

# Project : knightliao

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 1 inconsistent library.

## II. Inconsistent Libraries

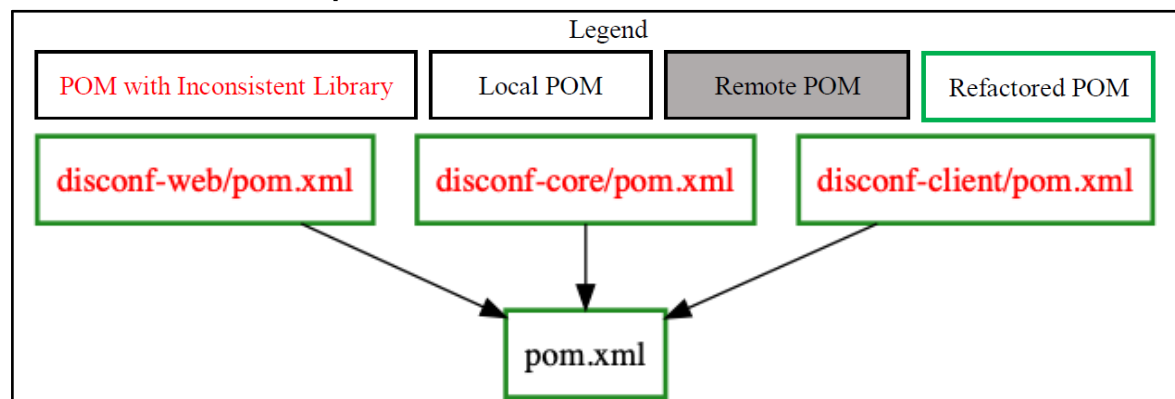
### 1. commons-io:commons-io

The distinct versions are 1.4, 2.4.

Index	Module	Type	Property	Version
1	disconf-core	explicit	NA	1.4
2	disconf-web	explicit	NA	2.4
3	disconf-client	explicit	NA	1.4

### 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 2.5.

#### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	disconf-core	1(1)	0(0)	1(1)

2	disconf-web	5(6)	0(0)	3(4)
3	disconf-client	6(7)	0(0)	6(7)

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
disconf-core	disconf-core/src/main/java/com/baidu/disconf/core/common/utis/FileUtils.java	Modified	org.apache.commons.io.FileUtils.contentEquals(java.io.File,java.io.File)
disconf-web	disconf-web/src/test/java/com/baidu/disconf/web/test/utis/CodeUtilsTestCase.java	Modified	org.apache.commons.io.FileUtils.readFileToString(java.io.File,java.lang.String)
	disconf-web/src/main/java/com/baidu/disconf/web/utis/TarUtils.java	Modified	org.apache.commons.io.IOUtils.copy(java.io.InputStream,java.io.OutputStream)
	disconf-web/src/test/java/com/baidu/disconf/web/test/common/AbstractTestCase.java	Modified	org.apache.commons.io.FileUtils.readFileToString(java.io.File)
disconf-client	disconf-client/src/main/java/com/baidu/disconf/client/common/constants/SupportFileTypeEnum.java	Modified	org.apache.commons.io.FilenameUtils.getExtension(java.lang.String)
	disconf-client/src/test/java/com/baidu/disconf/client/test/fetcher/inner/restful/RestfulMgrMock.java	Modified	org.apache.commons.io.FileUtils.writeStringToFile(java.io.File,java.lang.String)
	disconf-client/src/main/java/com/baidu/disconf/client/addons/properties/ReloadablePropertiesFactoryBean.java	Modified	org.apache.commons.io.FilenameUtils.getExtension(java.lang.String)
	disconf-client/src/test/java/com/baidu/disconf/client/test/support/utis/TestAntPathMatcher.java	Modified	org.apache.commons.io.FileUtils.writeByteArrayToFile(java.io.File,byte[]) org.apache.commons.io.IOUtils.toByteArray(java.io.InputStream) org.apache.commons.io.IOUtils.toString(java.io.InputStream,java.lang.String)

The inconsistent library versions in Modules 1-3 are harmonized into version 2.6.

### Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	disconf-core	1(1)	0(0)	1(1)
2	disconf-web	5(6)	0(0)	3(4)
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## Files related:

Module	File	Type	API
disconf-core	disconf-core/src/main/java/com/baidu/disconf/core/common/utis/FileUtils.java	Modified	org.apache.commons.io.FileUtils.contentEquals(java.io.File,java.io.File)
disconf-web	disconf-web/src/test/java/com/baidu/disconf/web/test/utis/CodeUtilsTestCase.java	Modified	org.apache.commons.io.FileUtils.readFileToString(java.io.File,java.lang.String)
	disconf-web/src/main/java/com/baidu/disconf/web/utis/TarUtils.java	Modified	org.apache.commons.io.IOUtils.copy(java.io.InputStream,java.io.OutputStream)
	disconf-web/src/test/java/com/baidu/disconf/web/test/common/AbstractTestCase.java	Modified	org.apache.commons.io.FileUtils.readFileToString(java.io.File)
disconf-client	disconf-client/src/main/java/com/baidu/disconf/client/common/constants/SupportFileTypeEnum.java	Modified	org.apache.commons.io.FilenameUtils.getExtension(java.lang.String)
	disconf-client/src/test/java/com/baidu/disconf/client/test/fetcher/inner/restful/RestfulMgrMock.java	Modified	org.apache.commons.io.FileUtils.writeStringToFile(java.io.File,java.lang.String)
	disconf-client/src/main/java/com/baidu/disconf/client/addons/properties/ReloadablePropertiesFactoryBean.java	Modified	org.apache.commons.io.FilenameUtils.getExtension(java.lang.String)
	disconf-client/src/test/java/com/baidu/disconf/client/test/support/utis/TestAntPathMatcher.java	Modified	org.apache.commons.io.FileUtils.writeByteArrayToFile(java.io.File,byte[]) org.apache.commons.io.IOUtils.toByteArray(java.io.InputStream) org.apache.commons.io.IOUtils.toString(java.io.InputStream,java.lang.String)

The inconsistent library versions in Modules 1-3 are harmonized into version 2.4.

## Harmonization Effort

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1	disconf-core	1(1)	0(0)	1(1)
2	disconf-web	5(6)	0(0)	0(0)
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**Files related:**

Module	File	Type	API
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disconf-client	disconf-client/src/main/java/com/baidu/disconf/client/common/constants/SupportFileTypeEnum.java	Modified	org.apache.commons.io.FilenameUtils.getExtension(java.lang.String)
	disconf-client/src/test/java/com/baidu/disconf/client/test/fetcher/inner/restful/RestfulMgrMock.java	Modified	org.apache.commons.io.FileUtils.writeStringToFile(java.io.File,java.lang.String)
	disconf-client/src/main/java/com/baidu/disconf/client/addons/properties/ReloadablePropertiesFactoryBean.java	Modified	org.apache.commons.io.FilenameUtils.getExtension(java.lang.String)
	disconf-client/src/test/java/com/baidu/disconf/client/test/support/utis/TestAntPathMatcher.java	Modified	org.apache.commons.io.FileUtils.writeByteArrayToFile(java.io.File,byte[]) org.apache.commons.io.IOUtils.toByteArray(java.io.InputStream) org.apache.commons.io.IOUtils.toString(java.io.InputStream,java.lang.String)