



Pelatihan ABCD – Hari 5 Cloud Computing

Sekolah Teknik Elektro dan Informatika Institut Teknologi Bandung
Universitas Singaperbangsa Karawang

Introduction to Cloud 101

<https://www.awseducate.com/student/s/>

Lab 4: Creating an Amazon RDS Database

https://awseducate.instructure.com/courses/746/assignments/3108?module_item_id=13260

Lab 4: Creating an Amazon RDS Database

The screenshot shows a web browser window with the following details:

- Title Bar:** Introduction to Cloud 101 (tab 1), Lab 4 - Introduction to Amazon (tab 2), and a blank tab (tab 3).
- Address Bar:** awseducate.instructure.com/courses/746/assignments/3108?module_item_id=13260
- Toolbar:** Includes links for Getting Started, Imported From Fir..., Addons, New Tab, Network Research..., IEEE/ACM Internat..., Styles Archives -..., and other browser controls.
- Sidebar (Left):** AWS logo, Account icon, Modules icon, Dashboard icon, Courses icon, History icon, and Help icon.
- Page Content:**
 - Section Headers:** EDC101v... > Assignments > Lab 4 - Introduction to Amazon Relational Database Service (Amazon RDS)
 - Section Title:** Lab 4 - Introduction to Amazon Relational Database Service (Amazon RDS)
 - Due Date:** No Due Date
 - Points:** 100
 - Submitting:** Submitting an external tool
 - Action Buttons:** Submit, Details, AWS, Start Lab, End Lab, Instructions, Grades, Actions.
 - Terminal Window:** Shows a bash prompt: ddd_v1_w_1Vu_1834270@runweb67415:~\$
- Bottom Navigation:** Previous and Next buttons.

Lab 4: Creating an Amazon RDS Database

- ▶ After completing this lab, you should be able to:
 - ▶ Launch a database using Amazon RDS
 - ▶ Configure a web application to connect to the database instance
- ▶ Duration
 - ▶ This lab requires approximately **30 minutes** to complete.

Accessing the AWS Management Console

The screenshot shows a web browser window with the URL awseducate.instructure.com/courses/746/assignments/3108?module_item_id=13260. The page title is "Lab 4 - Introduction to Amazon Relational Database Service (Amazon RDS)". The left sidebar of the browser has the "Courses" tab selected, showing the course navigation menu.

The main content area displays a "Start Lab" dialog box. The dialog contains the following information:

- Region: us-east-1
- Lab ID: arn:aws:cloudformation:us-east-1:471135555293:stack/c35460a48368313242452t1w471135555293/5905c330-747c-11ed-bd9b-12e4d1f03997
- Creation Time: 2022-12-05T01:08:13-0800
- Refresh session at: 2022-12-05T01:08:21-0800
- Remaining session time: 00:29:59(30 minutes)
- Lab status: ready

Below the dialog, the word "Objectives" is visible. At the bottom of the page, there are navigation buttons: "◀ Previous" and "Next ▶".



Task 1: Creating an Amazon RDS database

Lab 4 - Introduction to Amazon X AWS Management Console X +

us-east-1.console.aws.amazon.com/console/home?region=us-east-1#

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aws Services Search [Option+S] N. Virginia v vocabs/user2296696=Yoanes_Bandung @ 4711-3555-5293 ▾

Recently visited

Favorites

All services

Analytics Application Integration AR & VR AWS Cost Management Blockchain Business Applications Compute Containers Customer Enablement Database Developer Tools End User Computing Front-end Web & Mobile Game Development Internet of Things Machine Learning

Amazon DocumentDB
Fully-managed MongoDB-compatible database service

DynamoDB
Managed NoSQL Database

ElastiCache
In-Memory Cache

Amazon Keyspaces
Serverless Cassandra-compatible database

Amazon MemoryDB for Redis
Fully managed, Redis-compatible, in-memory database service

Neptune
Fast, reliable graph database built for the cloud

Amazon QLDB
Fully managed ledger database

RDS
Managed Relational Database Service

Amazon Timestream
Amazon Timestream is a fast, scalable, and serverless time series database for IoT and operational applications.

Reset to default layout + Add widgets

Welcome to AWS

Getting started with AWS
Learn the fundamentals and find valuable information to get the most out of AWS.

Training and certification
Learn from AWS experts and advance your skills and knowledge.

What's new with AWS?
Discover new AWS services, features, and Regions.

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Lab 4 - Introduction to Amazon RDS Management Console

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#

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Amazon 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

Events

Event subscriptions

Recommendations 0

Certificate update

Try the new Amazon RDS Multi-AZ deployment option for MySQL and PostgreSQL
For your Amazon RDS for MySQL and PostgreSQL workloads, improve transactional commit latencies by 2x, experience faster failover typically less than 35 seconds and, get read scalability with two readable standby DB instances by deploying the Multi-AZ DB cluster [Learn more](#)

Create database

Or, [Restore Multi-AZ DB Cluster from Snapshot](#)

Resources

You are using the following Amazon RDS resources in the US East (N. Virginia) region (used/quota)

DB Instances (0/40)	Parameter groups (0)
Allocated storage (0 TB/100 TB)	Default (0)
Increase DB instances limit	Custom (0/100)
DB Clusters (0/40)	Option groups (0)
Reserved instances (0/40)	Default (0)
Snapshots (0)	Custom (0/20)
Manual	Subnet groups (1/50)
DB Cluster (0/100)	Supported platforms VPC
DB Instance (0/100)	Default network vpc-020e1d7a23642c77f
Automated	
DB Cluster (0)	
DB Instance (0)	
Recent events (0)	
Event subscriptions (0/20)	

Recommended for you

Time-Series Tables in PostgreSQL
Step-by-step guide to design high-performance time series data tables on Amazon RDS for PostgreSQL. [Learn more](#)

Migrate SSRS to RDS for SQL Server
Learn how you can migrate existing SSRS content to an Amazon RDS for SQL Server instance using a PowerShell module. [Learn more](#)

Implementing Cross-Region DR
Learn how to set up Cross-Region disaster recovery (DR) for Aurora PostgreSQL using an Aurora global database spanning multiple Regions. [Learn more](#)

Test Your DR Strategy in Minutes
Amazon Aurora Global Database now supports planned managed failover, making disaster

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Create a MySQL database in virtual private cloud (VPC)

Screenshot of the AWS RDS Management Console showing the "Create database" wizard.

The "Create database" wizard is open, showing the "Choose a database creation method" step. The "Standard create" option is selected.

The "Engine options" section shows the following engine types:

- Amazon Aurora
- MySQL** (selected)
- MariaDB
- PostgreSQL
- Oracle
- Microsoft SQL Server

The "Edition" section shows the "MySQL Community" edition selected.

A modal window titled "PostgreSQL" provides information about the PostgreSQL database system:

PostgreSQL is a powerful, open-source object-relational database system with a strong reputation of reliability, stability, and correctness.

- High reliability and stability in a variety of workloads.
- Advanced features to perform in high-volume environments.
- Vibrant open-source community that releases new features multiple times per year.
- Supports multiple extensions that add even more functionality to the database.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- The most Oracle-compatible open-source database.

Page footer:

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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.

PostgreSQL

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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 - *new* 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 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 Creates a single DB instance with no standby DB instances.

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.

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Credentials Settings

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

1 to 16 alphanumeric characters. First character must be a letter.
 Auto generate a password
Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote)', "(double quote) and @ (at sign).
Confirm master password [Info](#)

Instance configuration

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

DB instance class [Info](#)
 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

Include previous generation classes

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Lab 4 - Introduction to Amazon RDS Management Console

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#launch-dbinstance;;isHermesCreate=true

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Storage

Storage type [Info](#)
General Purpose SSD (gp2)
Baseline performance determined by volume size

Allocated storage
20 GiB
The minimum value is 20 GiB and the maximum value is 6,144 GiB

Provisioning less than 100 GiB of General Purpose (SSD) storage for high throughput workloads could result in higher latencies upon exhaustion of the initial General Purpose (SSD) IO credit balance. [Learn more](#)

Storage autoscaling [Info](#)
Provides dynamic scaling support for your database's storage based on your application's needs.

Enable storage autoscaling
Enabling this feature will allow the storage to increase after the specified threshold is exceeded.

Maximum storage threshold [Info](#)
Charges will apply when your database autoscales to the specified threshold
1000 GiB
The minimum value is 22 GiB and the maximum value is 6,144 GiB

Connectivity [Info](#)

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Lab 4 - Introduction to Amazon RDS Management Console

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#launch-dbinstance;;isHermesCreate=true

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Connectivity Info

Compute resource
Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

Don't connect to an EC2 compute resource
Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

Connect to an EC2 compute resource
Set up a connection to an EC2 compute resource for this database.

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

Lab VPC (vpc-0c54fe5f735e4640a)

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.

lab-db-subnet-group

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

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PostgreSQL X

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Lab 4 - Introduction to Amazon RDS Management Console

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#launch-dbinstance;;isHermesCreate=true

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VPC security group (firewall) [Info](#)
Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

Choose existing
Choose existing VPC security groups

Create new
Create new VPC security group

Existing VPC security groups
[Choose one or more options](#)

DB-SG [X](#)

Availability Zone [Info](#)
No preference

RDS Proxy
RDS Proxy is a fully managed, highly available database proxy that improves application scalability, resiliency, and security.

Create an RDS Proxy [Info](#)
RDS automatically creates an IAM role and a Secrets Manager secret for the proxy. RDS Proxy has additional costs. For more information, see [Amazon RDS Proxy pricing](#).

► Additional configuration

Database authentication

Database authentication options [Info](#)

Password authentication
Authenticates using database passwords.

Password and IAM database authentication
Authenticates using the database password and user credentials through AWS IAM users and roles.

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Lab 4 - Introduction to Amazon RDS Management Console

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#launch-dbinstance;;isHermesCreate=true

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Monitoring

Monitoring

Enable Enhanced monitoring
Enabling Enhanced monitoring metrics are useful when you want to see how different processes or threads use the CPU.

Granularity
60 seconds

Monitoring Role
default

Clicking "Create database" will authorize RDS to create the IAM role rds-monitoring-role

▼ Additional configuration

Database options, encryption turned on, backup turned on, backtrack turned off, maintenance, CloudWatch Logs, delete protection turned off.

Database options

Initial database name [Info](#)
inventory

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group [Info](#)
default.mysql8.0

Option group [Info](#)

Feedback Looking for language selection? Find it in the new Unified Settings

PostgreSQL

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Choose Create database

The screenshot shows the AWS RDS Management Console interface for creating a new database. The top navigation bar includes tabs for 'Lab 4 - Introduction to Amazon RDS' and 'RDS Management Console'. The main content area is titled 'PostgreSQL'.

Maintenance window: Info
Select the period you want pending modifications or maintenance applied to the database by Amazon RDS.
 Choose a window
 No preference

Deletion protection:
 Enable deletion protection
Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database.

Estimated monthly costs:

DB instance	12.41 USD
Storage	2.30 USD
Total	14.71 USD

This billing estimate is based on on-demand usage as described in [Amazon RDS Pricing](#). Estimate does not include costs for backup storage, IOs (if applicable), or data transfer.

Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#).

Important: You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.

At the bottom, there are 'Cancel' and 'Create database' buttons.

An error message that mentions rds-monitoring-role

The screenshot shows the AWS RDS Management Console interface. At the top, there is an error message: "Failed to turn on Enhanced Monitoring for database null because of missing permissions. User: arn:aws:sts::471135555293:assumed-role/voclabs/user2296696=Yoanes_Bandung is not authorized to perform: iam:CreateRole on resource: arn:aws:iam::471135555293:role/rds-monitoring-role because no identity-based policy allows the iam:CreateRole action". Below this, a progress bar indicates the status of creating a database named "inventory-db". The progress bar shows "Your database might take a few minutes to launch." and includes a "View credential details" button. The main table lists the database "inventory-db" with details: Instance: MySQL Community, Engine: MySQL Community, Region & AZ: -, Size: db.t3.micro, Status: Creating.

Amazon 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

Events

Event subscriptions

Recommendations 0

Certificate update

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Cleared the Enable Enhanced monitoring option

The screenshot shows the AWS RDS Management Console interface for creating a new database instance. The left sidebar has 'Monitoring' selected. In the main area, under 'Monitoring', the 'Enable Enhanced monitoring' checkbox is unchecked. Below it, the 'Additional configuration' section is expanded, showing options for database options, DB parameter group, Option group, and backup settings. The 'Initial database name' field contains 'inventory'. The 'DB parameter group' dropdown is set to 'default.mysql8.0'. The 'Option group' dropdown is set to 'default:mysql-8-0'. Under 'Backup', the 'Enable automated backups' checkbox is checked. To the right, a 'MySQL' information panel provides details about the MySQL database engine.

Lab 4 - Introduction to Amazon RDS Management Console

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#launch-dbinstance:gdb=false;isHermesCreate=true;s3-import=...

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Monitoring

Monitoring

Enable Enhanced monitoring
Enabling Enhanced monitoring metrics are useful when you want to see how different processes or threads use the CPU.

▼ Additional configuration
Database options, encryption turned on, backup turned on, backtrack turned off, maintenance, CloudWatch Logs, delete protection turned off.

Database options

Initial database name [Info](#) **inventory**
If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group [Info](#) **default.mysql8.0**

Option group [Info](#) **default:mysql-8-0**

Backup

Enable automated backups
Creates a point-in-time snapshot of your database

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 5 Read Replicas per instance, within a single Region or cross-region.

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Creating database

The screenshot shows the Amazon RDS Management Console interface. On the left, a sidebar menu lists various RDS services: Dashboard, Databases (which is selected and highlighted in orange), Query Editor, Performance insights, Snapshots, Exports in Amazon S3, Automated backups, Reserved instances, Proxies, Subnet groups, Parameter groups, Option groups, Custom engine versions, Events, Event subscriptions, Recommendations (0), and Certificate update.

The main content area displays a confirmation message: "Creating database database-1inventory-db. Your database might take a few minutes to launch." Below this, the "Databases" section is shown. The table has the following data:

DB identifier	Role	Engine	Region & AZ	Size	Status
database-1inventory-db	Instance	MySQL Community	-	db.t3.micro	Creating
inventory-db	Instance	MySQL Community	us-east-1a	db.t3.micro	Creating

At the bottom of the page, there are links for Feedback, Language selection, Copyright notice (© 2022, Amazon Web Services, Inc. or its affiliates.), Privacy, Terms, and Cookie preferences.

Lab 4 - Introduction to Amazon RDS Management Console

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#databases:

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Amazon RDS

RDS > Databases

Databases

Group resources Modify Actions ▾ Restore from S3 Create database

Filter by databases < 1 > ⚙

DB identifier	Role	Engine	Region & AZ	Size	Status
database-1inventory-db	Instance	MySQL Community	us-east-1a	db.t3.micro	Available
inventory-db	Instance	MySQL Community	us-east-1a	db.t3.micro	Available

Dashboard

Databases

Query Editor

Performance insights

Snapshots

Exports in Amazon S3

Automated backups

Reserved instances

Proxies

Subnet groups

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Option groups

Custom engine versions

Events

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Recommendations 2

Certificate update

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Task 2: Configuring web application communication with a database instance

Lab 4 - Introduction to Amazon RDS Management Console Inventory System

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Amazon RDS

Dashboard

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- Exports in Amazon S3
- Automated backups
- Reserved instances
- Proxies

Subnet groups

Parameter groups

Option groups

Custom engine versions

Events

Event subscriptions

Recommendations 2

Certificate update

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For your Amazon RDS for MySQL and PostgreSQL workloads, improve transactional commit latencies by 2x, experience faster failover typically less than 35 seconds and, get read scalability with two readable standby DB instances by deploying the Multi-AZ DB cluster [Learn more](#)

Create database

Or, [Restore Multi-AZ DB Cluster from Snapshot](#)

Resources

Refresh

You are using the following Amazon RDS resources in the US East (N. Virginia) region (used/quota)

DB Instances (2/40)	Parameter groups (1)
Allocated storage (0.039 TB/100 TB)	Default (1)
Increase DB instances limit	Custom (0/100)
DB Clusters (0/40)	Option groups (1)
Reserved instances (0/40)	Default (1)
Snapshots (2)	Custom (0/20)
Manual	Subnet groups (1/50)
DB Cluster (0/100)	Supported platforms VPC
DB Instance (0/100)	Default network vpc-020e1d7a23642c77f
Automated	
DB Cluster (0)	
DB Instance (2)	
Recent events (11)	
Event subscriptions (0/20)	

Recommended for you

Amazon RDS Backup and Restore using AWS Backup
Learn how to backup and restore Amazon RDS databases using AWS Backup in just 10 minutes. [Learn more](#)

Time-Series Tables in PostgreSQL
Step-by-step guide to design high-performance time series data tables on Amazon RDS for PostgreSQL. [Learn more](#)

Test Your DR Strategy in Minutes
Amazon Aurora Global Database now supports planned managed failover, making disaster recovery drills a breeze. [Learn more](#)

Implementing Cross-Region DR
Learn how to set up Cross-Region disaster recovery (DR) for Aurora PostgreSQL using an Aurora global database spanning multiple

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Lab 4 - Introduction to Amazon RDS Management Console Inventory System

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#databases:

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AWS Services Search [Option+S] N. Virginia v vocabs/user2296696=Yoanes_Bandung @ 4711-3555-5293

Amazon RDS

RDS > Databases

Databases

Group resources C Modify Actions ▾ Restore from S3 Create database

Filter by databases < 1 > ⚙

DB identifier	Role	Engine	Region & AZ	Size	Status
database-1inventory-db	Instance	MySQL Community	us-east-1a	db.t3.micro	Available
inventory-db	Instance	MySQL Community	us-east-1a	db.t3.micro	Available

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

Events

Event subscriptions

Recommendations 2

Certificate update

Feedback Looking for language selection? Find it in the new Unified Settings

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In the Details tab, copy the Public IPv4 address

The screenshot shows the AWS EC2 Management console with the following details:

Instances (1/1) Info

- Instance state = running
- Clear filters

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Pub
App Server	i-02732f4e01c45ae9c	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-3-238-193-168.compute-1.amazonaws.com

Instance: i-02732f4e01c45ae9c (App Server)

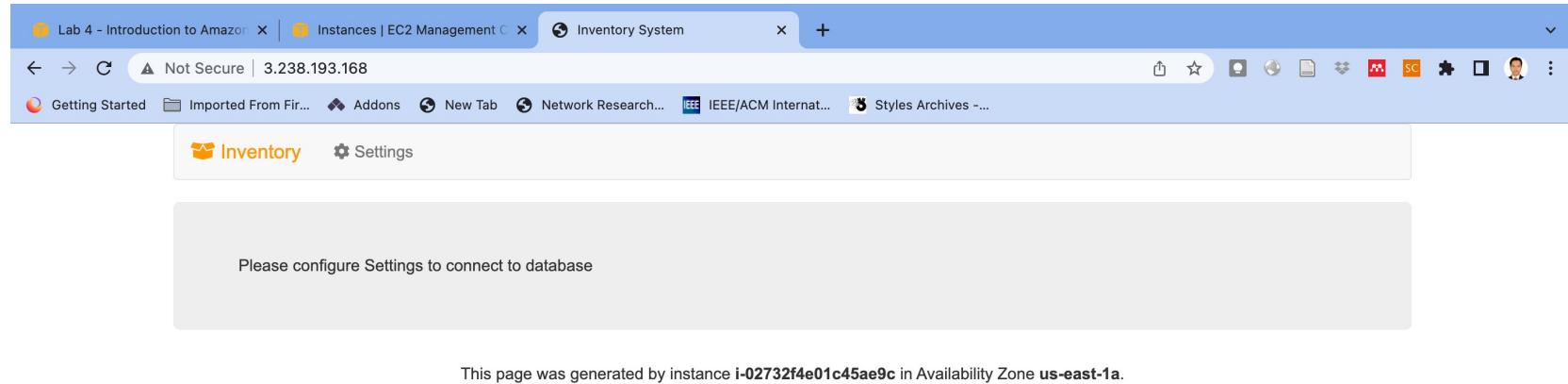
Details tab selected.

Instance summary

Instance ID i-02732f4e01c45ae9c (App Server)	Public IPv4 address 3.238.193.168 open address	Private IPv4 addresses 10.0.0.163
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-3-238-193-168.compute-1.amazonaws.com open address
Hostname type IP name: ip-10-0-0-163.ec2.internal	Private IP DNS name (IPv4 only) ip-10-0-0-163.ec2.internal	Elastic IP addresses -
Answer private resource DNS name -	Instance type t2.micro	AWS Compute Optimizer finding User: arn:aws:sts::471135555293:assumed-role/voclabs/us
Auto-assigned IP address 3.238.193.168 [Public IP]	VPC ID vpc-05b704299b3b88bf2 (Lab VPC)	

Page footer: Waiting for us-east-1.console.aws.amazon.com... © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Open the address in a browser



Configure the application to use the Amazon RDS database instance

The screenshot shows the AWS RDS Management Console interface. The left sidebar is titled "Amazon RDS" and includes links for Dashboard, Databases (which is selected and highlighted in orange), Query Editor, Performance insights, Snapshots, Exports in Amazon S3, Automated backups, Reserved instances, Proxies, Subnet groups, Parameter groups, Option groups, Custom engine versions, Events, Event subscriptions, Recommendations (with a notification badge of 1), and Certificate update.

The main content area is titled "RDS > Databases". It features a "Databases" table with the following data:

DB identifier	Role	Engine	Region & AZ	Size	Status
inventory-db	Instance	MySQL Community	us-east-1a	db.t3.micro	Available

At the top of the main content area, there are several buttons: "Group resources" (with a radio button), "C" (Create), "Modify", "Actions", "Restore from S3", and "Create database". A search bar labeled "Filter by databases" is also present.

At the bottom of the page, there are links for Feedback, Looking for language selection? Find it in the new Unified Settings, © 2022, Amazon Web Services, Inc. or its affiliates., Privacy, Terms, and Cookie preferences.

In connectivity & security section, copy the Endpoint

The screenshot shows the Amazon RDS Management Console interface. On the left, there's a sidebar with various navigation options like Dashboard, Databases, Query Editor, etc. The main area is titled 'Summary' and shows details for a database named 'inventory-db'. Below the summary is a tab bar with 'Connectivity & security' (which is highlighted in orange), 'Monitoring', 'Logs & events', 'Configuration', 'Maintenance & backups', and 'Tags'. The 'Connectivity & security' section is expanded, showing three columns: 'Endpoint & port', 'Networking', and 'Security'. In the 'Endpoint & port' column, the 'Endpoint' field contains the value 'inventory-db.cisph5idxf8h.us-east-1.rds.amazonaws.com'. This value is also highlighted with a blue selection bar.

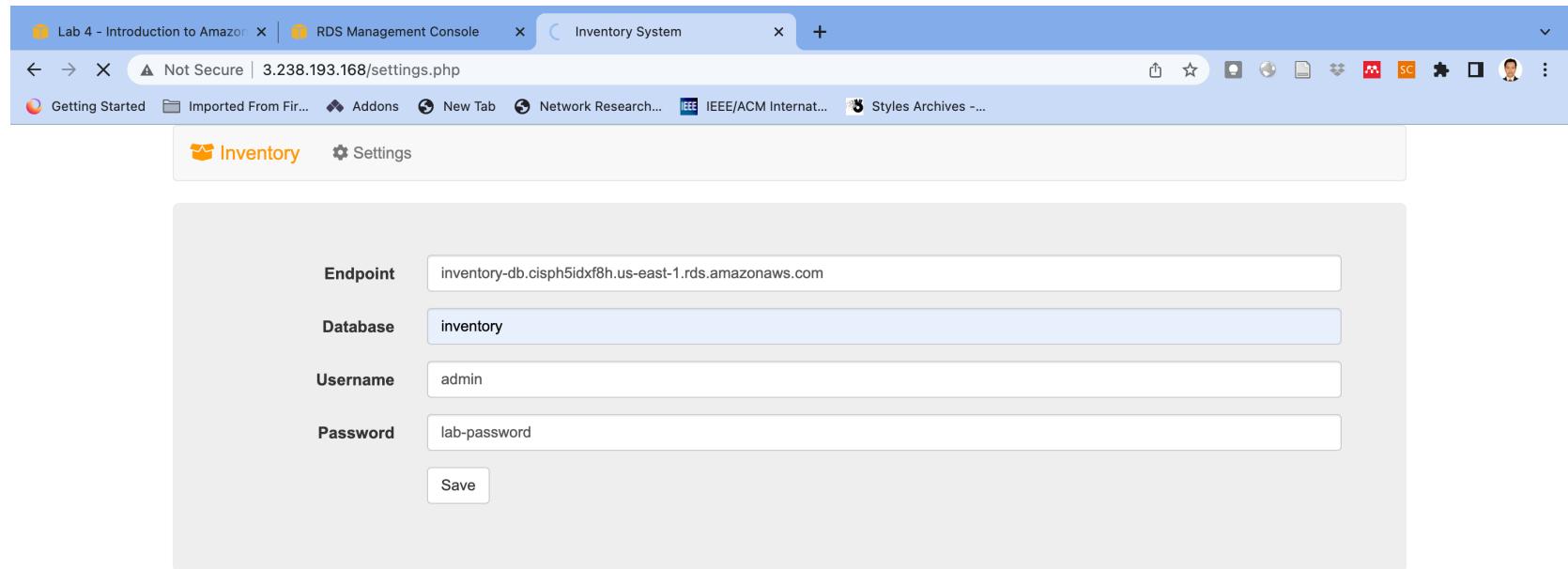
Summary			
DB identifier inventory-db	CPU <div style="width: 2.07%;"></div> 2.07%	Status Available	Class db.t3.micro
Role Instance	Current activity <div style="width: 0%;"></div> 0 Connections	Engine MySQL Community	Region & AZ us-east-1a

Connectivity & security		
Endpoint & port Endpoint inventory-db.cisph5idxf8h.us-east-1.rds.amazonaws.com	Networking Availability Zone us-east-1a VPC Lab VPC (vpc-05b704299b3b88bf2)	Security VPC security groups DB-SG (sg-0f149de2338f00c4a) Active
Port 3306	Subnet group lab-db-subnet-group Subnets subnet-03a2b53303686e6c5 subnet-076f30daf1ab258dc	Public accessibility No Certificate authority rds-ca-2019 Certificate authority date August 23, 2024, 00:08 (UTC+07:00)

Feedback Looking for language selection? Find it in the new Unified Settings [\[\]](#)

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Paste the endpoint to the browser



The screenshot shows a web browser window with the following details:

- Tab Bar:** The tabs are "Lab 4 - Introduction to Amazon" (active), "RDS Management Console", and "Inventory System".
- Address Bar:** Shows "Not Secure | 3.238.193.168".
- Toolbar:** Includes standard browser icons for back, forward, search, and refresh, along with a user profile icon.
- Bookmark Bar:** Shows links like "Getting Started", "Imported From Fir...", "Addons", "New Tab", "Network Research...", "IEEE/ACM Internat...", and "Styles Archives -...".
- Content Area:**
 - Header:** "Inventory" and "Settings".
 - Table:** Displays inventory data with columns: Store, Item, and Quantity.

	Store	Item	Quantity	
		Puerto Rico	Amazon Echo	12
		Paris	Amazon Dot	3
		Detroit	Amazon Tap	5
 - Button:** "+ Add Inventory" (blue button).

This page was generated by instance **i-02732f4e01c45ae9c** in Availability Zone **us-east-1a**.

Lab 4 - Introduction to Amazon X | RDS Management Console X | Inventory System X +

Not Secure | 3.238.193.168/index.php?mode=add

Getting Started Imported From Fir... Addons New Tab Network Research... IEEE/ACM Internat... Styles Archives -...

 Inventory  Settings

Add Inventory

Store:

Item:

Quantity:

Submit

	Store	Item	Quantity
 	Puerto Rico	Amazon Echo	12
 	Paris	Amazon Dot	3
 	Detroit	Amazon Tap	5

+ Add Inventory

This page was generated by instance **i-02732f4e01c45ae9c** in Availability Zone **us-east-1a**.

The screenshot shows a web browser window with the following details:

- Tab Bar:** The tabs are "Lab 4 - Introduction to Amazon" (active), "RDS Management Console", and "Inventory System".
- Address Bar:** "Not Secure | 3.238.193.168/index.php"
- Toolbar:** Includes icons for Back, Forward, Stop, Refresh, Home, and various extensions.
- Page Content:**
 - Header:** "Inventory" and "Settings".
 - Table:** Displays inventory data with columns: Store, Item, and Quantity.

	Store	Item	Quantity
	Puerto Rico	Amazon Echo	12
	Paris	Amazon Dot	3
	Detroit	Amazon Tap	5
	Bandung	Amazon A	4
	Yogyakarta	Amazon B	12
	Jakarta	Amazon C	20
 - Buttons:** "+ Add Inventory" button.
- Page Footer:** "This page was generated by instance **i-02732f4e01c45ae9c** in Availability Zone **us-east-1a**".

Access the saved parameters

The screenshot shows the AWS RDS Management Console interface. At the top, there are three tabs: "Lab 4 - Introduction to Amazon" (active), "RDS Management Console", and "Inventory System". Below the tabs, the URL is us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#database:id=inventory-db;is-cluster=false. The navigation bar includes links for "Getting Started", "Imported From Fir...", "Addons", "New Tab", "Network Research...", "IEEE/ACM Internat...", and "Styles Archives -...". On the far right of the navigation bar, it shows "N. Virginia" and the user "voclabs/user2296696=Yoanes_Bandung @ 4711-3555-5293".

The left sidebar lists various AWS services under "Recently visited": AR & VR, AWS Cost Management, Blockchain, Business Applications, Compute, Containers, Customer Enablement, Database, Developer Tools, End User Computing, Front-end Web & Mobile, Game Development, Internet of Things, Machine Learning, Management & Governance, Media Services, Migration & Transfer, Networking & Content Delivery, Quantum Technologies, and Robotics.

The main content area displays the "Recently visited" section with the following items:

- RDS**: Managed Relational Database Service
- EC2**: Virtual Servers in the Cloud
- Console Home**
- AWS Budgets**: Set Custom Budgets and Receive Alerts
- Systems Manager**: AWS Systems Manager is a Central Place to View and Manage AWS Resources
- S3**: Scalable Storage in the Cloud
- DynamoDB**: Managed NoSQL Database

On the right side, there are two panels showing saved parameters:

- Class**: db.t3.micro
- Region & AZ**: us-east-1a

Below these panels are tabs for "Performance & backups" and "Tags".

Security details shown:

- VPC security groups: DB-SG (sg-0f149de2338f00c4a) (Active)
- Public accessibility: No
- Certificate authority: rds-ca-2019
- Certificate authority date: August 23, 2024, 00:08 (UTC+07:00)

The bottom of the page includes the URL <https://s3.console.aws.amazon.com/s3/home?region=us-east-1>, "Unified Settings", copyright information (© 2022, Amazon Web Services, Inc. or its affiliates.), and links for "Privacy", "Terms", and "Cookie preferences".

Access the saved parameters

The screenshot shows the AWS Systems Manager home page in a web browser. The URL is us-east-1.console.aws.amazon.com/systems-manager/home?region=us-east-1#. The page features a sidebar with navigation links for Quick Setup, Operations Management (Explorer, OpsCenter, CloudWatch Dashboard, Incident Manager), Application Management (Application Manager, AppConfig, Parameter Store), Change Management (Change Manager, Automation, Change Calendar, Maintenance Windows), and Node Management (Fleet Manager, Compliance, Inventory). The main content area has a dark background with the title "AWS Systems Manager" and the subtitle "Gain Operational Insight and Take Action on AWS Resources." It includes a "Get Started with Systems Manager" button and a section describing how it works: "Group your resources" (Icon: three icons), "View insights" (Icon: two overlapping windows showing charts and graphs), and "Take action" (Icon: a laptop with a gear icon). A "More resources" sidebar on the right lists Documentation, API reference, and FAQs.

AWS Systems Manager

MANAGEMENT TOOLS

AWS Systems Manager

Gain Operational Insight and Take Action on AWS Resources.

Get Started with Systems Manager

View operational data for groups of resources, so you can quickly identify and act on any issues that might impact applications that use those resources.

How it works

Group your resources

Group your AWS resources and save them

View insights

See relevant operational data and dashboards about your grouped

Take action

Mitigate issues by performing operations directly on groups

More resources

Documentation

API reference

FAQs

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Access the saved parameters

The screenshot shows the AWS Systems Manager Parameter Store interface. The browser tab is titled "AWS Systems Manager - Param" and the URL is "us-east-1.console.aws.amazon.com/systems-manager/parameters/?region=us-east-1&tab=Table". The AWS logo and services navigation bar are visible at the top. The main content area shows a table titled "My parameters" with columns: Name, Tier, Type, and Last modified. There are four entries listed:

Name	Tier	Type	Last modified
/inventory-app/db	Standard	String	Mon, 05 Dec 2022 13:56:48 GMT
/inventory-app/endpoint	Standard	String	Mon, 05 Dec 2022 13:56:48 GMT
/inventory-app/password	Standard	SecureString	Mon, 05 Dec 2022 13:56:48 GMT
/inventory-app/username	Standard	String	Mon, 05 Dec 2022 13:56:48 GMT

At the bottom of the page, there are links for Feedback, Language selection, Copyright notice, Privacy, Terms, and Cookie preferences.



Submitting your work

Lab 4 - Introduction to Amazon RDS | AWS Systems Manager - Parameter Store | Inventory System

awseducate.instructure.com/courses/746/assignments/3108?module_item_id=13260

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aws EDC101v... > Assignments
Lab 4 - Introduction to Amazon Relational Database Service (Amazon RDS)

Lab 4 - Introduction to Amazon Relational Database Service (Amazon RDS)

Due No Due Date Points 100 Submitting an external tool

Submit Details AWS Start Lab End Lab 0:02 Instructions Grades Actions

EN-US Details

- Last submitted: Dec-05-2022 6:00:48 am PST
- Submission count: 1
- Due date: None
- AWS: Show

View Submission Report

waiting for report 3s

File README Terminal Source bash

```
id_v1_w_lvu_1834270@runweb67415:~$  
id_v1_w_lvu_1834270@runweb67415:~$  
id_v1_w_lvu_1834270@runweb67415:~$
```

Lab 4: Creating a Database Using Amazon RDS

Lab Overview

Traditionally, creating a database can be a complex process that requires either a database administrator or a systems administrator. In the cloud, you can simplify this process by using Amazon Relational Database Service (Amazon RDS).

Objectives

◀ Previous Next ▶

Lab 4 - Introduction to Amazon RDS | AWS Systems Manager - Param | Inventory System

awseducate.instructure.com/courses/746/assignments/3108?module_item_id=13260

Getting Started Imported From Fir... Addons New Tab Network Research... IEEE/ACM Internat... Styles Archives -...

aws EDC101v... > Assignments
Lab 4 - Introduction to Amazon Relational Database Service (Amazon RDS)

Lab 4 - Introduction to Amazon Relational Database Service (Amazon RDS)

Due No Due Date Points 100 Submitting an external tool

Submit Details AWS Start Lab End Lab 0:02 Instructions Grades Actions

EN-US

Lab 4: Creating an Amazon RDS Database

Lab overview

Traditionally, creating a database can be a complex process that requires either a database administrator or a systems administrator. In the cloud, you can simplify this process by using Amazon Relational Database Service (Amazon RDS).

Objectives

◀ Previous Next ▶

Submission Report:

```
[Executed at: Mon Dec 5 6:01:03 PST]
Testing report - Database named inventory
"Testing report - Correct engine type"
"Testing report - Correct instance type"
Testing report - 2 records were added

gradefile = /mnt/data2/students/sub483683_1/tmp/temp_uf_12052022/.fHP7G1
reportFile = /mnt/data2/students/sub483683_1/tmp/temp_uf_12052022/.LeKxRB
/mnt/data2/students/sub2/ccc_v1_g_5/temp_uf_12052022/.fHP7G1
len 4
Present working directory = /mnt/data2/asn483682_6/asn483683_1/2296696/1/work

Default region: us-east-1
Database instance inventory_db found
```

Total score 20/20

[Task 1A] inventory-db found 5/5

[Task 1B] Database engine type 5/5

[Task 1C] Database instance type 5/5

[Task 2] Add Inventory Records 5/5

Account Modules Home Courses History Help

Lab 4 - Introduction to Amazon RDS | AWS Systems Manager - Parameter Store | Inventory System

awseducate.instructure.com/courses/746/assignments/3108?module_item_id=13260

Getting Started Imported From Fir... Addons New Tab Network Research... IEEE/ACM Internat... Styles Archives -...

aws EDC101v... > Assignments
Lab 4 - Introduction to Amazon Relational Database Service (Amazon RDS)

Lab 4 - Introduction to Amazon Relational Database Service (Amazon RDS)

Due No Due Date Points 100 Submitting an external tool

Submission Report

EN-US

[Executed at: Mon Dec 5 6:01:03 PST 2022]

Testing report - Database named inventory-db was found
"Testing report - Correct engine type, MySQL, was used."
"Testing report - Correct instance type, db.t3.micro, was used."
Testing report - 2 records were added. Found total of 5 inventory records.

gradeFile =
/mnt/data2/students/sub2/ccc_v1_g_55bad_15686/asn483682_6/asn483683_1/tmp/temp_uf_12052022/.fHP7G1

Traditionally, creating a database can be a complex process that requires either a database administrator or a systems administrator. In the cloud, you can simplify this process by using Amazon Relational Database Service (Amazon RDS).

Objectives

Submit Details AWS Start Lab End Lab 0:01 Instructions Grades Actions

Source □ 20/20

bound 5/5

type 5/5

Task 1C Database instance type 5/5

Task 2 Add Inventory Records 5/5

◀ Previous Next ▶

THANK
YOU

