

Spring Professional Exam Tutorial v5.0

Question 02

Question 02 - How do you configure a DataSource in Spring? Which bean is very useful for development/test databases?

Data Source is represented by generic interface `javax.sql.DataSource` which represent any data source for sql database.

To configure data source in Spring you need to create a `@Configuration` class that will return `javax.sql.DataSource` bean.

You can use for example following types of `javax.sql.DataSource`:

- ▶ `DriverManagerDataSource` - basic JDBC driver connection source
- ▶ `BasicDataSource` - Apache DBCP for Connection Pooling
- ▶ `ComboPooledDataSource` - C3P0 for Connection Pool
- ▶ `SmartDataSource`
- ▶ `AbstractDataSource`
- ▶ `SingleConnectionDataSource`
- ▶ `TransactionAwareDataSourceProxy`
- ▶ `DataSourceTransactionManager`

Question 02 - How do you configure a DataSource in Spring? Which bean is very useful for development/test databases?

Configuration of Data Source in Spring is dependent on type of application that is executed.

Type of execution:

- ▶ Standalone - Data Source is configured in `@Configuration` class and is created as a bean of one of supported data source types
- ▶ Spring Boot - Data Source is configured through `application.properties`
- ▶ Application Server - Data Source should be fetched from JNDI via `JndiDataSourceLookup` / `JndiTemplate`, application server is responsible for creating and managing data source requested in resources configurations of deployment descriptors

Question 02 - How do you configure a DataSource in Spring? Which bean is very useful for development/test databases?

When working with development/test databases, following beans are very useful:

- ▶ `EmbeddedDatabaseBuilder` - allows to easily configure H2/HSQLDB embedded database with schema/data initialization scripts
- ▶ `DataSourceInitializer` / `ResourceDatabasePopulator` - allows to use schema/data initialization scripts without usage of `EmbeddedDatabaseBuilder`

