免费电子书

学习

spring-integration

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#spring-integration

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1: spring-integration

Spring。

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4.3.x	2016117
4.2.x	2016117
4.1.x	2016725
4.0.x	2016726
3.0.x	20151027
2.2.x	2016127
2.1.x	2013610
2.0.x	2013-04-11
1.0.x	2010-04-16

Examples

Spring-Integrationgradle。

```
dependencies {
    compile 'org.springframework.integration:spring-integration-core:4.3.5.RELEASE'
}
```

。

```
//these annotations will enable Spring integration and scan for components
@Configuration
@EnableIntegration
@IntegrationComponentScan
public class Application {
    //a channel has two ends, this Messaging Gateway is acting as input from one side of
inChannel
    @MessagingGateway
    interface Greeting {
        @Gateway(requestChannel = "inChannel")
        String greet(String name);
    }

    @Component
    static class HelloMessageProvider {
```

```
        //a service activator act as a handler when message is received from inChannel, in
this example, it is acting as the handler on the output side of inChannel
        @ServiceActivator(inputChannel = "inChannel")
        public String sayHello(String name) {
            return "Hi, " + name;
        }
    }

    @Bean
    MessageChannel inChannel() {
        return new DirectChannel();
    }

    public static void main(String[] args) {
        ApplicationContext context = new
AnnotationConfigApplicationContext(Application.class);
        Greeting greeting = context.getBean(Greeting.class);
        //greeting.greet() send a message to the channel, which trigger service activitor to
process the incoming message
        System.out.println(greeting.greet("Spring Integration!"));
    }
}
```

```
Hi, Spring Integration!◦
```

Spring Integrationxml◦ xml◦

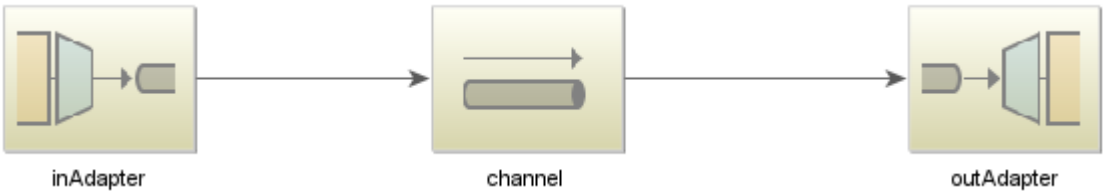
```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:int="http://www.springframework.org/schema/integration"
       xsi:schemaLocation="http://www.springframework.org/schema/beans
        http://www.springframework.org/schema/beans/spring-beans.xsd
        http://www.springframework.org/schema/integration
        http://www.springframework.org/schema/integration/spring-integration.xsd">
    <int:gateway default-request-channel="inChannel"
                 service-
interface="spring.integration.stackoverflow.getstarted.Application$Greeting"/>
    <int:channel id="inChannel"/>
    <int:service-activator input-channel="inChannel" method="sayHello">
        <bean
class="spring.integration.stackoverflow.getstarted.Application$HelloMessageProvider"/>
    </int:service-activator>
</beans>
```

xml`Applicationnew AnnotationConfigApplicationContext(Application.class)new ClassPathXmlApplicationContext("classpath:getstarted.xml")` ◦ ◦

Spring Integration◦ ◦

◦ ◦

◦ Java◦



- 。

```
public class Application {
    static class MessageProducer {
        public String produce() {
            String[] array = {"first line!", "second line!", "third line!"};
            return array[new Random().nextInt(3)];
        }
    }

    static class MessageConsumer {
        public void consume(String message) {
            System.out.println(message);
        }
    }

    public static void main(String[] args) {
        new
ClassPathXmlApplicationContext("classpath:spring/integration/stackoverflow/ioadapter/ioadapter.xm

    }
}
```

- XML

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:int="http://www.springframework.org/schema/integration"
       xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd
       http://www.springframework.org/schema/integration
http://www.springframework.org/schema/integration/spring-integration.xsd">
    <int:channel id="channel"/>
    <int:inbound-channel-adapter id="inAdapter" channel="channel" method="produce">
        <bean
class="spring.integration.stackoverflow.ioadapter.Application$MessageProducer"/>
        <int:poller fixed-rate="1000"/>
    </int:inbound-channel-adapter>
    <int:outbound-channel-adapter id="outAdapter" channel="channel" method="consume">
        <bean
class="spring.integration.stackoverflow.ioadapter.Application$MessageConsumer"/>
    </int:outbound-channel-adapter>
</beans>
```

- ◦ inAdapter ◦ 1Application$MessageProducer.produce <int:poller fixed-rate="1000"/>
  channel ◦
  ◦ channel ◦
  ◦ outAdapter ◦ channelApplication$MessageConsumer.consume◦
  ◦

1。

Spring-Integration-Stream

Java

```
public class StdioApplication {
    public static void main(String[] args) {
        new
ClassPathXmlApplicationContext("classpath:spring/integration/stackoverflow/stdio/stdio.xml");
    }
}
```

Xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:int="http://www.springframework.org/schema/integration"
       xmlns:int-stream="http://www.springframework.org/schema/integration/stream"
       xsi:schemaLocation="http://www.springframework.org/schema/beans
       http://www.springframework.org/schema/beans/spring-beans.xsd
       http://www.springframework.org/schema/integration/stream
       http://www.springframework.org/schema/integration/stream/spring-integration-stream.xsd
       http://www.springframework.org/schema/integration
       http://www.springframework.org/schema/integration/spring-integration.xsd">
    <int:channel id="channel"/>
    <int-stream:stdin-channel-adapter id="stdin" channel="channel">
        <int:poller fixed-rate="1000"/>
    </int-stream:stdin-channel-adapter>
    <int-stream:stdout-channel-adapter id="stdout" channel="channel"/>
</beans>
```

◦ Java◦

spring-integration https://riptutorial.com/zh-CN/spring-integration/topic/6985/spring-integration

2: Jdbc

Examples

Jdbc - xml

SQL SELECT。List。Map。


- ```
  public class Application {
     static class Book {
        String title;
        double price;

        Book(String title, double price) {
            this.title = title;
            this.price = price;
        }

        double getPrice() {
            return price;
        }

        String getTitle() {
            return title;
        }

        @Override
        public String toString() {
            return String.format("{title: %s, price: %s}", title, price);
        }
      }

      static class Consumer {
        public void consume(List<Book> books) {
            books.stream().forEach(System.out::println);
        }
      }

      static class BookRowMapper implements RowMapper<Book> {

        @Override
        public Book mapRow(ResultSet rs, int rowNum) throws SQLException {
            String title = rs.getString("TITLE");
            double price = rs.getDouble("PRICE");
            return new Book(title, price);
        }
      }
  ```
  ```

```
    public static void main(String[] args) {
      new ClassPathXmlApplicationContext(
              "classpath:spring/integration/stackoverflow/jdbc/jdbc.xml");
    }
}
```

- xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:jdbc="http://www.springframework.org/schema/jdbc"
       xmlns:int="http://www.springframework.org/schema/integration"
       xmlns:int-jdbc="http://www.springframework.org/schema/integration/jdbc"
       xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd
       http://www.springframework.org/schema/integration
http://www.springframework.org/schema/integration/spring-integration.xsd
       http://www.springframework.org/schema/integration/jdbc
http://www.springframework.org/schema/integration/jdbc/spring-integration-jdbc.xsd
       http://www.springframework.org/schema/jdbc
http://www.springframework.org/schema/jdbc/spring-jdbc.xsd">
    <jdbc:embedded-database id="dataSource" type="H2">
        <jdbc:script
location="classpath:spring/integration/stackoverflow/jdbc/schema.sql"/>
    </jdbc:embedded-database>
    <bean id="bookRowMapper"
          class="spring.integration.stackoverflow.jdbc.Application$BookRowMapper"/>

    <int:channel id="channel"/>

    <int-jdbc:inbound-channel-adapter id="jdbcInbound"
                                      channel="channel"
                                      data-source="dataSource"
                                      query="SELECT * FROM BOOKS"
                                      row-mapper="bookRowMapper">
        <int:poller fixed-rate="1000"/>
    </int-jdbc:inbound-channel-adapter>

    <int:outbound-channel-adapter id="outbound" channel="channel" method="consume">
        <bean class="spring.integration.stackoverflow.jdbc.Application$Consumer"/>
    </int:outbound-channel-adapter>
</beans>
```

- schema.sql

```
CREATE TABLE BOOKS (
  TITLE VARCHAR(20) NOT NULL,
  PRICE DOUBLE      NOT NULL
);

INSERT INTO BOOKS(TITLE, PRICE) VALUES('book1', 10);
INSERT INTO BOOKS(TITLE, PRICE) VALUES('book2', 20);
```

-
  - `jdbcInbound` Jdbc。 SQL `SELECT * FROM BOOKS`bean `bookRowMapperList<Book>` 。 `channel` 。
  - `channel`
  - `outbound` 。

Jdbc - xml

Spring Integration Reference Docuement

SQL。...

- Java

```
public class OutboundApplication {
    static class Book {
        String title;
        double price;

        Book(String title, double price) {
            this.title = title;
            this.price = price;
        }

        public double getPrice() {
            return price;
        }

        public String getTitle() {
            return title;
        }

    }

    static class Producer {
        public Book produce() {
            return IntStream.range(0, 3)
                    .mapToObj(i -> new Book("book" + i, i * 10))
                    .collect(Collectors.toList())
                    .get(new Random().nextInt(3));
        }
    }

    public static void main(String[] args) {
        new ClassPathXmlApplicationContext(
                "classpath:spring/integration/stackoverflow/jdbc/jdbc-outbound.xml");
    }
}
```

- xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:jdbc="http://www.springframework.org/schema/jdbc"
```

```
       xmlns:int="http://www.springframework.org/schema/integration"
       xmlns:int-jdbc="http://www.springframework.org/schema/integration/jdbc"
       xsi:schemaLocation="http://www.springframework.org/schema/beans
       http://www.springframework.org/schema/beans/spring-beans.xsd
       http://www.springframework.org/schema/jdbc
       http://www.springframework.org/schema/jdbc/spring-jdbc.xsd
       http://www.springframework.org/schema/integration
       http://www.springframework.org/schema/integration/spring-integration.xsd
       http://www.springframework.org/schema/integration/jdbc
       http://www.springframework.org/schema/integration/jdbc/spring-integration-
jdbc.xsd">
    <bean id="dataSource"
class="org.springframework.jdbc.datasource.DriverManagerDataSource">
        <property name="url" value="jdbc:h2:tcp://localhost/~/booksystem"/>
        <property name="username" value="sa"/>
        <property name="password" value=""/>
        <property name="driverClassName" value="org.h2.Driver"/>
    </bean>
    <jdbc:initialize-database>
        <jdbc:script
location="classpath:spring/integration/stackoverflow/jdbc/schema.sql"/>
    </jdbc:initialize-database>
    <int:channel id="channel"/>
    <int:inbound-channel-adapter channel="channel" method="produce" >
        <bean
class="spring.integration.stackoverflow.jdbc.OutboundApplication$Producer"/>
        <int:poller fixed-rate="1000"/>
    </int:inbound-channel-adapter>
    <int-jdbc:outbound-channel-adapter id="jdbcOutbound"
                                       channel="channel"
                                       data-source="dataSource"
                                       sql-parameter-source-factory="sqlParameterSource"
                                       query="INSERT INTO BOOKS(TITLE, PRICE)
VALUES(:title, :price)"/>
    <bean id="sqlParameterSource"
class="org.springframework.integration.jdbc.ExpressionEvaluatingSqlParameterSourceFactory">

        <property name="parameterExpressions">
            <map>
                <entry key="title" value="payload.title"/>
                <entry key="price" value="payload.price"/>
            </map>
        </property>
    </bean>
</beans>
```

- schema.sql

```
DROP TABLE IF EXISTS BOOKS;
CREATE TABLE BOOKS (
  TITLE VARCHAR(20) NOT NULL,
  PRICE DOUBLE      NOT NULL
);
```

- BOOKS◦ int-jdbc:inbound-channel-adapterBOOKS◦
- ◦ inbound Bookchannel◦
  ◦ channel ◦

- `jdbcOutbound` JDBC`Book:title:price`sql`ParameterSource`SpEL`payload.titlepayload.price`
  -

Jdbc https://riptutorial.com/zh-CN/spring-integration/topic/8140/jdbc

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