

# Project : scouter-project scouter

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 5 inconsistent libraries.

## II. Inconsistent Libraries

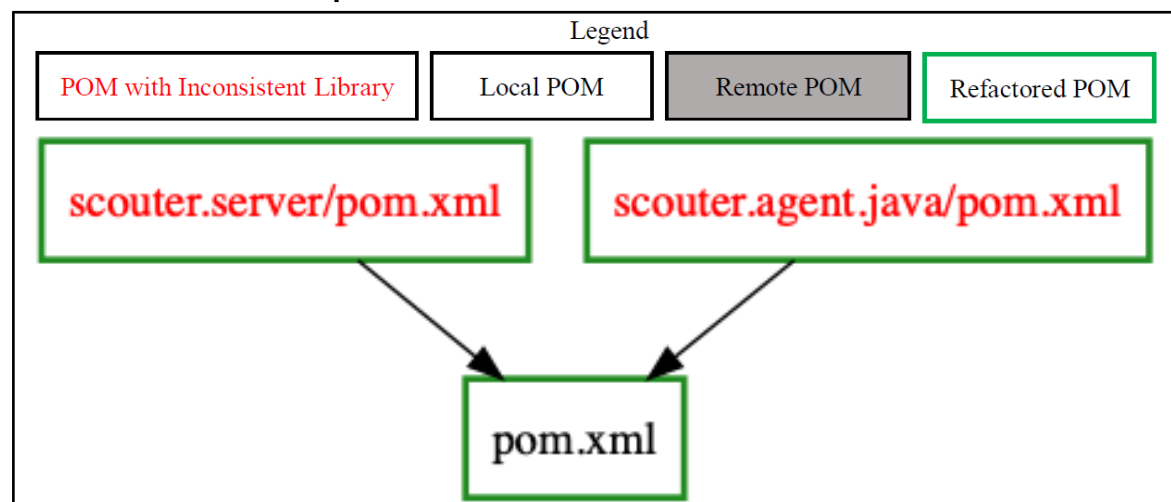
### 1. org.apache.httpcomponents:httpClient

The distinct versions are 4.5.5, 4.3.6.

Index	Module	Type	Property	Version
1	scouter.agent.java	explicit	NA	4.3.6
2	scouter.server	explicit	NA	4.5.5

### 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 1-2 are harmonized into version 4.5.5.

### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
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1	scouter.agent.java	0	0	0
2	scouter.server	8(8)	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 1-2 are harmonized into version 4.5.

### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	scouter.agent.java	0	0	0
2	scouter.server	8(8)	0(0)	1(1)

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### Files related:

Module	File	Type	API
scouter.server	scouter.server/src/main/java/scouter/server/plugin/PluginHelper.java	Modified	org.apache.http.impl.client.HttpClientBuilder.build()

The inconsistent library versions in Modules 1-2 are harmonized into version 4.5.10.

### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	scouter.agent.java	0	0	0
2	scouter.server	8(8)	0(0)	2(2)

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### Files related:

Module	File	Type	API
scouter.server	scouter.server/src/main/java/scouter/server/plugin/PluginHelper.java	Modified	org.apache.http.impl.client.HttpClientBuilder.build()
			org.apache.http.client.config.RequestConfig.Builder.build()

The inconsistent library versions in Modules 1-2 are harmonized into version 4.5.11.

### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	scouter.agent.java	0	0	0
2	scouter.server	8(8)	0(0)	2(2)

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### Files related:

Module	File	Type	API
scouter.server	scouter.server/src/main/java/scouter/server/plugin/PluginHelper.java	Modified	org.apache.http.impl.client.HttpClientBuilder.build()
			org.apache.http.client.config.RequestConfig.Builder.build()

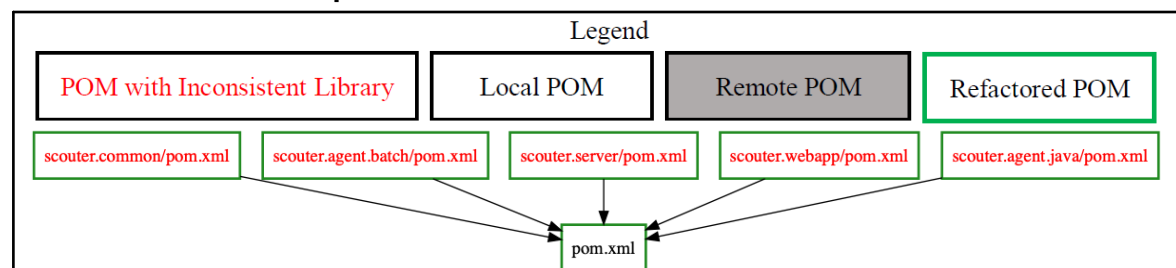
## 2. org.assertj:assertj-core

The distinct versions are 3.8.0, 2.3.0.

Index	Module	Type	Property	Version
1	scouter.agent.java	explicit	NA	2.3.0
2	scouter.webapp	explicit	NA	3.8.0
3	scouter.agent.batch	explicit	NA	2.3.0
4	scouter.common	explicit	NA	2.3.0
5	scouter.server	explicit	NA	2.3.0

### 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 1-5 are harmonized into version 3.8.0.

### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	scouter.agent.java	0	0	0
2	scouter.webapp	0	0	0
3	scouter.agent.batch	0	0	0
4	scouter.common	0	0	0
5	scouter.server	0	0	0

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

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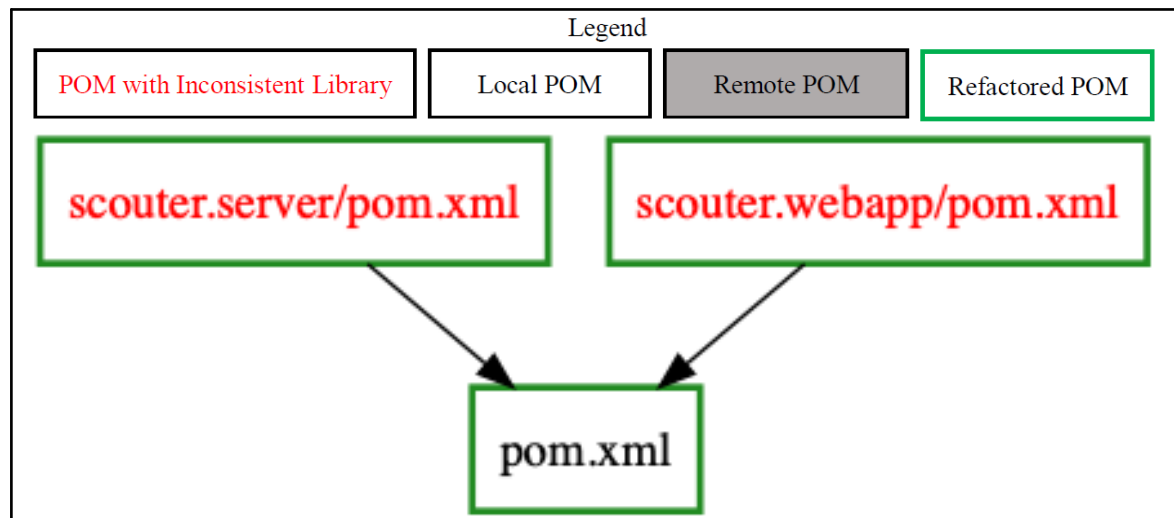
### 3. com.sun.xml.bind:jaxb-impl

The distinct versions are 2.3.0.1, 2.3.0.

Index	Module	Type	Property	Version
1	scouter.webapp	explicit	NA	2.3.0
2	scouter.server	explicit	NA	2.3.0.1

## 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 1-2 are harmonized into version 2.3.0.

### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	scouter.webapp	0	0	0
2	scouter.server	0	0	0

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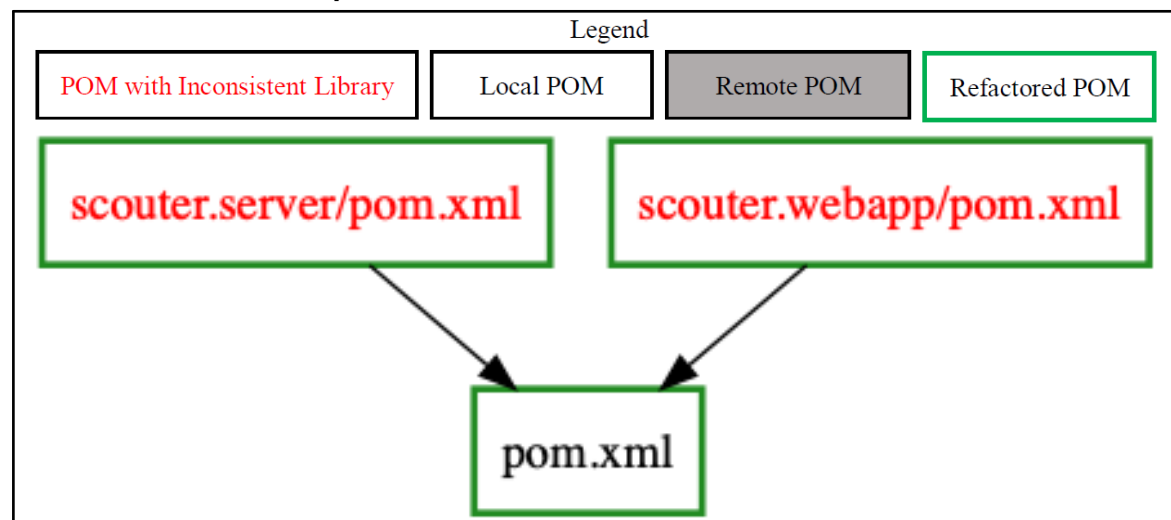
## 4. javax.xml.bind:jaxb-api

The distinct versions are 2.3.1, 2.3.0.

Index	Module	Type	Property	Version
1	scouter.webapp	explicit	NA	2.3.0
2	scouter.server	explicit	NA	2.3.1

### 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 1-2 are harmonized into version 2.3.1.

### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	scouter.webapp	0	0	0
2	scouter.server	0	0	0

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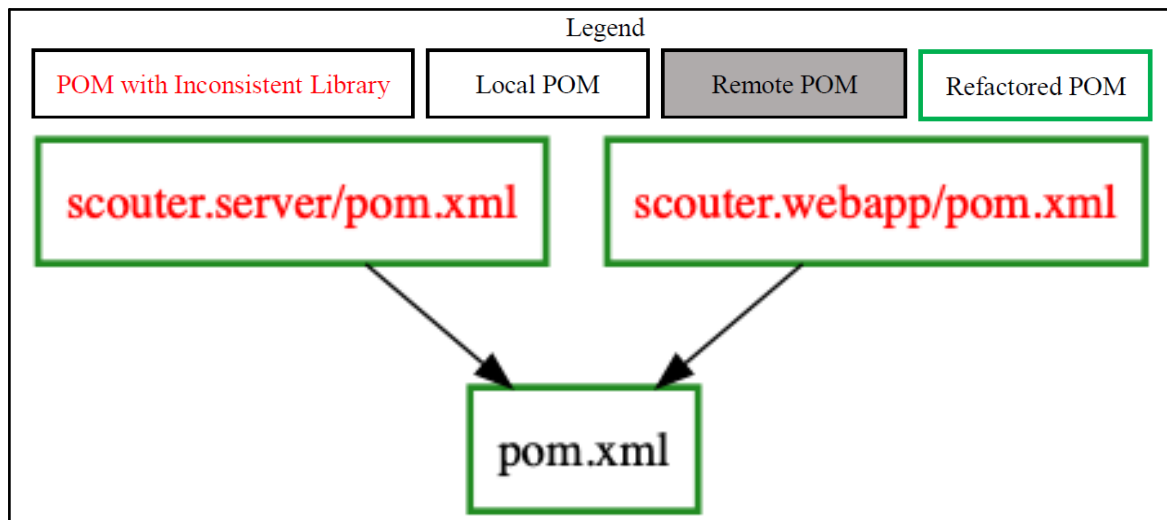
## 5. com.sun.xml.bind:jaxb-core

The distinct versions are 2.3.0.1, 2.3.0.

Index	Module	Type	Property	Version
1	scouter.webapp	explicit	NA	2.3.0
2	scouter.server	explicit	NA	2.3.0.1

### 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 1-2 are harmonized into version 2.3.0.

### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	scouter.webapp	0	0	0
2	scouter.server	0	0	0

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