

Project : thinkaurelius titan

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 2 inconsistent libraries.

II. Inconsistent Libraries

1. com.thinkaurelius.titan:titan-core

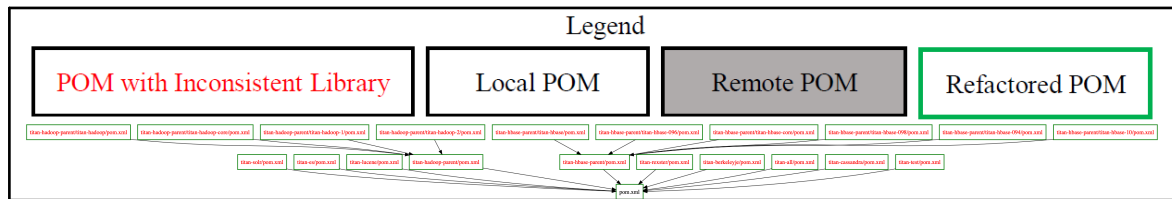
The distinct versions are 1.0.1-SNAPSHOT, 0.9.0-SNAPSHOT.

Index	Module	Type	Property	Version
1	titan-lucene	implicit	project.version	1.0.1-SNAPSHOT
2	titan-hbase-parent/titan-hbase	implicit	project.version	1.0.1-SNAPSHOT
3	titan-cassandra	implicit	project.version	1.0.1-SNAPSHOT
4	titan-berkeleyje	implicit	project.version	1.0.1-SNAPSHOT
5	titan-all	implicit	project.version	1.0.1-SNAPSHOT
6	titan-hadoop-parent	implicit	project.version	1.0.1-SNAPSHOT
7	titan-hbase-parent/titan-hbase-096	implicit	project.version	1.0.1-SNAPSHOT
8	titan-hadoop-parent/titan-hadoop-1	implicit	project.version	1.0.1-SNAPSHOT
9	titan-hadoop-parent/titan-hadoop-2	implicit	project.version	1.0.1-SNAPSHOT
10	titan-hbase-parent/titan-hbase-core	implicit	project.version	1.0.1-SNAPSHOT
11	titan-hbase-parent/titan-hbase-094	implicit	project.version	1.0.1-SNAPSHOT
12	titan-hbase-parent/titan-hbase-098	implicit	project.version	1.0.1-SNAPSHOT
13	titan-hadoop-parent/titan-hadoop	implicit	project.version	1.0.1-SNAPSHOT
14	titan-hbase-parent	implicit	project.version	1.0.1-SNAPSHOT

15	titan-hbase-parent/titan-hbase-10	implicit	project.version	1.0.1-SNAPSHOT
16	titan-test	implicit	project.version	1.0.1-SNAPSHOT
17	titan-es	implicit	project.version	1.0.1-SNAPSHOT
18	titan-rexster	implicit	project.version	0.9.0-SNAPSHOT
19	titan-hadoop-parent/titan-hadoop-core	implicit	project.version	1.0.1-SNAPSHOT
20	titan-solr	implicit	project.version	1.0.1-SNAPSHOT

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 1-20 are harmonized into version 1.0.1-SNAPSHOT.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	titan-lucene	0	0	0
2	titan-hbase-parent/titan-hbase	0	0	0
3	titan-cassandra	0	0	0
4	titan-berkeleyje	0	0	0
5	titan-all	0	0	0
6	titan-hadoop-parent	0	0	0
7	titan-hbase-parent/titan-hbase-096	0	0	0
8	titan-hadoop-parent/titan-hadoop-1	0	0	0
9	titan-hadoop-parent/titan-hadoop-2	0	0	0
10	titan-hbase-parent/titan-hbase-core	0	0	0
11	titan-hbase-parent/titan-hbase-094	0	0	0
12	titan-hbase-parent/titan-hbase-098	0	0	0
13	titan-hadoop-parent/titan-hadoop	0	0	0
14	titan-hbase-parent	0	0	0
15	titan-hbase-parent/titan-hbase-10	0	0	0
16	titan-test	0	0	0
17	titan-es	0	0	0

18	titan-rexster	0	0	0
19	titan-hadoop-parent/titan-hadoop-core	0	0	0
20	titan-solr	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.

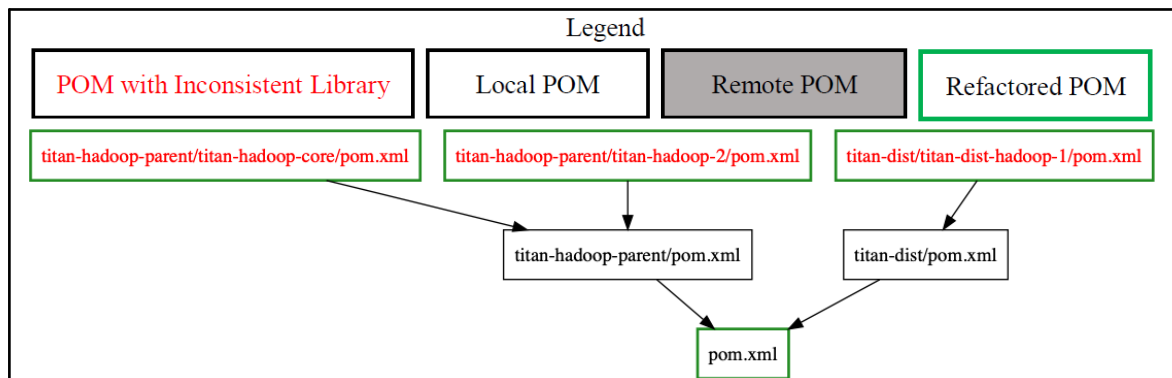
2. org.apache.hadoop:hadoop-client

The distinct versions are 2.7.1, 1.2.1.

Index	Module	Type	Property	Version
1	titan-dist/titan-dist-hadoop-1	implicit	hadoop1.version	1.2.1
2	titan-hadoop-parent/titan-hadoop-2	implicit	hadoop2.version	2.7.1
3	titan-hadoop-parent/titan-hadoop-core	implicit	hadoop2.version	2.7.1

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 1-3 are harmonized into version 2.7.1.

Harmonization Effort

Index	Module	NA (NAC)	NDA (NDAC)	NMA (NMAC)
1	titan-dist/titan-dist-hadoop-1	0	0	0
2	titan-hadoop-parent/titan-hadoop-2	0	0	0
3	titan-hadoop-parent/titan-hadoop-core	0	0	0

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