search bar, 'Find security groups by attribute or tag', and buttons for 'Actions', 'Export security groups to CSV', and 'Create security group'. A table lists the security groups:

<input type="checkbox"/>	Name	Security group ID	Security group name	VPC ID	Description
<input type="checkbox"/>	lathian_rds_sg	sg-03fc43a6217165899	lathian_rds_sg-orca	vpc-0fa3a8c61bc4d8745	Managed by Terraform

Below the table, there is a section titled 'Select a security group' with a search bar and a dropdown menu.

Terraform destroy


```
C:\Users\ibamq\OneDrive\Documents\Kuliah\Semester 4\Workshop Aplikasi Dan Komputasi Awan\Pertemuan ke-11\rds>terraform destroy
tls_private_key.rsa-orca: Refreshing state... [id=8c8641a1643c501bffb698ae21e84bffe61cd81]
local_file.LatihanPrivateKeyPairOrca: Refreshing state... [id=b4d59058633f691f8ae0fae8f69386cb4b4add73]
aws_key_pair.LatihanPublicKeyPair: Refreshing state... [id=LatihanKeyPair]
aws_vpc.latihan-vpc-orca: Refreshing state... [id=vpc-0fa3a8c61bc4d8745]
aws_internet_gateway.latihan-igw-orca: Refreshing state... [id=igw-03ecff5036b56e6d7]
aws_subnet.latihan-private-subnet-orca2: Refreshing state... [id=subnet-0aad270f73568ff78]
aws_subnet.latihan-public-subnet-orca: Refreshing state... [id=subnet-06344eec33c677917]
aws_subnet.latihan-private-subnet-orca: Refreshing state... [id=subnet-03d4fc773cda8e192]
aws_security_group.rds: Refreshing state... [id=sg-03fc43a6217165899]
aws_network_acl.latihan-acl-orca: Refreshing state... [id=acl-03c88746723ec0ad1]
aws_security_group.latihan-security-group-orca: Refreshing state... [id=sg-04ale07174493de33]
aws_db_subnet_group.latihan_subnet_db: Refreshing state... [id=latihan_subnet_db]
aws_route_table.latihan-public-rt-orca: Refreshing state... [id=rtb-0b9d2df08652ae8c9]
aws_network_acl_association.latihan-acl-assoc-orca2: Refreshing state... [id=aclassoc-0fa2ab34593031ba6]
aws_network_acl_association.latihan-acl-assoc-orca: Refreshing state... [id=aclassoc-095c2825b2fc72425]
aws_route_table_association.latihan-public-rt-a-orca: Refreshing state... [id=rtbassoc-032a0717304ef1f67]
aws_db_instance.latihan_db_rds: Refreshing state... [id=db-GIFEXMYDVN2VEYBDMVMKMLA4M]
data.template_file.user_data_orca: Reading...
data.template_file.user_data_orca: Read complete after 0s [id=caa249a624d1365e3b857bb346e3b94e59381a0454445cf4903e8b0290f1b0c5]
aws_instance.latihan-ec2: Refreshing state... [id=i-01cef4394bb13454d]
```

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:

- destroy

Terraform will perform the following actions:

```
# aws_db_instance.latihan_db_rds will be destroyed
- resource "aws_db_instance" "latihan_db_rds" {
  - address              = "latihan-db-rds.cxyakw2ycnfi.ap-southeast-2.rds.amazonaws.com" -> null
  - allocated_storage    = 20 -> null
```



```
aws_security_group.latihan-security-group-orca: Destruction complete after 2s
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 10s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 20s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 30s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 40s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 50s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 1m0s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 1m10s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 1m20s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 1m30s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 1m40s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 1m50s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 2m0s elapsed]
aws_db_instance.latihan_db_rds: Still destroying... [id=db-GIFEXMYDVN2VEYBDMVKMRLA4M, 2m10s elapsed]
aws_db_instance.latihan_db_rds: Destruction complete after 2m13s
aws_db_subnet_group.latihan_subnet_db: Destroying... [id=latihan_subnet_db]
aws_security_group.rds: Destroying... [id=sg-03fc43a6217165899]
aws_db_subnet_group.latihan_subnet_db: Destruction complete after 1s
aws_subnet.latihan-private-subnet-orca2: Destroying... [id=subnet-0aad270f73568ff78]
aws_subnet.latihan-private-subnet-orca: Destroying... [id=subnet-03d4fc773cda8e192]
aws_security_group.rds: Still destroying... [id=sg-03fc43a6217165899, 10s elapsed]
aws_subnet.latihan-private-subnet-orca2: Still destroying... [id=subnet-0aad270f73568ff78, 10s elapsed]
aws_subnet.latihan-private-subnet-orca: Still destroying... [id=subnet-03d4fc773cda8e192, 10s elapsed]
aws_subnet.latihan-private-subnet-orca: Destruction complete after 12s
aws_subnet.latihan-private-subnet-orca2: Destruction complete after 12s
aws_security_group.rds: Destruction complete after 13s
aws_vpc.latihan-vpc-orca: Destroying... [id=vpc-0fa3a8c61bc4d8745]
aws_vpc.latihan-vpc-orca: Destruction complete after 1s
```

Destroy complete! Resources: 18 destroyed.