Ref Card 03 mit RDS Mysql Datenbank

Projektbeschreibung

Das Ref-Card-03-Projekt ist ein Docker-Utility, das Entwicklern ermöglicht, Docker-Container mit dem NGINX-Webserver und einer einfachen HTML-Datei bereitzustellen.

Voraussetzungen

Betriebssystem: Das Ref-Card-03-Projekt kann auf Linux (WSL) ausgeführt werden. Docker: Stellen Sie sicher, dass Docker auf Ihrem System installiert ist und Sie die erforderlichen Berechtigungen haben, um Docker-Container auszuführen.

Git Repository herunterladen

Github Repository: https://github.com/masluse/ref-card-03

Klonen Sie das Repository auf Ihren lokalen Computer und navigieren Sie in das Projektverzeichnis:

```
git clone https://github.com/masluse/ref-card-03
cd ref-card-03
```

RDS Instanz Erstellen

Um die RDS Instanz zu erstellen kann man den folgenden Schritten folgen:

Änderungen:

- Engine type = MariaDB
- Templates = Free tier

Create database

Choose a database creation method Info

- (•) Standard create
  You set all of the configuration options, including ones for availability, security, backups, and maintenance.
- ( ) Easy create
  Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type Info

- ( ) Aurora (MySQL Compatible)
- ( ) Aurora (PostgreSQL Compatible)
- ( ) MySQL
- (•) MariaDB
- ( ) PostgreSQL
- ( ) Oracle
- ( ) Microsoft SQL Server

▼ Hide filters

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

MariaDB 10.6.12 ▼

Templates

Choose a sample template to meet your use case.

- ( ) Production
  Use defaults for high
- ( ) Dev/Test
  This instance is intended for
- (•) Free tier
  Use RDS Free Tier to develop

Änderungen:

- DB instance identifier = jokedb
- Master username = 'Username'
- Master password = 'Password'
- Confirm master password = 'Password'

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.

jokedb

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.

jokedbuser

1 to 16 alphanumeric characters. First character must be a letter.

☐ Manage master credentials in AWS Secrets Manager

Manage master user credentials in Secrets Manager. RDS can generate a password for you and manage it throughout its lifecycle.

ⓘ If you manage the master user credentials in Secrets Manager, some RDS features aren't supported.
Learn more

☐ 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.

Amazon RDS Optimized Writes - *new* Info

Show instance classes that support Amazon RDS Optimized Writes

DB instance class Info

○ Standard classes (includes m classes)

○ Memory optimized classes (includes r and x classes)

◉ Burstable classes (includes t classes)

db.t3.micro

Änderungen:

- Public access = Yes
- VPC security group = 3306 von deinem Client aus erreichbar

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.

Network type Info

To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

- (●) **IPv4**
  Your resources can communicate only over the IPv4 addressing protocol.
- ( ) **Dual-stack mode**
  Your resources can communicate over IPv4, IPv6, or both.

Virtual private cloud (VPC) Info

Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

Default VPC (vpc-024bc4324da2cc619)
6 Subnets, 6 Availability Zones

Only VPCs with a corresponding DB subnet group are listed.

ⓘ After a database is created, you can't change its VPC.

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.

default-vpc-024bc4324da2cc619
6 Subnets, 6 Availability Zones

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

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

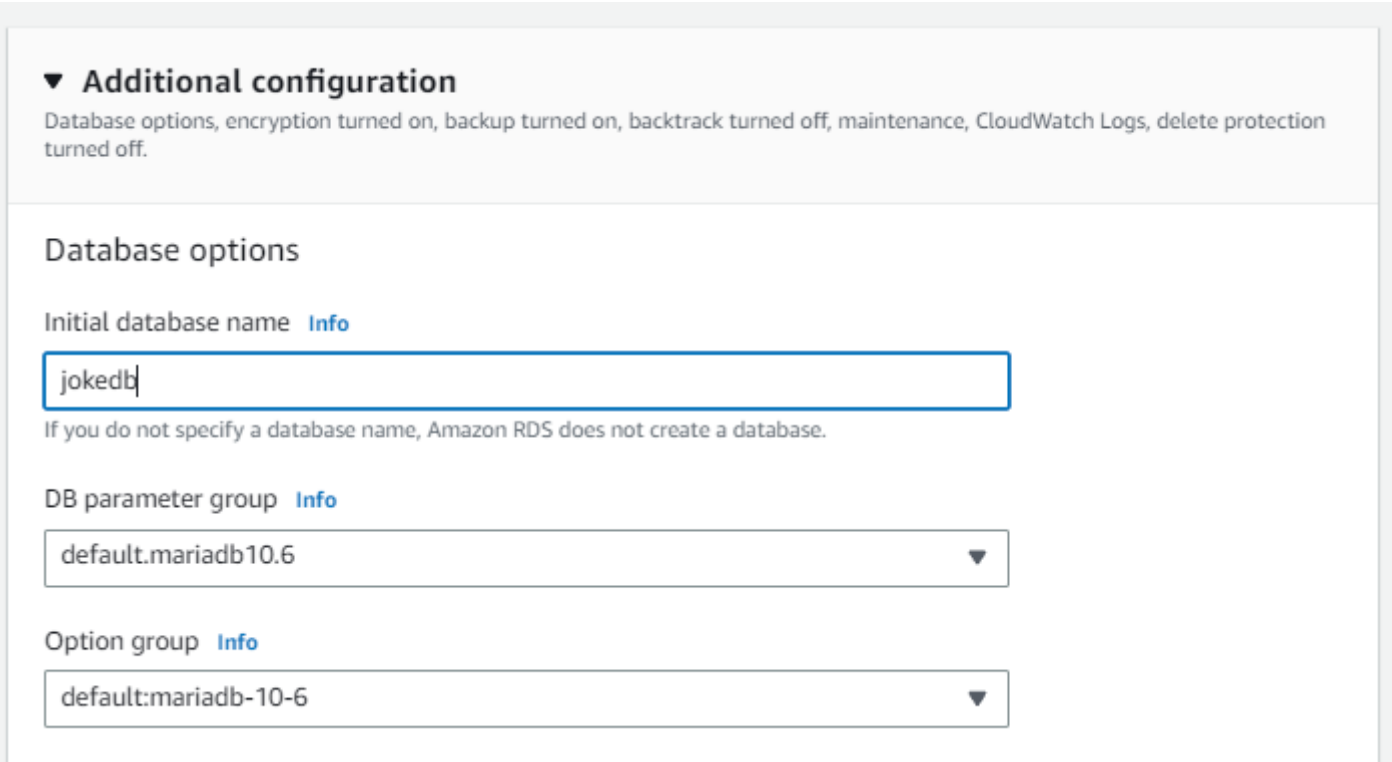
DB ×

Availability Zone Info

No preference

Änderungen:

- Initial database name = jokedb



Git Repository umkonfigurieren

Änderungen:

- Endpoint in docker-compose.yml hinzufügen
- DB-USERNAME = 'Username' und DB_PASSWORD = 'Password' anpassen

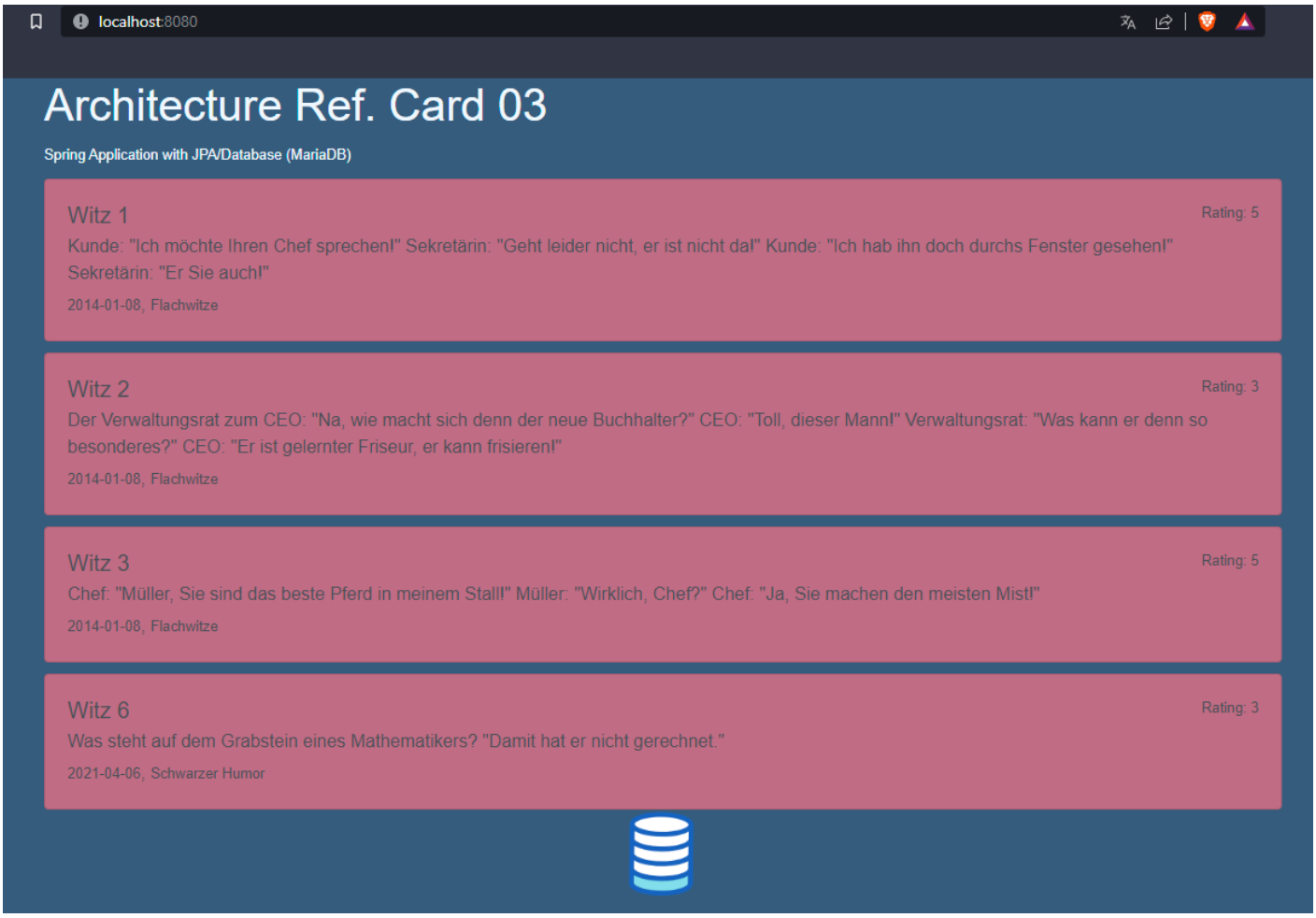
```
    dockerfile: Dockerfile
  ports:
    - 8080:8080
  environment:
    DB_URL: jdbc:mariadb://jokedb.ca574jaewyqv.us-east-1.rds.amazonaws.com:3306/jokedb
    DB_USERNAME: jokedbuser
    DB_PASSWORD: 12345678
```

Testen

```
docker compose up
```

```
WARN[0035] Found orphan containers ([ref-card-03-phpmyadmin-1 ref-card-03-database-1]) for this project. If you removed or renamed this service in your compose file, you can run this command with the --remove-
orphans flag to clean it up.
[+] Running 1/1
 ✔ Container ref-card-03-spring-1  Recreated                                                                                                                                                    0.1s
Attaching to ref-card-03-spring-1
ref-card-03-spring-1  |
ref-card-03-spring-1  |   .   ____          _            __ _ _
ref-card-03-spring-1  |  /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
ref-card-03-spring-1  | ( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
ref-card-03-spring-1  |  \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
ref-card-03-spring-1  |   '  |____| .__|_| |_|_| |_\__, | / / / /
ref-card-03-spring-1  |  =========|_|==============|___/=/_/_/_/
ref-card-03-spring-1  |  :: Spring Boot ::                (v2.7.0)
ref-card-03-spring-1  |
ref-card-03-spring-1  | 2023-05-22 20:02:11.334  INFO 1 --- [           main] c.b.a.ArchitectureRefCard03Application   : Starting ArchitectureRefCard03Application v0.0.1-SNAPSHOT using Java 17.0.2 on 714eae5f2
d8d with PID 1 (/app.jar started by root in /)
ref-card-03-spring-1  | 2023-05-22 20:02:11.336  INFO 1 --- [           main] c.b.a.ArchitectureRefCard03Application   : No active profile set, falling back to 1 default profile: "default"ref-card-03-spring-1
 | 2023-05-22 20:02:11.822  INFO 1 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
ref-card-03-spring-1  | 2023-05-22 20:02:11.854  INFO 1 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 26 ms. Found 1 JPA repository interfaces.
ref-card-03-spring-1  | 2023-05-22 20:02:12.259  INFO 1 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat initialized with port(s): 8080 (http)
ref-card-03-spring-1  | 2023-05-22 20:02:12.267  INFO 1 --- [           main] o.apache.catalina.core.StandardService   : Starting service [Tomcat]
ref-card-03-spring-1  | 2023-05-22 20:02:12.267  INFO 1 --- [           main] org.apache.catalina.core.StandardEngine  : Starting Servlet engine: [Apache Tomcat/9.0.63]
ref-card-03-spring-1  | 2023-05-22 20:02:12.314  INFO 1 --- [           main] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring embedded WebApplicationContext
ref-card-03-spring-1  | 2023-05-22 20:02:12.315  INFO 1 --- [           main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 938 ms
ref-card-03-spring-1  | 2023-05-22 20:02:12.385  INFO 1 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Starting...
ref-card-03-spring-1  | 2023-05-22 20:02:13.089  INFO 1 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Start completed.
ref-card-03-spring-1  | 2023-05-22 20:02:14.474  INFO 1 --- [           main] o.hibernate.jpa.internal.util.LogHelper  : HHH000204: Processing PersistenceUnitInfo [name: default]
ref-card-03-spring-1  | 2023-05-22 20:02:14.503  INFO 1 --- [           main] org.hibernate.Version                    : HHH000412: Hibernate ORM core version 5.6.9.Final
ref-card-03-spring-1  | 2023-05-22 20:02:14.601  INFO 1 --- [           main] o.hibernate.annotations.common.Version   : HCANN000001: Hibernate Commons Annotations {5.1.2.Final}
ref-card-03-spring-1  | 2023-05-22 20:02:14.668  INFO 1 --- [           main] org.hibernate.dialect.Dialect            : HHH000400: Using dialect: org.hibernate.dialect.MySQL8Dialect
ref-card-03-spring-1  | 2023-05-22 20:02:15.147  INFO 1 --- [           main] o.h.e.t.j.p.i.JtaPlatformInitiator       : HHH000490: Using JtaPlatform implementation: [org.hibernate.engine.transaction.jta.platf
orm.internal.NoJtaPlatform]
ref-card-03-spring-1  | 2023-05-22 20:02:15.152  INFO 1 --- [           main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'ref-card-03-spring-1
 | 2023-05-22 20:02:15.422  WARN 1 --- [           main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rende
ring. Explicitly configure spring.jpa.open-in-view to disable this warning
ref-card-03-spring-1  | 2023-05-22 20:02:15.623  INFO 1 --- [           main] o.s.b.a.w.s.WelcomePageHandlerMapping    : Adding welcome page template: index
ref-card-03-spring-1  | 2023-05-22 20:02:15.872  INFO 1 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port(s): 8080 (http) with context path ''
ref-card-03-spring-1  | 2023-05-22 20:02:15.884  INFO 1 --- [           main] c.b.a.ArchitectureRefCard03Application   : Started ArchitectureRefCard03Application in 4.865 seconds (JVM running for 5.187)
ref-card-03-spring-1  | 2023-05-22 20:02:23.082  INFO 1 --- [nio-8080-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring DispatcherServlet 'dispatcherServlet'
ref-card-03-spring-1  | 2023-05-22 20:02:23.082  INFO 1 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet        : Initializing Servlet 'dispatcherServlet'
ref-card-03-spring-1  | 2023-05-22 20:02:23.083  INFO 1 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet        : Completed initialization in 1 ms
```

Browser: localhost:8080



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