



EPAM Systems, RD Dep., RD Dep.

AWS CLOUD FOR DATA ENGINEERING

DB Services

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TASK 1. RDS MYSQL

In this task let's work with MySQL database to see that it is quite similar with what you have already done in PostgreSQL and Oracle previously.

Mentors started one or two RDS MySQL databases. Please, first of all, using admin user (see below) create your own user in this MySQL RDS database. All further database manipulation should be from your own users.

Usually, to initialize or upgrade any database special initial script is prepared, in which you combine necessary DDL and DML operations to establish database environment.

Prepare the initial script in which you:

- establish the connection to any of 1-2 provided mysql databases using your own user
- create a separate schema
- create several objects in your schema -> at least table, view, procedure
- this script should be restartable

Initial script should be provided to Mentors and screens of the task steps should be in the Report.

User: admin

Password: admin_mysql

Db: dilab_dev

TASK 2. RDS AURORA

- Let's try to manipulate Aurora RDS database directly from AWS Console.
- Use Query editor to create several meaningful (not simple) queries to the data in the Aurora db. For this you could create your own schema in the database and populate it or use pre-created [sakila schema](#) in this db.

Optional: use AWS Cloud09 to work with Aurora (could be same manipulations as in previous task part).

- Use any EC2 created by you in the HW02 as a jump-server (aka bastion server), pay attention to the keys management (e.g. <https://aws.amazon.com/premiumsupport/knowledge-center/systems-manager-ssh-vpc-resources/>) and connect to the Aurora RDS from your PC using any SQL client.
- Describe why it is the only way to connect to Aurora from local PC oppose to Amazon RDS MySQL.
- Provide the screens of connection settings and any query execution and results.

Save screens of the queries with results and optional task screens (how you work with this db using Cloud IDE) into your Report.

User: admin

Password: admin_aurora

Db: dilab_dev / sakila

TASK 3

Add table in dynamodb using AWS Console and populate it manually. Make screenshots and delete it.

All further AWS Dynamodb manipulations should be using api calls from aws cli (follow the [link](#)):

- Create table in AWS DynamoDb. Primary key in this table is mandatory. Please explain why you choose this primary key for your table (help: <https://aws.amazon.com/ru/blogs/database/choosing-the-right-dynamodb-partition-key/>)
- Add 20+ rows to the table.
- Retrieve 5+ rows from the table using keys.
- Make several selects using syntax showed you on the lecture.
- Delete 2 rows from the table.

All screens, queries with results, intermediate steps result, and mentioned in the task activities please consolidate into the Word-based report and put it into your own bucket.