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The Spring Framework consists of features organized into about 20 modules. These modules are grouped into Core Container, Data Access/Integration, Web, AOP (Aspect Oriented Programming), Instrumentation, Messaging, and Test, as shown in the following diagram.



### 3.3.1 Core Container

The [Core Container](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#beans-introduction) consists of the spring-core, spring-beans, spring-context, spring-context-support, and spring-expression (Spring Expression Language) modules.

The spring-core and spring-beans modules [provide the fundamental parts of the framework](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#beans-introduction), including the IoC and Dependency Injection features.

The [Context](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#context-introduction) (spring-context) module builds on the solid base provided by the [Core and Beans](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#beans-introduction) modules: it is a means to access objects in a framework-style manner that is similar to a JNDI registry.

spring-context-support provides support for integrating common third-party libraries into a Spring application context for caching (EhCache, Guava, JCache), mailing (JavaMail), scheduling (CommonJ, Quartz) and template engines (FreeMarker, JasperReports, Velocity).

The spring-expression module provides a powerful [Expression Language](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#expressions) for querying and manipulating an object graph at runtime.

### 3.3.2 AOP and Instrumentation

The spring-aop module provides an [AOP](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#aop-introduction) Alliance-compliant aspect-oriented programming

The separate spring-aspects module provides integration with AspectJ

The spring-instrument module provides class instrumentation support and classloader implementations

The spring-instrument-tomcat module contains Spring’s instrumentation agent for Tomcat

### 3.3.3 Messaging

Spring Framework 4 includes a spring-messaging module with key abstractions from the Spring Integration project such as Message, MessageChannel, MessageHandler, and others to serve as a foundation for messaging-based applications.

### 3.3.4 Data Access/Integration

The Data Access/Integration layer consists of the JDBC, ORM, OXM, JMS, and Transaction modules.

The spring-jdbc module provides a [JDBC](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#jdbc-introduction)-abstraction layer

The spring-tx module supports [programmatic and declarative transaction](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#transaction) management for classes

The spring-orm module provides integration layers for popular [object-relational mapping](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#orm-introduction) APIs, including [JPA](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#orm-jpa), [JDO](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#orm-jdo), and [Hibernate](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#orm-hibernate).

The spring-oxm module provides an abstraction layer that supports [Object/XML mapping](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#oxm) implementations such as JAXB, Castor, XMLBeans, JiBX and XStream

The spring-jms module ([Java Messaging Service](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#jms)) contains features for producing and consuming messages.

### 3.3.5 Web

The Web layer consists of the spring-web, spring-webmvc, spring-websocket, and spring-webmvc-portlet modules.

### 3.3.6 Test

The spring-test module supports the [unit testing](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#unit-testing) and [integration testing](http://docs.spring.io/spring/docs/current/spring-framework-reference/htmlsingle/#integration-testing) of Spring components with JUnit or TestNG