

Project : leelance

We introduce some terms for avoiding confusions.

- **Explicit version declaration in Maven:** a library version is declared as a hard-coded value in version tag, e.g., `<version>2.5</version>`.
- **Implicit version declaration in Maven:** a library version is declared as a referenced value in version tag through a declared property, e.g., `<version>${guava.version}</version>`.
- **Inconsistent library:** a library whose multiple versions are used in multiple modules of a project; e.g., module A declares guava 2.5 but module B declares guava 2.6.
- **False consistent library:** a library that is used in multiple modules of a project with the same version declared separately; e.g., module A declares guava 2.5 explicitly and module B declares guava 2.5 explicitly. Therefore, such a consistency is likely to turn into inconsistency when there is an incomplete library update.

I. Overview

Your project have 9 inconsistent libraries and 3 false consistent libraries.

II. Inconsistent Libraries

1. com.alibaba:fastjson

The distinct versions are 1.2.21, 1.2.31, 1.2.12.

Index	Module	Type	Property	Version
1	spring-boot-mybatis	explicit	NA	1.2.12
2	spring-boot-cache-ehcache	explicit	NA	1.2.12
3	spring-boot-quartz	explicit	NA	1.2.12
4	spring-boot-websocket	explicit	NA	1.2.12
5	spring-boot-hibernate5	explicit	NA	1.2.12
6	spring-boot-cache-redis	explicit	NA	1.2.12
7	spring-boot-activemq-consumer	explicit	NA	1.2.12
8	spring-boot-shiro-redis	explicit	NA	1.2.12
9	spring-boot-email	explicit	NA	1.2.12
10	spring-boot-jpa-querydsl	explicit	NA	1.2.12
11	spring-boot-websocket-netty-server	explicit	NA	1.2.31
12	spring-boot-jpa	explicit	NA	1.2.12
13	spring-boot-activemq-producer	explicit	NA	1.2.12
14	spring-boot-shiro	explicit	NA	1.2.12
15	spring-boot-freemarker	explicit	NA	1.2.12
16	spring-boot-activiti	explicit	NA	1.2.21

Harmonization Recommendation

Inheritance Relationship of POMs in All Related Modules

See leelance__fdse__spring-boot-all_2020-02-20_com.alibaba__fastjson__jar_0.png for details.

The inconsistent library versions in Modules 1-16 are harmonized into version 1.2.61.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-mybatis	0	0	0
2	spring-boot-cache-ehcache	0	0	0
3	spring-boot-quartz	0	0	0
4	spring-boot-websocket	0	0	0
5	spring-boot-hibernate5	0	0	0
6	spring-boot-cache-redis	0	0	0
7	spring-boot-activemq-consumer	0	0	0
8	spring-boot-shiro-redis	0	0	0
9	spring-boot-email	0	0	0
10	spring-boot-jpa-querydsl	0	0	0
11	spring-boot-websocket-netty-server	1(2)	0(0)	0(0)
12	spring-boot-jpa	0	0	0
13	spring-boot-activemq-producer	0	0	0
14	spring-boot-shiro	0	0	0
15	spring-boot-freemarker	0	0	0
16	spring-boot-activiti	6(23)	0(0)	0(0)

NA (Number of APIs): the number of called library APIs in one module.

NAC (Number of API Calls): the number of library API calls in one module.

NDA (Number of Deleted APIs): the number of called library APIs that are deleted in the recommended library version.

NDAC (Number of Deleted API Calls): the number of library API calls that are deleted in the recommended library version.

NMA (Number of Modified APIs): the number of called library APIs whose call graphs (A control flow graph which represents calling relationships between subroutines in the library) are modified in the recommended library version.

NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

The inconsistent library versions in Modules 1-16 are harmonized into version 1.2.60.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-mybatis	0	0	0
2	spring-boot-cache-ehcache	0	0	0
3	spring-boot-quartz	0	0	0
4	spring-boot-websocket	0	0	0
5	spring-boot-hibernate5	0	0	0
6	spring-boot-cache-redis	0	0	0

7	spring-boot-activemq-consumer	0	0	0
8	spring-boot-shiro-redis	0	0	0
9	spring-boot-email	0	0	0
10	spring-boot-jpa-querydsl	0	0	0
11	spring-boot-websocket-netty-server	1(2)	0(0)	0(0)
12	spring-boot-jpa	0	0	0
13	spring-boot-activemq-producer	0	0	0
14	spring-boot-shiro	0	0	0
15	spring-boot-freemarker	0	0	0
16	spring-boot-activiti	6(23)	0(0)	0(0)

NA (Number of APIs): the number of called library APIs in one module.

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

The inconsistent library versions in Modules 1-16 are harmonized into version 1.2.62.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-mybatis	0	0	0
2	spring-boot-cache-ehcache	0	0	0
3	spring-boot-quartz	0	0	0
4	spring-boot-websocket	0	0	0
5	spring-boot-hibernate5	0	0	0
6	spring-boot-cache-redis	0	0	0
7	spring-boot-activemq-consumer	0	0	0
8	spring-boot-shiro-redis	0	0	0
9	spring-boot-email	0	0	0
10	spring-boot-jpa-querydsl	0	0	0
11	spring-boot-websocket-netty-server	1(2)	0(0)	0(0)
12	spring-boot-jpa	0	0	0
13	spring-boot-activemq-producer	0	0	0
14	spring-boot-shiro	0	0	0
15	spring-boot-freemarker	0	0	0
16	spring-boot-activiti	6(23)	0(0)	0(0)

NA (Number of APIs): the number of called library APIs in one module.

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

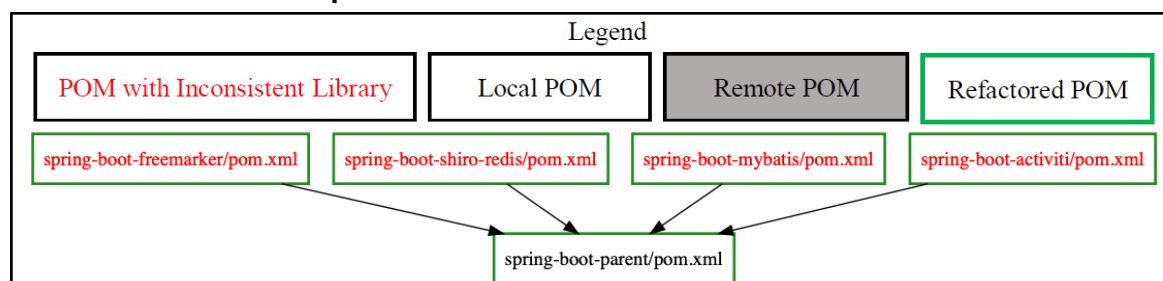
2. com.alibaba:druid

The distinct versions are 1.0.20, 1.0.27.

Index	Module	Type	Property	Version
1	spring-boot-mybatis	explicit	NA	1.0.20
2	spring-boot-shiro-redis	explicit	NA	1.0.20
3	spring-boot-freemarker	explicit	NA	1.0.20
4	spring-boot-activiti	explicit	NA	1.0.27

Harmonization Recommendation

Inheritance Relationship of POMs in All Related Modules



The pom in red references the property value declared in the pom in green.

The inconsistent library versions in Modules 1-4 are harmonized into version 1.0.27.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-mybatis	0	0	0
2	spring-boot-shiro-redis	0	0	0
3	spring-boot-freemarker	0	0	0
4	spring-boot-activiti	0	0	0

NA (Number of APIs): the number of called library APIs in one module.

NAC (Number of API Calls): the number of library API calls in one module.

NDA (Number of Deleted APIs): the number of called library APIs that are deleted in the recommended library version.

NDAC (Number of Deleted API Calls): the number of library API calls that are deleted in the recommended library version.

NMA (Number of Modified APIs): the number of called library APIs whose call graphs (A control flow graph which represents calling relationships between subroutines in the library) are modified in the recommended library version.

NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

3. org.mybatis.spring.boot:mybatis-spring-boot-starter

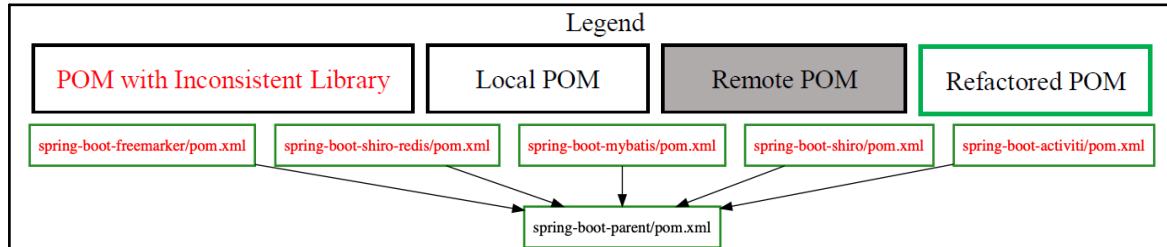
The distinct versions are 1.1.1, 1.3.1.

Index	Module	Type	Property	Version
1	spring-boot-mybatis	explicit	NA	1.1.1
2	spring-boot-shiro-redis	explicit	NA	1.1.1
3	spring-boot-shiro	explicit	NA	1.3.1

4	spring-boot-freemarker	explicit	NA	1.1.1
5	spring-boot-activiti	explicit	NA	1.1.1

Harmonization Recommendation

Inheritance Relationship of POMs in All Related Modules



The pom in red references the property value declared in the pom in green.

The inconsistent library versions in Modules 1-5 are harmonized into version 1.3.1.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-mybatis	0	0	0
2	spring-boot-shiro-redis	0	0	0
3	spring-boot-shiro	0	0	0
4	spring-boot-freemarker	0	0	0
5	spring-boot-activiti	0	0	0

NA (Number of APIs): the number of called library APIs in one module.

NAC (Number of API Calls): the number of library API calls in one module.

NDA (Number of Deleted APIs): the number of called library APIs that are deleted in the recommended library version.

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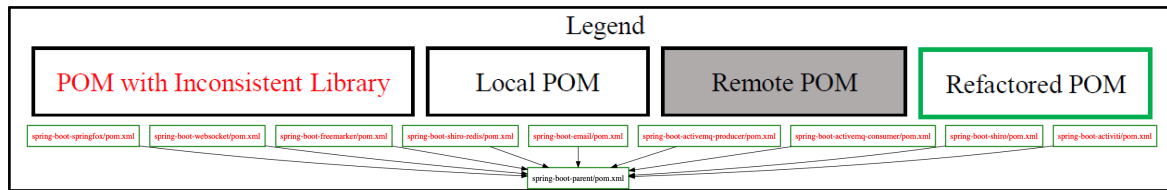
4. com.google.guava:guava

The distinct versions are 19.0, 20.0.

Index	Module	Type	Property	Version
1	spring-boot-springfox	explicit	NA	19.0
2	spring-boot-websocket	explicit	NA	19.0
3	spring-boot-activemq-consumer	explicit	NA	19.0
4	spring-boot-shiro-redis	explicit	NA	19.0
5	spring-boot-email	explicit	NA	19.0
6	spring-boot-activemq-producer	explicit	NA	19.0
7	spring-boot-shiro	explicit	NA	19.0
8	spring-boot-freemarker	explicit	NA	19.0
9	spring-boot-activiti	implicit	guava.version	20.0

Harmonization Recommendation

Inheritance Relationship of POMs in All Related Modules



The pom in red references the property value declared in the pom in green.

The inconsistent library versions in Modules 1-9 are harmonized into version 28.2-android.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-springfox	0	0	0
2	spring-boot-websocket	1(1)	0(0)	1(1)
3	spring-boot-activemq-consumer	0	0	0
4	spring-boot-shiro-redis	2(3)	0(0)	2(3)
5	spring-boot-email	0	0	0
6	spring-boot-activemq-producer	0	0	0
7	spring-boot-shiro	1(2)	0(0)	1(2)
8	spring-boot-freemarker	0	0	0
9	spring-boot-activiti	1(2)	0(0)	1(2)

NA (Number of APIs): the number of called library APIs in one module.

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

Files related:

Module	File	Type	API
spring-boot-websocket	spring-boot-websocket/src/main/java/com/lance/websocket/config/SocketSessionHandler.java	Modified	com.google.common.collect.Sets.newConcurrentHashSet()
spring-boot-shiro-redis	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/ShiroConfig.java	Modified	com.google.common.collect.Maps.newHashMap()
	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/ShiroRedisCache.java	Modified	com.google.common.collect.Sets.newHashSet()
spring-boot-shiro	spring-boot-shiro/src/main/java/com/lance/shiro/config/ShiroConfig.java	Modified	com.google.common.collect.Maps.newHashMap()
spring-boot-activiti	spring-boot-activiti/src/main/java/com/lance/activiti/common/shiro/ShiroConfig.java	Modified	com.google.common.collect.Maps.newHashMap()

The inconsistent library versions in Modules 1-9 are harmonized into version 28.2-jre.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-springfox	0	0	0
2	spring-boot-websocket	1(1)	1(1)	0(0)
3	spring-boot-activemq-consumer	0	0	0
4	spring-boot-shiro-redis	2(3)	2(3)	0(0)
5	spring-boot-email	0	0	0
6	spring-boot-activemq-producer	0	0	0
7	spring-boot-shiro	1(2)	1(2)	0(0)
8	spring-boot-freemarker	0	0	0
9	spring-boot-activiti	1(2)	1(2)	0(0)

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Files related:

Module	File	Type	API
spring-boot-websocket	spring-boot-websocket/src/main/java/com/lance/websocket/config/SocketSessionHandler.java	Deleted	com.google.common.collect.Sets.newConcurrentHashSet()
spring-boot-shiro-redis	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/ShiroConfig.java	Deleted	com.google.common.collect.Maps.newHashMap()
	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/ShiroRedisCache.java	Deleted	com.google.common.collect.Sets.newHashSet()
spring-boot-shiro	spring-boot-shiro/src/main/java/com/lance/shiro/config/ShiroConfig.java	Deleted	com.google.common.collect.Maps.newHashMap()
spring-boot-activiti	spring-boot-activiti/src/main/java/com/lance/activiti/common/shiro/ShiroConfig.java	Deleted	com.google.common.collect.Maps.newHashMap()

The inconsistent library versions in Modules 1-9 are harmonized into version [28.1-android](#).

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-springfox	0	0	0
2	spring-boot-websocket	1(1)	0(0)	1(1)
3	spring-boot-activemq-consumer	0	0	0
4	spring-boot-shiro-redis	2(3)	0(0)	2(3)
5	spring-boot-email	0	0	0
6	spring-boot-activemq-producer	0	0	0

7	spring-boot-shiro	1(2)	0(0)	1(2)
8	spring-boot-freemarker	0	0	0
9	spring-boot-activiti	1(2)	0(0)	1(2)

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

Files related:

Module	File	Type	API
spring-boot-websocket	spring-boot-websocket/src/main/java/com/lance/websocket/config/SocketSessionHandler.java	Modified	com.google.common.collect.Sets.newConcurrentHashSet()
spring-boot-shiro-redis	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/ShiroConfig.java	Modified	com.google.common.collect.Maps.newHashMap()
	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/ShiroRedisCache.java	Modified	com.google.common.collect.Sets.newHashSet()
spring-boot-shiro	spring-boot-shiro/src/main/java/com/lance/shiro/config/ShiroConfig.java	Modified	com.google.common.collect.Maps.newHashMap()
spring-boot-activiti	spring-boot-activiti/src/main/java/com/lance/activiti/common/shiro/ShiroConfig.java	Modified	com.google.common.collect.Maps.newHashMap()

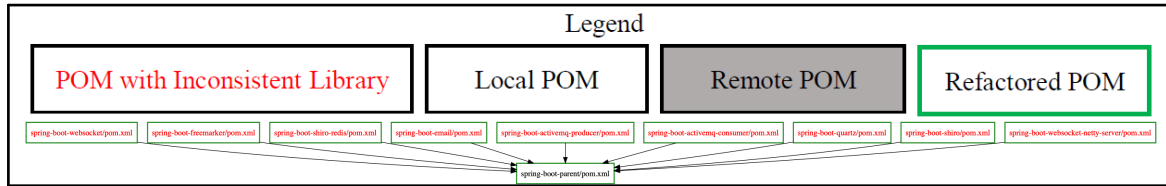
5. org.apache.commons:commons-lang3

The distinct versions are 3.5, 3.4, 3.2.1.

Index	Module	Type	Property	Version
1	spring-boot-quartz	explicit	NA	3.4
2	spring-boot-websocket	explicit	NA	3.2.1
3	spring-boot-activemq-consumer	explicit	NA	3.2.1
4	spring-boot-shiro-redis	explicit	NA	3.2.1
5	spring-boot-email	explicit	NA	3.2.1
6	spring-boot-websocket-netty-server	explicit	NA	3.5
7	spring-boot-activemq-producer	explicit	NA	3.2.1
8	spring-boot-shiro	explicit	NA	3.2.1
9	spring-boot-freemarker	explicit	NA	3.2.1

Harmonization Recommendation

Inheritance Relationship of POMs in All Related Modules



The pom in red references the property value declared in the pom in green.

The inconsistent library versions in Modules 1-9 are harmonized into version 3.9.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-quartz	1(2)	0(0)	1(2)
2	spring-boot-websocket	1(1)	0(0)	1(1)
3	spring-boot-activemq-consumer	0	0	0
4	spring-boot-shiro-redis	3(4)	0(0)	2(3)
5	spring-boot-email	1(1)	0(0)	0(0)
6	spring-boot-websocket-netty-server	4(5)	0(0)	0(0)
7	spring-boot-activemq-producer	1(1)	0(0)	1(1)
8	spring-boot-shiro	3(4)	0(0)	2(3)
9	spring-boot-freemarker	0	0	0

NA (Number of APIs): the number of called library APIs in one module.

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

Files related:

Module	File	Type	API
spring-boot-quartz	spring-boot-quartz/src/main/java/com/lance/quartz/service/TaskServiceImpl.java	Modified	org.apache.commons.lang3.time.DateFormatUtils.format(java.util.Date,java.lang.String)
spring-boot-websocket	spring-boot-websocket/src/main/java/com/lance/websocket/config/SocketSessionInfo.java	Modified	org.apache.commons.lang3.time.DateUtils.addMinutes(java.util.Date,int)
spring-boot-shiro-redis	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/URLPermissionsFilter.java	Modified	org.apache.commons.lang3.StringUtils.equals(java.lang.CharSequence,java.lang.CharSequence)
			org.apache.commons.lang3.StringUtils.endsWithAny(java.lang.CharSequence,java.lang.CharSequence[])
spring-boot-activemq-producer	spring-boot-activemq-producer/src/main/java/com/lance/mq/producer/web/IndexController.java	Modified	org.apache.commons.lang3.time.DateFormatUtils.format(java.util.Date,java.lang.String)
spring-boot-shiro	spring-boot-shiro/src/main/java/com/lance/shiro/config/URLPermissionsFilter.java	Modified	org.apache.commons.lang3.StringUtils.equals(java.lang.CharSequence,java.lang.CharSequence)

		org.apache.commons.lang3.StringUtils.endsWithAny(java.lang.CharSequence,java.lang.CharSequence[])
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The inconsistent library versions in Modules 1-9 are harmonized into version 3.8.1.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-quartz	1(2)	0(0)	1(2)
2	spring-boot-websocket	1(1)	0(0)	1(1)
3	spring-boot-activemq-consumer	0	0	0
4	spring-boot-shiro-redis	3(4)	0(0)	2(3)
5	spring-boot-email	1(1)	0(0)	0(0)
6	spring-boot-websocket-netty-server	4(5)	0(0)	0(0)
7	spring-boot-activemq-producer	1(1)	0(0)	1(1)
8	spring-boot-shiro	3(4)	0(0)	2(3)
9	spring-boot-freemarker	0	0	0

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

Files related:

Module	File	Type	API
spring-boot-quartz	spring-boot-quartz/src/main/java/com/lance/quartz/service/TaskServiceImpl.java	Modified	org.apache.commons.lang3.time.DateFormatUtils.format(java.util.Date,java.lang.String)
spring-boot-websocket	spring-boot-websocket/src/main/java/com/lance/websocket/config/SocketSessionInfo.java	Modified	org.apache.commons.lang3.time.DateUtils.addMinutes(java.util.Date,int)
spring-boot-shiro-redis	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/URLPermissionsFilter.java	Modified	org.apache.commons.lang3.StringUtils.equals(java.lang.CharSequence,java.lang.CharSequence)
			org.apache.commons.lang3.StringUtils.endsWithAny(java.lang.CharSequence,java.lang.CharSequence[])
spring-boot-activemq-producer	spring-boot-activemq-producer/src/main/java/com/lance/mq/producer/web/IndexController.java	Modified	org.apache.commons.lang3.time.DateFormatUtils.format(java.util.Date,java.lang.String)
spring-boot-shiro	spring-boot-shiro/src/main/java/com/lance/shiro/config/URLPermissionsFilter.java	Modified	org.apache.commons.lang3.StringUtils.equals(java.lang.CharSequence,java.lang.CharSequence)

		org.apache.commons.lang3.StringUtils.endsWithAny(java.lang.CharSequence,java.lang.CharSequence[])
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The inconsistent library versions in Modules 1-9 are harmonized into version 3.8.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-quartz	1(2)	0(0)	1(2)
2	spring-boot-websocket	1(1)	0(0)	1(1)
3	spring-boot-activemq-consumer	0	0	0
4	spring-boot-shiro-redis	3(4)	0(0)	2(3)
5	spring-boot-email	1(1)	0(0)	0(0)
6	spring-boot-websocket-netty-server	4(5)	0(0)	0(0)
7	spring-boot-activemq-producer	1(1)	0(0)	1(1)
8	spring-boot-shiro	3(4)	0(0)	2(3)
9	spring-boot-freemarker	0	0	0

NA (Number of APIs): the number of called library APIs in one module.

NAC (Number of API Calls): the number of library API calls in one module.

NDA (Number of Deleted APIs): the number of called library APIs that are deleted in the recommended library version.

NDAC (Number of Deleted API Calls): the number of library API calls that are deleted in the recommended library version.

NMA (Number of Modified APIs): the number of called library APIs whose call graphs (A control flow graph which represents calling relationships between subroutines in the library) are modified in the recommended library version.

NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

Files related:

Module	File	Type	API
spring-boot-quartz	spring-boot-quartz/src/main/java/com/lance/quartz/service/TaskServiceImpl.java	Modified	org.apache.commons.lang3.time.DateFormatUtils.format(java.util.Date,java.lang.String)
spring-boot-websocket	spring-boot-websocket/src/main/java/com/lance/websocket/config/SocketSessionInfo.java	Modified	org.apache.commons.lang3.time.DateUtils.addMinutes(java.util.Date,int)
spring-boot-shiro-redis	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/URLPermissionsFilter.java	Modified	org.apache.commons.lang3.StringUtils.equals(java.lang.CharSequence,java.lang.CharSequence)
			org.apache.commons.lang3.StringUtils.endsWithAny(java.lang.CharSequence,java.lang.CharSequence[])
spring-boot-activemq-producer	spring-boot-activemq-producer/src/main/java/com/lance/mq/producer/web/IndexController.java	Modified	org.apache.commons.lang3.time.DateFormatUtils.format(java.util.Date,java.lang.String)
spring-boot-shiro	spring-boot-shiro/src/main/java/com/lance/shiro/config/URLPermissionsFilter.java	Modified	org.apache.commons.lang3.StringUtils.equals(java.lang.CharSequence,java.lang.CharSequence)

```
org.apache.commons.lang3.StringUtils.endsWithAny(java.lang.CharSequence,java.lang.CharSequence[])
```

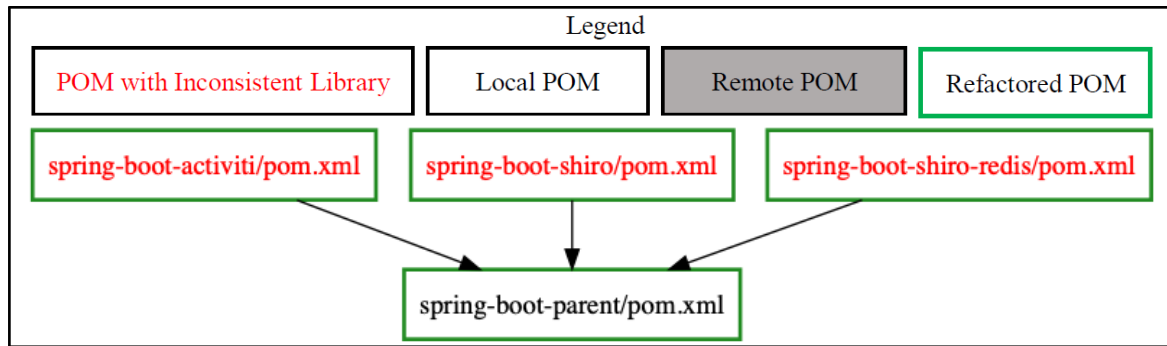
6. org.apache.shiro:shiro-ehcache

The distinct versions are 1.2.6, 1.2.5, 1.3.2.

Index	Module	Type	Property	Version
1	spring-boot-shiro-redis	implicit	shiro.version	1.2.6
2	spring-boot-shiro	implicit	shiro.version	1.2.5
3	spring-boot-activiti	implicit	shiro.version	1.3.2

Harmonization Recommendation

Inheritance Relationship of POMs in All Related Modules



The pom in red references the property value declared in the pom in green.

The inconsistent library versions in Modules 1-3 are harmonized into version 1.4.1.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	0	0	0
2	spring-boot-shiro	1(1)	0(0)	0(0)
3	spring-boot-activiti	1(1)	0(0)	0(0)

NA (Number of APIs): the number of called library APIs in one module.

NAC (Number of API Calls): the number of library API calls in one module.

NDA (Number of Deleted APIs): the number of called library APIs that are deleted in the recommended library version.

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NMA (Number of Modified APIs): the number of called library APIs whose call graphs (A control flow graph which represents calling relationships between subroutines in the library) are modified in the recommended library version.

NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

The inconsistent library versions in Modules 1-3 are harmonized into version 1.5.1.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	0	0	0
2	spring-boot-shiro	1(1)	0(0)	0(0)
3	spring-boot-activiti	1(1)	0(0)	0(0)

NA (Number of APIs): the number of called library APIs in one module.

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

The inconsistent library versions in Modules 1-3 are harmonized into version 1.4.0.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	0	0	0
2	spring-boot-shiro	1(1)	0(0)	0(0)
3	spring-boot-activiti	1(1)	0(0)	0(0)

NA (Number of APIs): the number of called library APIs in one module.

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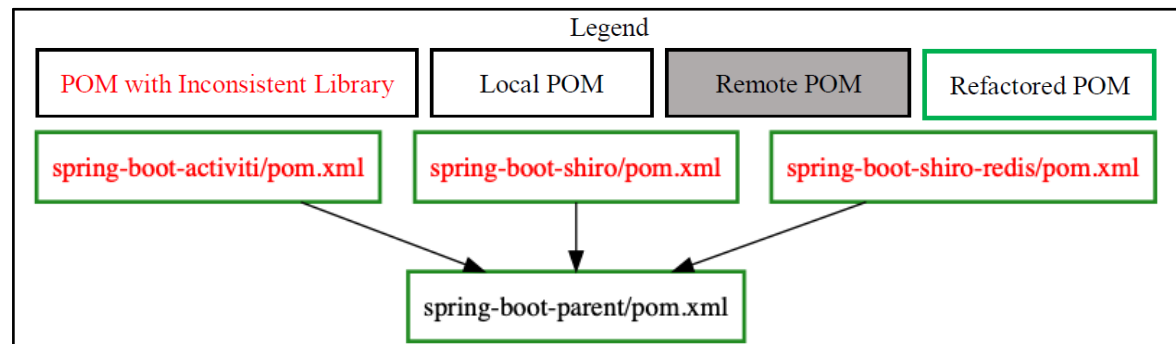
7. org.apache.shiro:shiro-spring

The distinct versions are 1.2.6, 1.2.5, 1.3.2.

Index	Module	Type	Property	Version
1	spring-boot-shiro-redis	implicit	shiro.version	1.2.6
2	spring-boot-shiro	implicit	shiro.version	1.2.5
3	spring-boot-activiti	implicit	shiro.version	1.3.2

Harmonization Recommendation

Inheritance Relationship of POMs in All Related Modules



The pom in red references the property value declared in the pom in green.

The inconsistent library versions in Modules 1-3 are harmonized into version 1.3.2.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	0	0	0
2	spring-boot-shiro	0	0	0
3	spring-boot-activiti	0	0	0

NA (Number of APIs): the number of called library APIs in one module.

NAC (Number of API Calls): the number of library API calls in one module.

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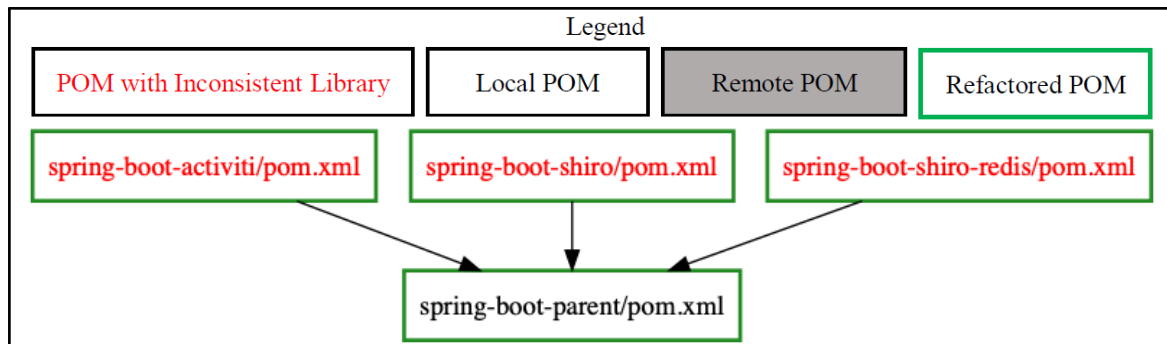
8. org.apache.shiro:shiro-web

The distinct versions are 1.2.6, 1.2.5, 1.3.2.

Index	Module	Type	Property	Version
1	spring-boot-shiro-redis	implicit	shiro.version	1.2.6
2	spring-boot-shiro	implicit	shiro.version	1.2.5
3	spring-boot-activiti	implicit	shiro.version	1.3.2

Harmonization Recommendation

Inheritance Relationship of POMs in All Related Modules



The pom in red references the property value declared in the pom in green.

The inconsistent library versions in Modules 1-3 are harmonized into version 1.4.1.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	1(1)	0(0)	1(1)
2	spring-boot-shiro	1(1)	0(0)	1(1)
3	spring-boot-activiti	1(1)	0(0)	1(1)

NA (Number of APIs): the number of called library APIs in one module.

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

Files related:

Module	File	Type	API
spring-boot-shiro-redis	spring-boot-shiro-redis/src/main/java/com/ance/shiro/config/ShiroConfig.java	Modified	org.apache.shiro.web.mgt.DefaultWebSecurityManager.setSessionManager(org.apache.shiro.session.mgt.SessionManager)

spring-boot-shiro	spring-boot-shiro/src/main/java/com/lance/shiro/config/ShiroConfig.java	Modified	org.apache.shiro.web.mgt.DefaultWebSecurityManager.setSessionManager(org.apache.shiro.session.mgt.SessionManager)
spring-boot-activiti	spring-boot-activiti/src/main/java/com/lance/activiti/common/shiro/ShiroConfig.java	Modified	org.apache.shiro.web.mgt.DefaultWebSecurityManager.setSessionManager(org.apache.shiro.session.mgt.SessionManager)

The inconsistent library versions in Modules 1-3 are harmonized into version 1.4.2.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	1(1)	0(0)	0(0)
2	spring-boot-shiro	1(1)	0(0)	1(1)
3	spring-boot-activiti	1(1)	0(0)	0(0)

NA (Number of APIs): the number of called library APIs in one module.

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

Files related:

Module	File	Type	API
spring-boot-shiro	spring-boot-shiro/src/main/java/com/lance/shiro/config/ShiroConfig.java	Modified	org.apache.shiro.web.mgt.DefaultWebSecurityManager.setSessionManager(org.apache.shiro.session.mgt.SessionManager)

The inconsistent library versions in Modules 1-3 are harmonized into version 1.5.1.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	1(1)	0(0)	1(1)
2	spring-boot-shiro	1(1)	0(0)	1(1)
3	spring-boot-activiti	1(1)	0(0)	1(1)

NA (Number of APIs): the number of called library APIs in one module.

NAC (Number of API Calls): the number of library API calls in one module.

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Files related:

Module	File	Type	API
spring-boot-shiro-redis	spring-boot-shiro-redis/src/main/java/com/lance/shiro/config/ShiroConfig.java	Modified	org.apache.shiro.web.mgt.DefaultWebSecurityManager.setSessionManager(org.apache.shiro.session.mgt.SessionManager)

spring-boot-shiro	spring-boot-shiro/src/main/java/com/lance/shiro/config/ShiroConfig.java	Modified	org.apache.shiro.web.mgt.DefaultWebSecurityManager.setSessionManager(org.apache.shiro.session.mgt.SessionManager)
spring-boot-activiti	spring-boot-activiti/src/main/java/com/lance/activiti/common/shiro/ShiroConfig.java	Modified	org.apache.shiro.web.mgt.DefaultWebSecurityManager.setSessionManager(org.apache.shiro.session.mgt.SessionManager)

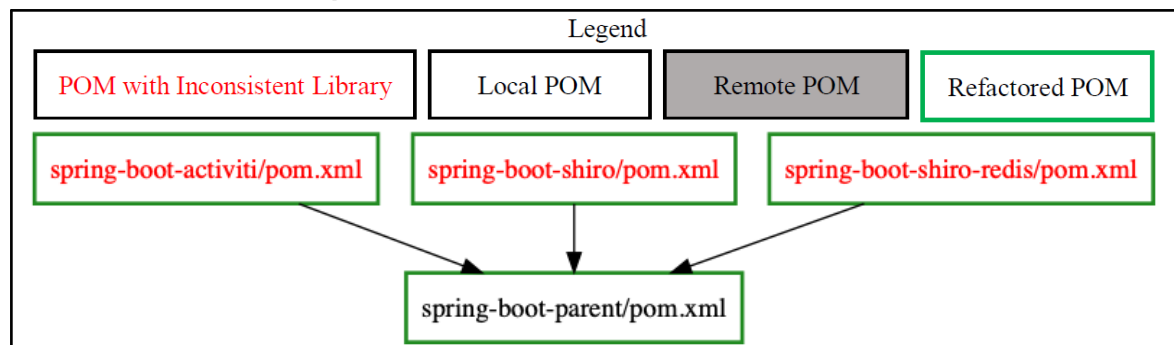
9. org.apache.shiro:shiro-core

The distinct versions are 1.2.6, 1.2.5, 1.3.2.

Index	Module	Type	Property	Version
1	spring-boot-shiro-redis	implicit	shiro.version	1.2.6
2	spring-boot-shiro	implicit	shiro.version	1.2.5
3	spring-boot-activiti	implicit	shiro.version	1.3.2

Harmonization Recommendation

Inheritance Relationship of POMs in All Related Modules



The pom in red references the property value declared in the pom in green.

The inconsistent library versions in Modules 1-3 are harmonized into version 1.5.1.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	2(3)	0(0)	0(0)
2	spring-boot-shiro	3(4)	0(0)	0(0)
3	spring-boot-activiti	5(5)	0(0)	3(3)

NA (Number of APIs): the number of called library APIs in one module.

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Files related:

Module	File	Type	API
	spring-boot-activiti/src/main/java/com/lance/activiti/common/shiro/UsernamePasswordToken.java	Modified	org.apache.shiro.authc.UsernamePasswordToken.getUsernamePasswordToken()

spring-boot-activiti			org.apache.shiro.authc.UsernamePasswordToken.UsernamePasswordToken(java.lang.String, char[], boolean, java.lang.String)
	spring-boot-activiti/src/main/java/com/lance/activiti/common/shiro/UserRealm.java	Modified	org.apache.shiro.authz.SimpleAuthorizationInfo.addRole(java.lang.String)

The inconsistent library versions in Modules 1-3 are harmonized into version 1.5.0.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	2(3)	0(0)	0(0)
2	spring-boot-shiro	3(4)	0(0)	0(0)
3	spring-boot-activiti	5(5)	0(0)	0(0)

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

The inconsistent library versions in Modules 1-3 are harmonized into version 1.4.2.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	spring-boot-shiro-redis	2(3)	0(0)	0(0)
2	spring-boot-shiro	3(4)	0(0)	0(0)
3	spring-boot-activiti	5(5)	0(0)	0(0)

NA (Number of APIs): the number of called library APIs in one module.

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NMAC (Number of Modified API Calls): the number of library API calls to modified library APIs.

III. False Consistent Libraries

1. com.alibaba:fastjson

Index	Module	Type	Property	Version
1	spring-boot-sharding	explicit	NA	1.2.54
2	spring-boot-samples	explicit	NA	

2. org.apache.commons:commons-lang3

Index	Module	Type	Property	Version
1	spring-boot-sharding	explicit	NA	3.8.1
2	spring-boot-samples	explicit	NA	

3. org.jsoup:jsoup

Index	Module	Type	Property	Version
1	spring-boot-crawler	explicit	NA	1.9.2
2	spring-boot-samples	explicit	NA	