Connecting Multiple Databases in Spring Boot

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To connect to two different databases in a Spring Boot application, you typically need to configure multiple `DataSource` beans and manage transactions accordingly. Here's a step-by-step guide:

1. Define Configuration Properties: Start by defining the database connection properties in your `application.properties` or `application.yml` file for each database. Specify different properties for each database, including URL, username, password, and driver class.

2. Configure DataSources: Create multiple DataSource configurations, each representing a connection to a different database. You can do this by creating separate configuration classes for each database or by configuring them in a single class.

3. Configure JPA or JDBC Templates: Once you have configured the DataSources, configure JPA repositories or JDBC templates for each database. Spring Boot auto-configuration may handle this for you based on the DataSource beans you've defined.

4. Manage Transactions: If you need transactions across multiple databases, you'll need to manage transaction synchronization manually or use JTA (Java Transaction API) for distributed transactions.

5. Here's an example demonstrating how to configure two DataSource beans in a Spring Boot application:

```
@Configuration
public class DataSourceConfig {

@Primary
@Bean(name = "firstDataSource")
@ConfigurationProperties(prefix = "spring.datasource.first")
public DataSource firstDataSource() {
return DataSourceBuilder.create().build();
}

@Bean(name = "secondDataSource")
@ConfigurationProperties(prefix = "spring.datasource.second")
public DataSource secondDataSource() {
return DataSourceBuilder.create().build();
}
}
```

In the above configuration:

- `firstDataSource` and `secondDataSource` represent two different database connections.
- `@ConfigurationProperties` is used to bind the properties from `application.properties` to the DataSource objects.

After configuring DataSources, you can use them in your repositories or JDBC templates by qualifying the `@Autowired` annotation with the DataSource name or by using `@Qualifier`:

```
@Autowired
@Qualifier("firstDataSource")
private DataSource firstDataSource;

@Autowired
@Qualifier("secondDataSource")
private DataSource secondDataSource;
```

Make sure to adjust your repository or template configurations accordingly to use the correct DataSource.

Finally, ensure proper transaction management for your use case. If you need transactions across multiple databases, you may need to implement custom transaction management logic or use JTA.

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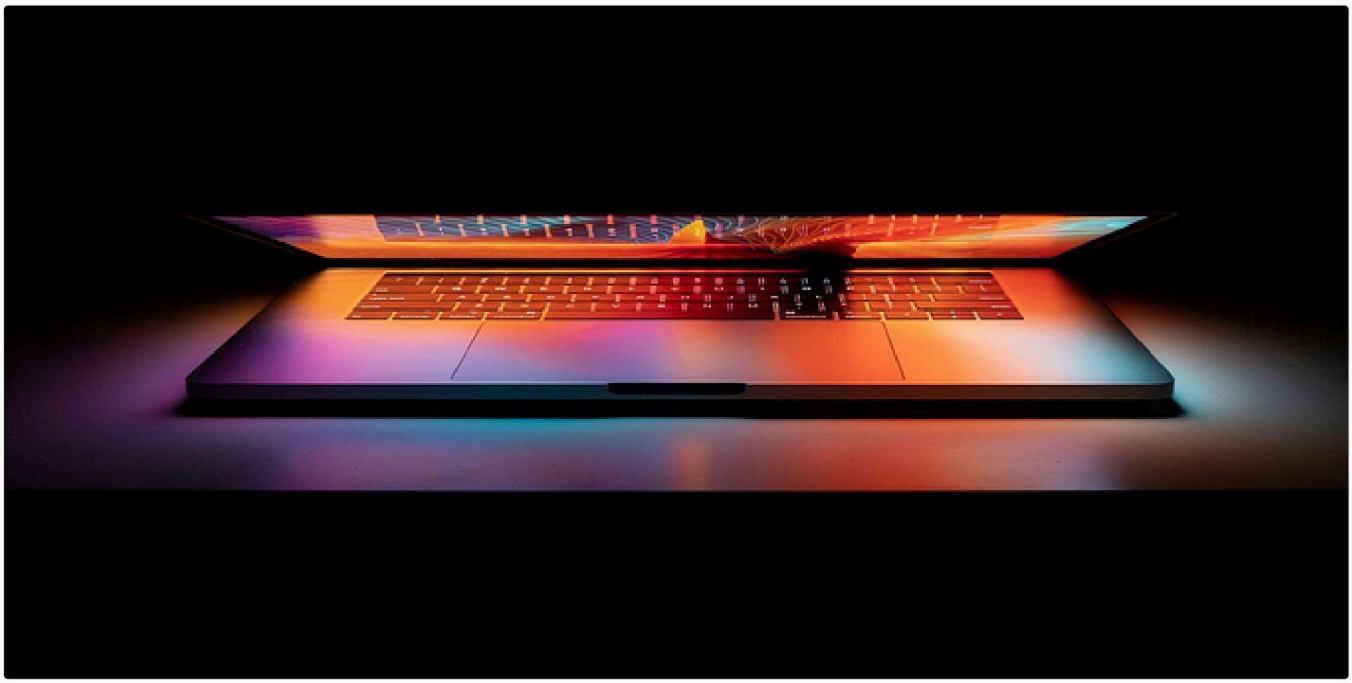

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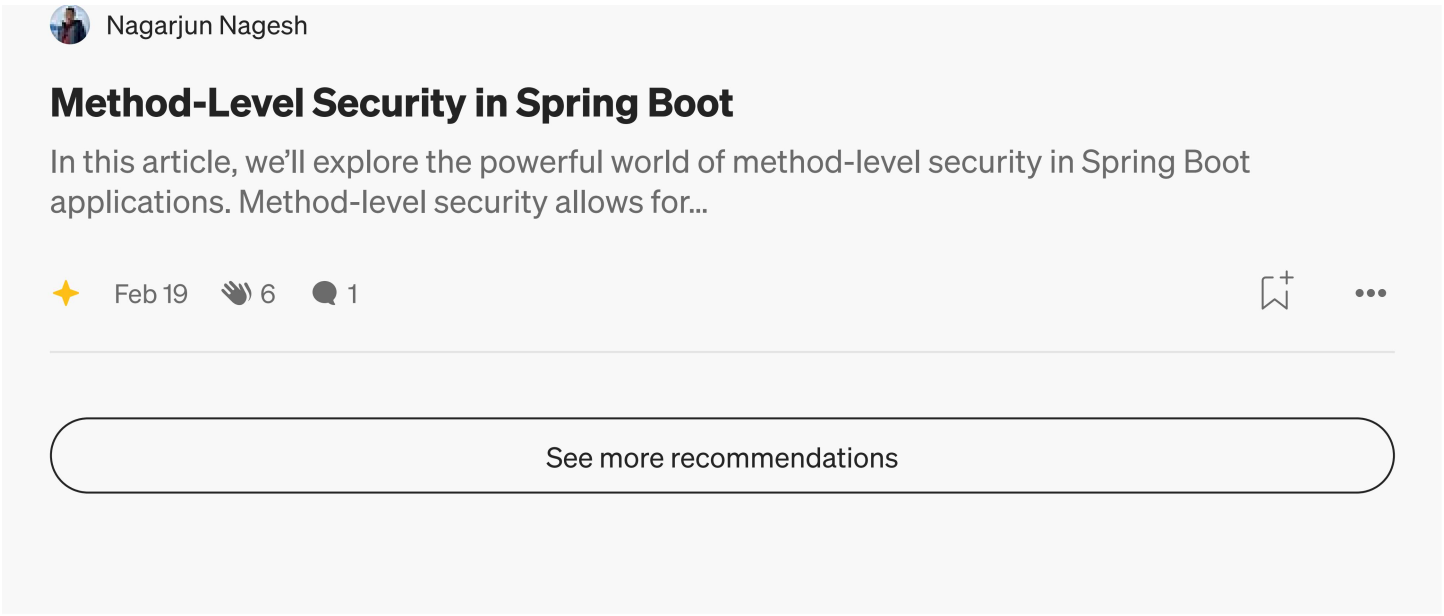

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