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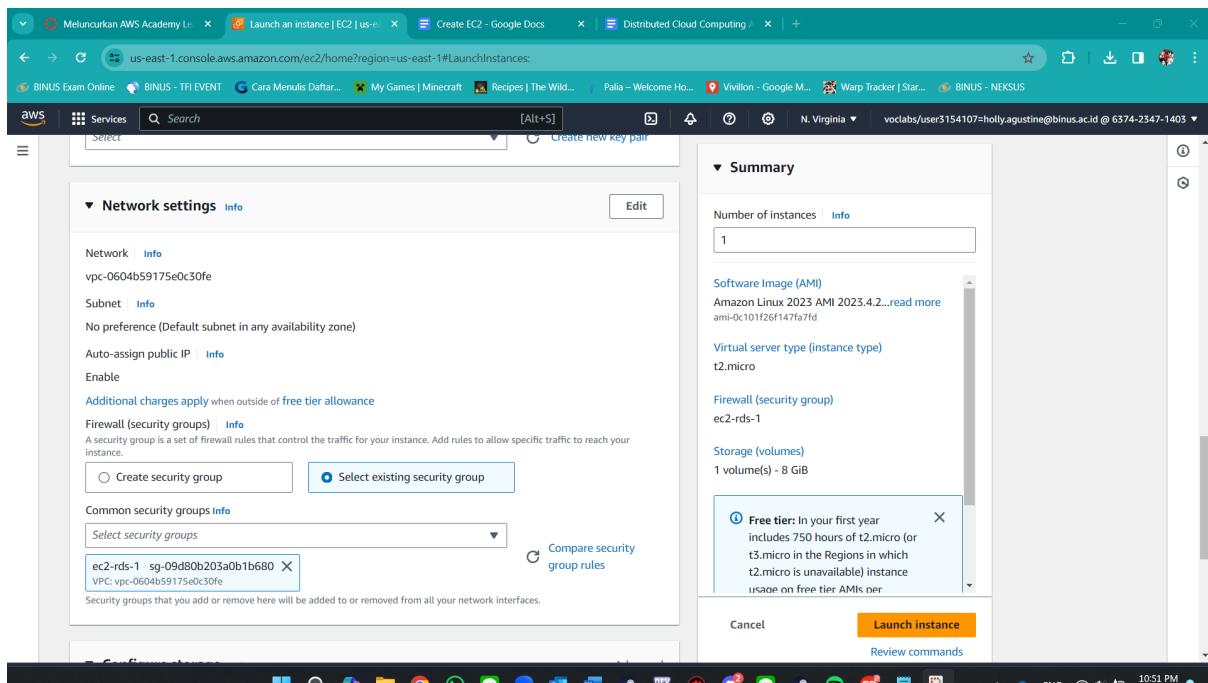
Kelas : LD01

## DISTRIBUTED CLOUD COMPUTING

### Create EC2

The screenshot shows the AWS Cloud9 interface with the 'Create EC2' tab selected. The main pane displays the 'Name and tags' section, where the name 'WebProject' is entered. Below it, the 'Application and OS Images (Amazon Machine Image)' section is shown, featuring a search bar and a grid of OS icons including Amazon Linux, macOS, Ubuntu, Windows, Red Hat, and SUSE Linux. A tooltip for the 'Free tier' is visible, stating: 'In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per'. The right sidebar contains sections for 'Summary', 'Software Image (AMI)', 'Virtual server type (instance type)', 'Firewall (security group)', 'Storage (volumes)', and a large 'Launch instance' button.

This screenshot continues the 'Create EC2' process. It shows the 'Instance type' selection step, where 't2.xlarge' is chosen from a dropdown menu. The 'Additional costs apply for AMIs with pre-installed software' note is visible. Below it, the 'Key pair (login)' section is shown, with 'KeyPair' selected in the 'Key pair name - required' field. A tooltip for the 'Free tier' is also present here, stating: 'In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per'. The right sidebar remains consistent with the previous screenshot.



## Open Remote Desktop File

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
WebServer	i-04dcde1da300d8bae	Running	t2.large	2/2 checks passed	View alarms	us-east-1e	ec2-54-236-17-6
<b>WebPro</b>	<b>i-0f10f5416</b>	<b>Running</b>	<b>t2.large</b>	<b>2/2 checks passed</b>	<b>View alarms</b>	<b>us-east-1e</b>	<b>ec2-54-237-145-</b>
RDS							

The screenshot shows the AWS EC2 'Connect to instance' page. At the top, there is a warning message in a yellow box: 'No IAM instance profile attached to your instance'. It explains that Systems Manager requires an IAM instance profile and provides a link to 'Open Systems Manager Quick Setup'. Below this, under 'Session Manager usage:', there is a list of bullet points: 'Connect to your instance without SSH keys, a bastion host, or opening any inbound ports.', 'Sessions are secured using an AWS Key Management Service key.', 'You can log session commands and details in an Amazon S3 bucket or CloudWatch Logs log group.', and 'Configure sessions on the Session Manager Preferences page.' At the bottom right of the page are 'Cancel' and 'Connect' buttons.

The screenshot shows the AWS EC2 'Connect to instance' page with the 'RDP client' tab selected. It displays the instance ID 'i-0f10f541fe3db92a (WebProject)'. Under 'Connection Type', two options are shown: 'Connect using RDP client' (selected) and 'Connect using Fleet Manager'. A note below says: 'You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below.' A 'Download remote desktop file' button is available. On the right, there is a 'Username' dropdown set to 'Administrator'. At the bottom right of the page are 'Cancel' and 'Connect' buttons.

Screenshot of a web browser showing the AWS CloudShell interface. The user is navigating through the AWS Management Console to retrieve the Windows password for an EC2 instance.

The URL in the address bar is: `us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#GetWindowsPassword?instanceId=i-0f10f5416fe3db92a&previousPlace=ConnectToInstance&lang=English`

The browser tabs show:

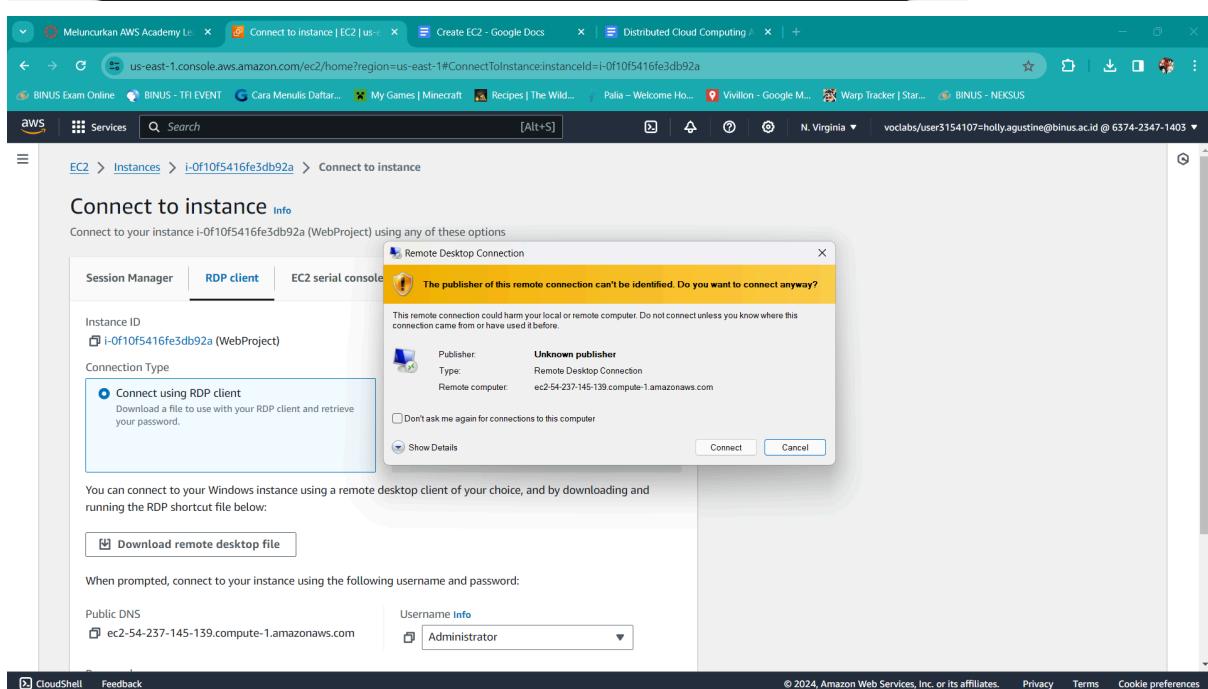
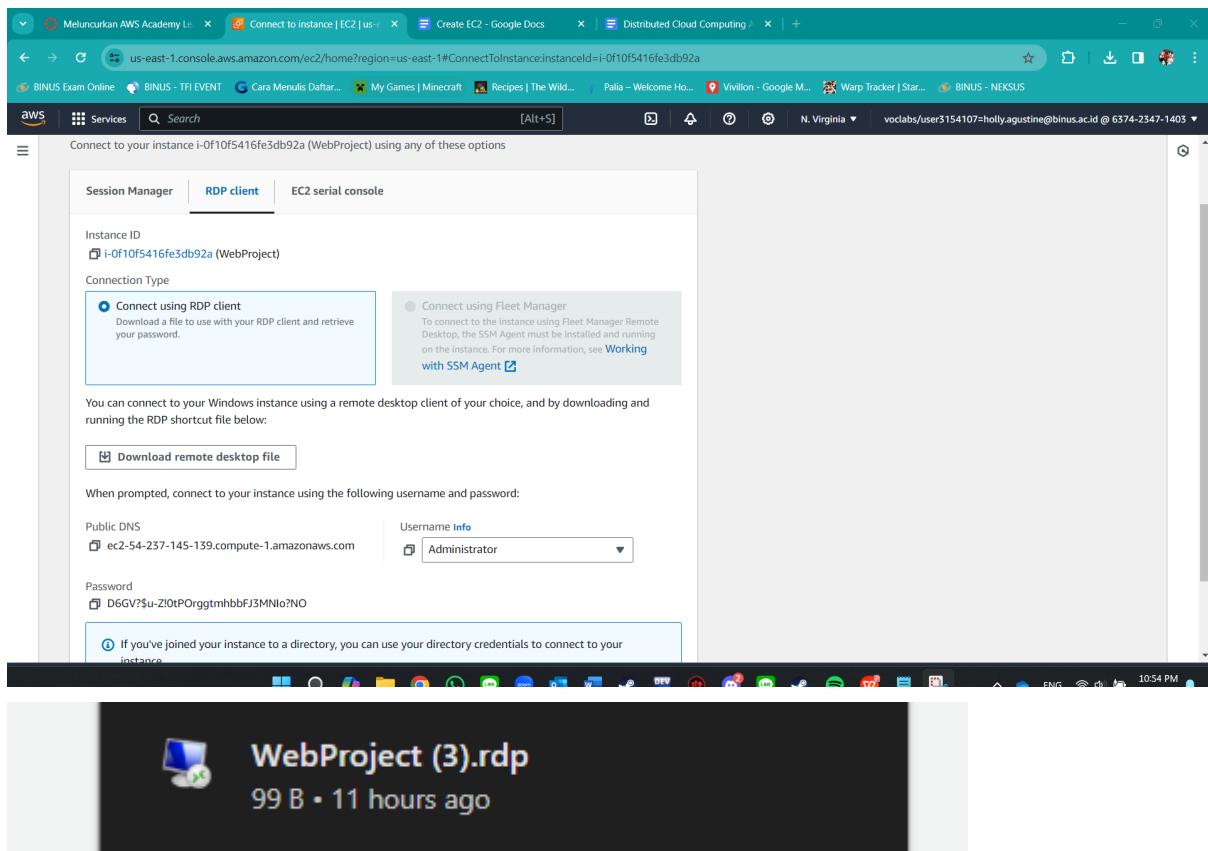
- Meluncurkan AWS Academy Le...
- Get windows password | EC2 |
- Create EC2 - Google Docs
- Distributed Cloud Computing

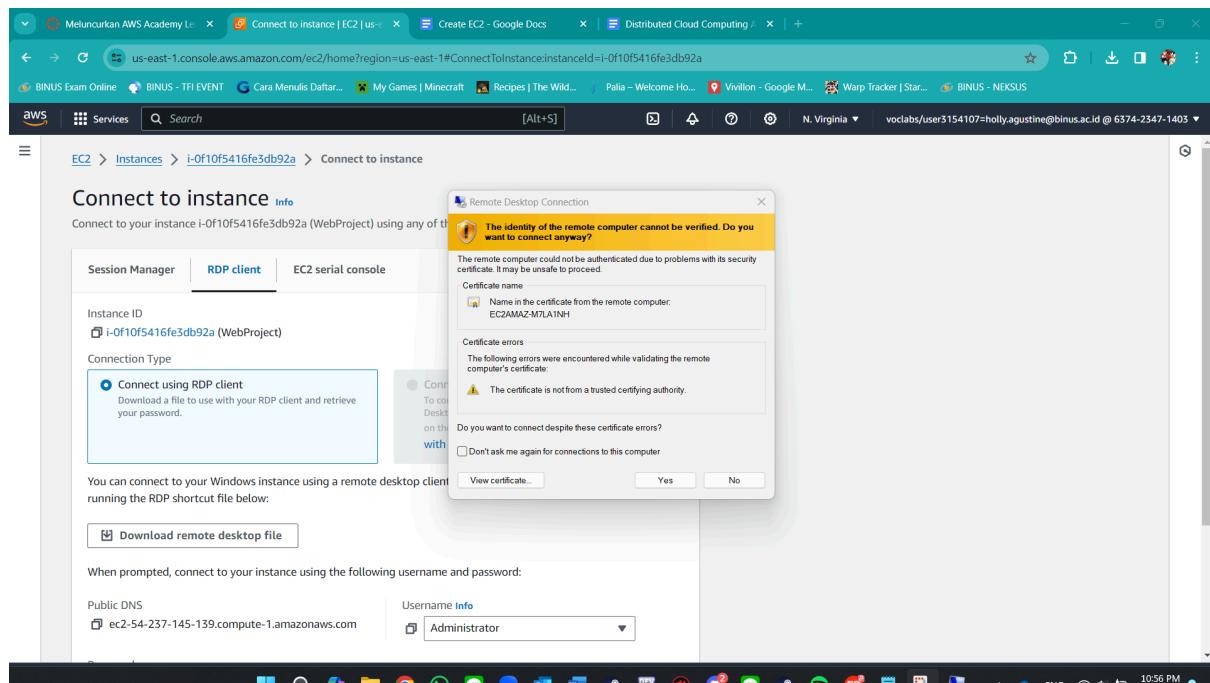
The AWS CloudShell interface shows the following steps:

- Get Windows password** (Info)
- Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.
- Instance ID: `i-0f10f5416fe3db92a` (WebProject)
- Key pair associated with this instance: `KeyPair`
- Private key: Upload private key file (File dialog open, showing `KeyPair.pem` in Downloads)
- Private key contents - optional: `KeyPair.pem` (contents shown in code block below)
- Decrypt password (button)

The file dialog content (Private key contents) is:

```
-----BEGIN RSA PRIVATE KEY-----
MIIEpaIBAKCAQEao6pPKEGwhLkQ+BSMhGEVn9OaMu31H/F/Z9vt7mPOaxs3mSET
IOV54nzHB7n4cHtaPArqOrKvdmobZygVmXujXAX5r+ULj9wgJhBvyxL743KA
REZNyadEGpuNxiJWytfgD3ntGnPQPqnEkQYmz9XyNeDFo0rqHG5GCKzA//S2
KD8dMldmCwVGL+r+hd7Llg66LT6LgoooKMm0Mipu1R/1zLCbdwgBl22q5FgON
go1CT26incipGTyp2l7PwyeUMxvVCxeR6t6WSDmu5.IbbwgznzdcFGGO7eq52mCrF
ypUbERBO+ln6ujn4T2vCfjAEVGpV7yoHc6QQQIDAQABAoIBADKwqeit8NMlo1HS
u3q@vv/Tf+zKOqN8HqPCQD0XeHUnttQnSYRL0DzGlnSFZpw+g+iqt0oaxbNXWl0
-----END RSA PRIVATE KEY-----
```





## Connect EC2 to RDS

The screenshot shows the AWS Management Console with the Services menu open on the left. The 'All services' section is selected. On the right, the 'EC2 Free Tier' page is displayed, showing a summary of free tier offers. It includes sections for 'Recently visited' services like Amazon DocumentDB, DynamoDB, ElastiCache, Amazon Keyspaces, Amazon MemoryDB for Redis, Neptune, Amazon QLDB, RDS, and Amazon Timestream. A note indicates that the user lacks permission to perform certain actions on the RDS resource. A sidebar on the right shows account attributes.

The screenshot shows the 'Create database' wizard for MySQL. The first step, 'Choose a database creation method', has 'Standard create' selected. The second step, 'Engine options', shows 'MySQL' selected as the engine type. To the right, a detailed description of MySQL is provided, listing its features such as support for up to 64 TiB, various instance classes, automated backup, and up to 15 read replicas per instance. The status bar at the bottom right shows '11:00 PM'.

Screenshot of the AWS RDS console showing the MySQL engine selection screen. The MySQL logo is highlighted.

**Edition**

- MySQL Community

**Known issues/limitations**

Review the [Known issues/limitations](#) to learn about potential compatibility issues with specific database versions.

**Engine version** [Info](#)

View the engine versions that support the following database features.

**Show versions that support the Multi-AZ DB cluster** [Info](#)

Create a Multi-AZ DB cluster with one primary DB instance and two readable standby DB instances. Multi-AZ DB clusters provide up to 2x faster transaction commit latency and automatic failover in typically under 35 seconds.

**Show versions that support the Amazon RDS Optimized Writes** [Info](#)

Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

**Engine Version**

MySQL 8.0.35

**Templates**

Choose a sample template to meet your use case.

- Production**  
Use defaults for high availability and fast, consistent performance.
- Dev/Test**  
This instance is intended for development use outside of a production environment.
- Free tier**  
Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.

**Availability and durability**

**Deployment options** [Info](#)

The deployment options below are limited to those supported by the engine you selected above.

- Multi-AZ DB Cluster**  
Creates a DB cluster with a primary DB instance and two readable standby DB instances, with each DB instance in a different Availability Zone (AZ). Provides high availability, data redundancy and increases capacity to serve read workloads.
- Multi-AZ DB instance (not supported for Multi-AZ DB cluster snapshot)**  
Creates a primary DB instance and a standby DB instance in a different AZ. Provides high availability and data redundancy, but the standby DB instance doesn't support connections for read workloads.
- Single DB instance (not supported for Multi-AZ DB cluster snapshot)**  
Creates a single DB instance with no standby DB instances.

**Settings**

The screenshot shows the AWS RDS MySQL creation wizard. The top section, titled 'Settings', includes fields for the DB instance identifier ('database-2'), master username ('admin'), and password. It also provides options for managing credentials ('Managed in AWS Secrets Manager - most secure' or 'Self managed'). The bottom section, titled 'Instance configuration', lists supported instance classes: Standard (m), Memory optimized (r), and Burstable (t). The 'Burstable classes (includes t classes)' option is selected, and the chosen class is db.t4g.micro.

**Settings**

**DB instance identifier** [Info](#)  
Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

**Credentials Settings**

**Master username** [Info](#)  
Type a login ID for the master user of your DB instance.

1 to 16 alphanumeric characters. The first character must be a letter.

**Credentials management**  
You can use AWS Secrets Manager or manage your master user credentials.

**Managed in AWS Secrets Manager - most secure**  
RDS generates a password for you and manages it throughout its lifecycle using AWS Secrets Manager.

**Self managed**  
Create your own password or have RDS create a password that you manage.

**Auto generate password**  
Amazon RDS can generate a password for you, or you can specify your own password.

**Master password** [Info](#)  
  
Minimum constraints: At least 8 printable ASCII characters. Can't contain any of the following symbols: / \ ^ @

**MySQL**

MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.

- Supports database size up to 64 TiB.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- Supports automated backup and point-in-time recovery.
- Supports up to 15 Read Replicas per instance, within a single Region or 5 read replicas cross-region.

11:03 PM

**Instance configuration**

The DB instance configuration options below are limited to those supported by the engine that you selected above.

**DB instance class** [Info](#)

**Show instance classes that support Amazon RDS Optimized Writes** [Info](#)  
Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

**Include previous generation classes**

**Standard classes (includes m classes)**

**Memory optimized classes (includes r and x classes)**

**Burstable classes (includes t classes)**

2 vCPUs 1 GiB RAM Network: 2,085 Mbps

**Storage**

11:09 PM

Screenshot of the AWS RDS Storage configuration page. The left sidebar shows 'Storage' settings. Under 'Provisioned IOPS SSD (io1)', the value is set to 100 GiB. Under 'Provisioned IOPS', the value is set to 3000 IOPS. A note states: 'After you modify the storage for a DB instance, the status of the DB instance will be in storage-optimization. Your instance will remain available as the storage-optimization operation completes.' A 'Learn more' link is provided. On the right, the 'Free Tier' section details the free usage period and specific limits: 750 hrs of Amazon RDS in a Single-AZ db.t2.micro Instance, 20 GB of General Purpose Storage (SSD), and 20 GB for automated backup storage and any user-initiated DB Snapshots.

Screenshot of the AWS RDS Connectivity configuration page. The left sidebar shows 'Connectivity' settings. Under 'Compute resource', the option 'Connect to an EC2 compute resource' is selected. Under 'EC2 instance', the instance ID 'i-0f10f5416fe3db92a' is listed. A note states: 'Some VPC settings can't be changed when a compute resource is added'. A 'Learn more' link is provided. On the right, the 'Free Tier' section details the free usage period and specific limits: 750 hrs of Amazon RDS in a Single-AZ db.t2.micro Instance, 20 GB of General Purpose Storage (SSD), and 20 GB for automated backup storage and any user-initiated DB Snapshots.

**Virtual private cloud (VPC) Info**  
Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

Default VPC (vpc-0604b59175e0c30fe)  
11 Subnets, 6 Availability Zones

Only VPCs with a corresponding DB subnet group are listed.

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

Choose existing  
Choose existing DB subnet group

Automatic setup  
RDS creates a new subnet group for you or reuses an existing subnet group

**DB subnet group name**  
rds-ec2-db-subnet-group-1

Existing DB subnet group reused.

**Public access Info**

Yes  
RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.

No  
RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups that specify which resources can connect to the database.

**VPC security group (firewall) Info**

**Free Tier**

The Amazon RDS Free Tier is available to you for 12 months. Each calendar month, the free tier will allow you to use the Amazon RDS resources listed below for free:

- 750 hrs of Amazon RDS in a Single-AZ db.t2.micro Instance.
- 20 GB of General Purpose Storage (SSD).
- 20 GB for automated backup storage and any user-initiated DB Snapshots.

[Learn more about AWS Free Tier](#)

When your free usage expires or if your application use exceeds the free usage tiers, you simply pay standard, pay-as-you-go service rates as described in the [Amazon RDS Pricing page](#).

The screenshot shows the AWS RDS (Relational Database Service) console. On the left, a sidebar menu includes options like Dashboard, Databases (selected), 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, Events, and Event subscriptions. The main content area displays a banner about Aurora I/O-Optimized and a message about Blue/Green Deployments. Below these are sections for 'Databases (1)' and 'Recommendations'. A table lists one database entry:

DB identifier	Status	Role	Engine	Region & AZ	Size	Recommendations	CPU
database-1	Available	Instance	MySQL Community	us-east-1e	db.t3.micro	2 Informational	

## Back to remote file desktop

The screenshot shows a Windows File Explorer window displaying the contents of the 'htdocs' folder located at 'This PC > Local Disk (C) > xampp > htdocs'. The folder contains several files and subfolders, including 'cafe', 'dashboard', 'img', 'webalizer', 'xampp', 'applications', 'bitnami', 'favicon', and 'index.php'. The status bar at the bottom provides details about the EC2 instance:

Hostname: EC2AMAZ-M7LA1NH  
Instance ID: i-0f105416f63db92a  
Private IPv4 address: 172.31.63.24  
Public IPv4 address: 54.236.24.137  
Instance size: t2 large  
Availability Zone: us-east-1e  
Architecture: AMD64  
Total memory: 8192  
Network interface: Intel PRO/100 MT Desktop



```
<?php

$showServerInfo = "Cafe Server";
$currency="$";
$timeZone="Asia/Jakarta";

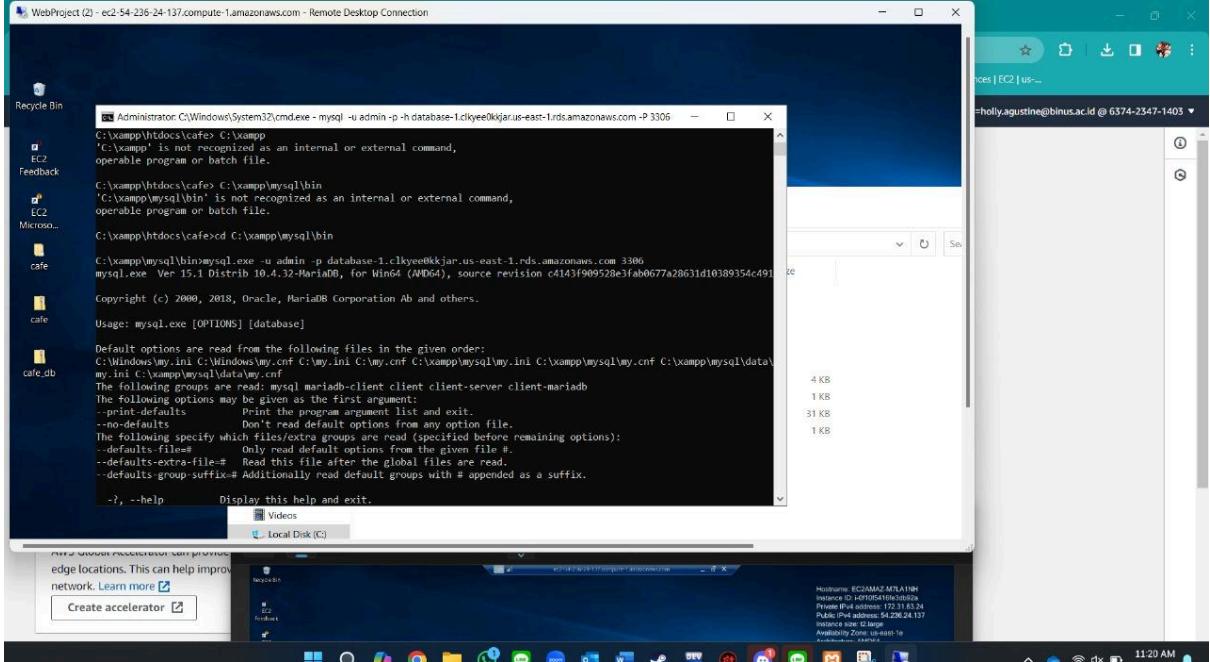
//Database setup
$db_url = "database-1.cjw04maie7jj.us-east-1.rds.amazonaws.com";
$db_name = "cafe_db";
$db_user = "admin";
$db_password = "mypassword";
?>
```

<?php

```
$showServerInfo = "Cafe Server";
$currency="$";
$timeZone="Asia/Jakarta";
```

//Database setup

```
$db_url = "database-1.clkyee0kkjar.us-east-1.rds.amazonaws.com";
$db_name = "cafe_db";
$db_user = "admin";
$db_password = "mypassword";
?>
```



Administrator: C:\Windows\System32\cmd.exe - mysql -u admin -p -h database-1.clkyee0kkjar.us-east-1.rds.amazonaws.com -P 3306

```
C:\xampp\htdocs\cafe> C:\xampp
'C:\xampp' is not recognized as an internal or external command,
operable program or batch file.

C:\xampp\htdocs\cafe> C:\xampp\mysql\bin
'C:\xampp\mysql\bin' is not recognized as an internal or external command,
operable program or batch file.

C:\xampp\mysql\bin>mysql.exe -u admin -p -h database-1.clkyee0kkjar.us-east-1.rds.amazonaws.com 3306
mysql.exe: Ver 15.1 Distrib 10.4.32-MariaDB, for Win64 (AMD64), source revision c4143f909528e3fa0677a28631d10389354c491
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Usage: mysql.exe [OPTIONS] [database]

Default options are read from the following files, in the given order:
C:\Windows\my.ini C:\Windows\my.cnf C:\my.ini C:\xampp\mysql\my.ini C:\xampp\mysql\my.cnf C:\xampp\mysql\data\my
my.ini C:\xampp\mysql\my.cnf
The following groups are read: mysql mariadb-client client client-server client-mariadb
The following options may also be given as the first argument:
--print-defaults          Print the program argument list and exit.
--no-defaults             Don't read default options from any option file.
The following specify which files/extras groups are read (specified before remaining options):
--defaults-file=#        Only read default options from the given file #.
--defaults-extra-file=#   Read this file after the global files are read.
--defaults-group-suffix#  Additionally read default groups with # appended as a suffix.
--?, --help               Display this help and exit.
```

File Explorer:

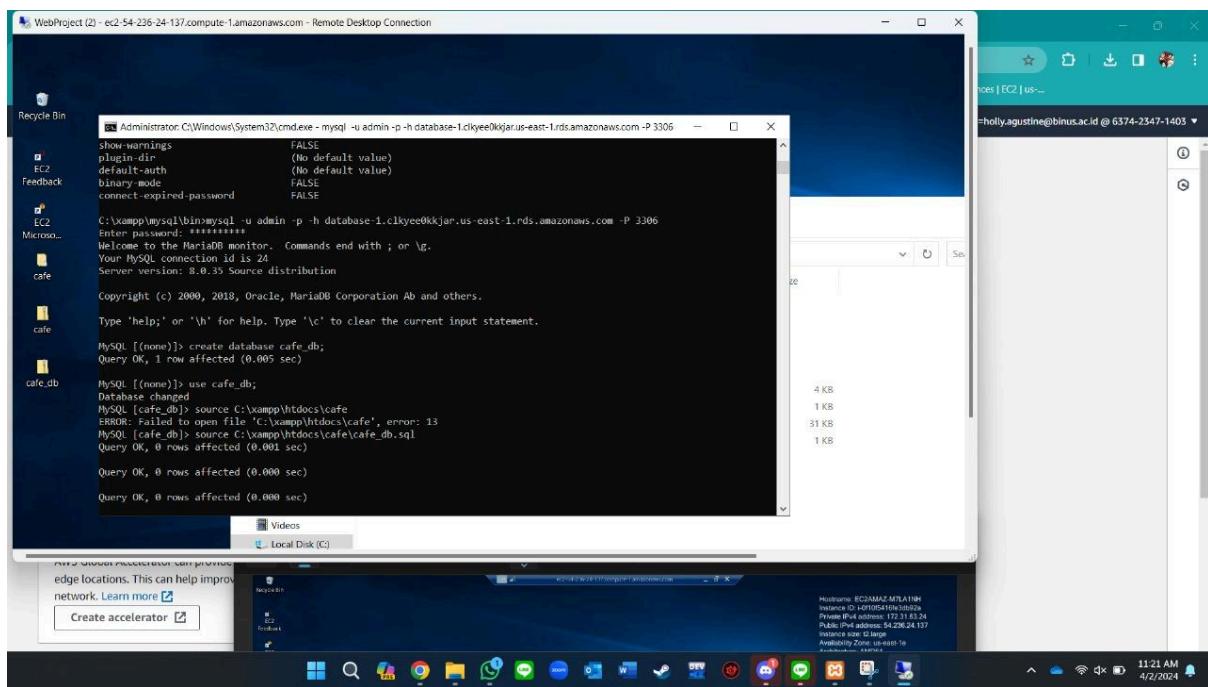
- 4 KB
- 1 KB
- 31 KB
- 1 KB

System tray:

- Hostname: EC2AMAZ-MTIA1NH
- Instance ID: i-0f910545451723116324
- Public IPv4 address: 54.226.24.137
- Instance state: 62 large
- Available RAM: 8.0 GiB

Bottom bar:

- 11:20 AM
- 4/22/2024



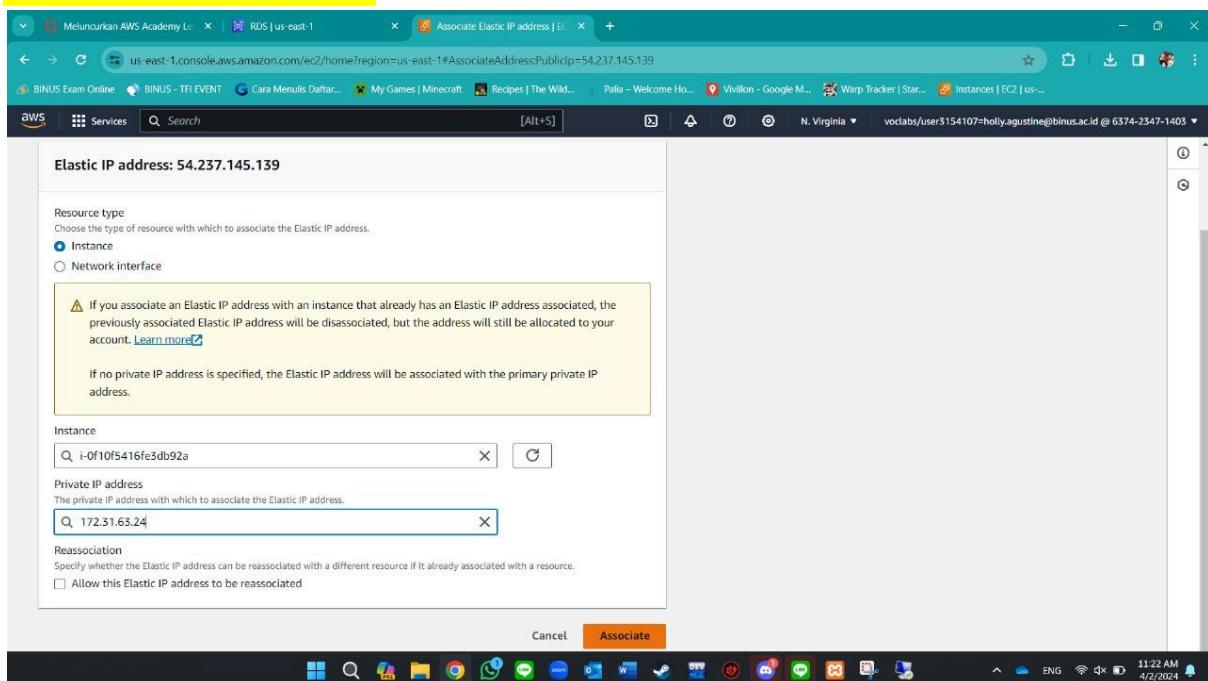
C:\Users\Administrator>cd C:\xampp\mysql\bin

```
C:\xampp\mysql\bin>mysql.exe -u admin -p -h
database-1.cjw04maie7jj.us-east-1.rds.amazonaws.com -P 3306
Enter password: *****
```

MySQL [(none)]> create database cafe\_db;

```
MySQL [(none)]> use cafe_db;
MySQL [cafe_db]> source C:\xampp\htdocs\cafe\cafe_db.sql
```

### Elastic IP for EC2 web server



Screenshot of the AWS CloudWatch Metrics console showing metrics for an EC2 instance. The metrics include CPU Utilization, Network In, Network Out, and Memory Utilization over time.

**Elastic IP addresses (1/1)**

| Name | Allocated IPv4 address | Type      | Allocation ID              |
|------|------------------------|-----------|----------------------------|
| -    | 54.237.145.139         | Public IP | eipalloc-04bc5364e3747e69e |

**Actions**

- Associate Elastic IP address (highlighted)
- Release Elastic IP addresses
- Change Elastic IP address
- Transfer ownership
- Transfer ownership
- Disable transfers
- Accept transfers

**Summary**

54.237.145.139

**Summary**

**Elastic IP address associated successfully.**

Elastic IP address 54.237.145.139 has been associated with instance i-0f10f5416fe3db92a

**54.237.145.139**

**Summary**

|  |  |  |                                    |
|--|--|--|------------------------------------|
| Allocated IPv4 address<br>54.237.145.139       | Type<br>Public IP                                  | Allocation ID<br>eipalloc-04bc5364e3747e69e              | Reverse DNS record<br>-            |
| Association ID<br>eipassoc-05315a7838cd4f53    | Scope<br>VPC                                       | Associated instance ID<br>i-0f10f5416fe3db92a            | Private IP address<br>172.31.63.24 |
| Network interface ID<br>eni-00d15f835a33bb11fa | Network interface owner account ID<br>637423471403 | Public DNS<br>ec2-54-237-145-139.compute-1.amazonaws.com | NAT Gateway ID<br>-                |
| Address pool<br>Amazon                         | Network border group<br>us-east-1                  |  |                                    |

**Tags(0)**

11:22 AM 4/2/2024

11:23 AM 4/2/2024

Meluncurkan AWS Academy L... | RDS | us-east-1 | Elastic IP address | EC2 | us-east-1 | Café | +

Not secure 54.237.145.139/cafe/

BINUS Exam Online BINUS - TFI EVENT Cara Menulis Daftar... My Games | Minecraft Recipes | The Wild... Palia - Welcome Ho... Vivillon - Google M... Warp Tracker | Star... Instances | EC2 | us-e...

# Café

Home About Us Contact Us Menu Order History

Our café offers an assortment of delicious and delectable pastries and coffees that will put a smile on your face. From cookies to croissants, tarts and cakes, each treat is especially prepared to excite your tastebuds and brighten your day!

Frank bakes a rich variety of cookies. Try them all!

Tea, Coffee,

Our tarts are always a customer favorite!