

 무료 전자 책

배우기

spring-integration

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#spring-
integration

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1:

4.3.x	2016-11-07
4.2.x	2016-11-07
4.1.x	2016-07-25
4.0.x	2016-07-26
3.0.x	2015-10-27
2.2.x	2016-01-27
2.1.x	2013-06-10
2.0.x	2013-04-11
1.0.x	2010-04-16

Examples

Spring Integration `gradle` .

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

, [service-activator](#) .

```
//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 activator to
process the incoming message
    System.out.println(greeting.greet("Spring Integration!"));
}
}

```

Hi, Spring Integration! Hi, Spring Integration! .

Spring Integration 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"
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>

```

```

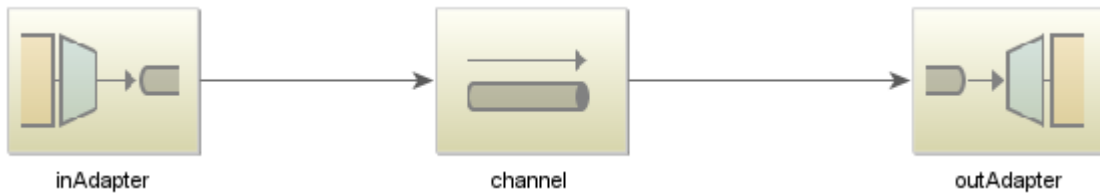
xml    Application new AnnotationConfigApplicationContext (Application.class) new
ClassPathXmlApplicationContext ("classpath:getstarted.xml") .

```

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/iadapter/iadapter.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"
    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.iadapter.Application$MessageProducer"/>
        <int:poller fixed-rate="1000"/>
    </int:inbound-channel-adapter>
    <int:outbound-channel-adapter id="outAdapter" channel="channel" method="consume">
        <bean
class="spring.integration.stackoverflow.iadapter.Application$MessageConsumer"/>
    </int:outbound-channel-adapter>
</beans>

```

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



:

```
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 .

: <https://riptutorial.com/ko/spring-integration/topic/6985/-->

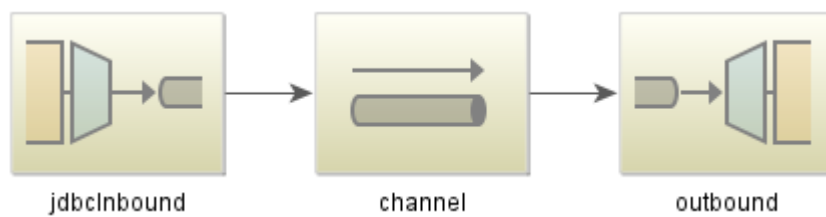
2: Jdbc

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 Y . SQL SELECT * FROM BOOKS List<Book> bookRowMapper . channel .
- channel :
- outbound : . . .

Jdbc - xml

[Spring Integration Reference Document](#) :

Y Y . 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-adapter BOOKS .

• :

- inbound:Book channel .
- channel: .
- jdbcOutbound:JDBC , Book :title :price sqlParameterSource SpEL
payload.title payload.price .

Jdbc : <https://riptutorial.com/ko/spring-integration/topic/8140/jdbc->

S. No		Contributors
1		Community , Maxi Wu , walsh
2	Jdbc	walsh