

CN4J Report

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Chapter 1. Introduction

This document contains a dependency analysis showing the current state and target for Cloud Native for Java (CN4J) platforms like [Jakarta EE](#) and [MicroProfile](#). The analysis tool to generate the actual state analysis is [jQAssistant](#) (see [this repository](#)), where the to-be analysis is derived from manually.



This document uses PlantUML diagrams, that are converted to SVG images - so text based search can be used in source and target files.

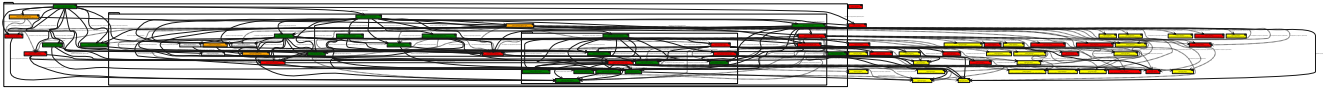


Figure 6. Jakarta Platform API 10.0.1 target with including TCK dependencies



The so called **waves** for the release order of the component specifications can be derived from this graph directly ([see here](#))!

Issues:

- Patch Release
 - <https://github.com/jakartaee/jakartaee-api/issues/138>
 - <https://github.com/jakartaee/jakartaee-api/pull/139>
 - [Remove jakarta.annotation.managedbean tests from Platform TCK](#)

11.0.0

TBD

2.1.2. Jakarta Platform TCK

The (old) combined TCK to test compatibility. The refactoring (splitting it up to the several component specs) is pending for improving maintainability.

Source: <https://github.com/jakartaee/platform-tck>

Still contains the TCK for the following specifications:

- [Jakarta Annotation\(s\)](#) (TBD, TCK creation planed for Jakarta Annotations 3.0.0)
- [Jakarta Authorization](#)
- Jakarta Connectors (Jakarta Resources in Maven)
- Jakarta EJB
- [Jakarta Expression Language \(EL\)](#)
- Jakarta JSP
- Jakarta JSTL
- Jakarta Mail
- Jakarta Messaging (Jakarta JMS in Maven)
- Jakarta Persistence
- Jakarta Transaction
- [Jakarta Security](#) (TBD remove here?)
- Jakarta Servlet
- Jakarta Websocket
- Jakarta XML SOAP

- Jakarta XML Web Service
- Jakarta (XML) Web Services Metadata (JSR-181)

Additionally it contains tests for older versions of [Jakarta Component Specifications](#).

2.2. Jakarta Component Specifications

2.2.1. Separated TCKs

Jakarta component specs with separated TCK already:

- [Jakarta Activation](#) (script based)
- [Jakarta Annotation\(s\)](#) (TBD, TCK creation planed for Jakarta Annotations 3.0.0)
- [Jakarta Authentication](#)
- [Jakarta Batch](#)
- [Jakarta \(Bean\) Validation](#) (renaming planed soon)
- [Jakarta CDI](#) (split into CDI Core and CDI web is planed later, a CDI Platform might be required too)
- [Jakarta Concurrency](#)
- Jakarta Data (stand-alone)
- [Jakarta \(Dependency\) Inject\(ion\)](#)
- [Jakarta JSON \(Processing\)](#)
- [Jakarta JSON Bind\(ing\)](#)
- Jakarta MVC (stand-alone)
- [Jakarta REST\(ful Web Services\)](#)
- [Jakarta Security](#)
- [Jakarta XML Bind\(ing\)](#) (script based)



The remaining specifications still have their TCK included in the (old) [Jakarta Platform TCK](#).

2.2.2. Jakarta Activation

Project: <https://projects.eclipse.org/projects/ee4j.jaf>

Source:

- <https://github.com/jakartaee/jaf-api> (specification and API)
- <https://github.com/jakartaee/jaf-tck> (TCK)

2.1.0



Figure 7. Jakarta Activation API 2.1.0 actual

Issues:

- CVEs https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- script based TCK

2.1.2



Figure 8. Jakarta Activation API 2.1.2 actual

Java SE version:

- 8 (source, with and an exception for module-info.java)
- 8 (target)
- 11+ (build)

Issues:

- CVEs https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- script based TCK
- based on Java SE 8 and 11+
- check for dependency and plugin dependency updates (especially API)

2.1.3

Issues:

- Patch Release
 - Patch CVEs
- based on Java SE 8 and 11+

3.0.0

Issues:

- Major Release
- Update Java SE requirement to 11+ at minimum

2.2.3. Jakarta Annotation(s)

Project: <https://projects.eclipse.org/projects/ee4j.ca>

Source:

- <https://github.com/jakartaee/common-annotations-api> (specification and API)
- <https://github.com/jakartaee/platform-tck> (TCK)

2.1.1



Figure 9. Jakarta Annotation API 2.1.1 actual

Java SE version:

- API
 - 8 (source)
 - 9 (source module-info.java)
 - 8 (target)
 - 11+ (build)
- specification
 - 8+ (build)

Issues:

- CVEs https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- depends on [Jakarta Platform TCK](#)
- Inconsistent naming
- check for dependency (especially Maven) and plugin dependency updates (especially API)
- Parent POM is missing

2.1.2

Issues:

- Patch Release [Issue #177](#)
 - Patch CVEs

3.0.0

Issues:

- Major Release (Plan Review)
 - @ManagedBean removal
 - <https://github.com/jakartaee/platform-tck/issues/1184>
 - TODO affected specs
 - Java SE 11
- Additional changes
 - Extract TCK from [Jakarta Platform TCK](#) (by moving [existing signature test](#))
 - Multi-module Maven setup
 - Consistent naming

2.2.4. Jakarta Authentication

Project: <https://projects.eclipse.org/projects/ee4j.authentication>

Source: <https://github.com/jakartaee/authentication> (specification, API and TCK)

3.0.0



Figure 10. Jakarta Authentication API 3.0.0 actual

Java SE version:

- 11 (source, target, bundle, javadoc)
- 11+ (build)

Issues:

- CVEs
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580

- arquillian-protocol-servlet → arquillian-protocol-servlet-jakarta (1.7.0.Final)
 - [CVE-2023-26049](#)
 - [CVE-2023-26048](#)
 - [CVE-2021-34428](#)
 - [CVE-2019-10247](#)
 - [CVE-2019-10241](#)
 - [CVE-2017-7658](#)
 - [CVE-2017-7657](#)
 - [CVE-2017-7656](#)
 - [CVE-2015-2080](#)
- shrinkwrap-resolver-impl-maven
 - [CVE-2023-2976](#)
 - [CVE-2020-27216](#)
- Parent, Spec and API do not **define maven.compiler.release**
- Parent enforces out-dated Maven version 3.6.0
- API contains relative path on parent project
- check for dependency and plugin dependency updates
- TCK uses out-dated dependencies (i.e. arquillian-*, CDI, EL, Validation, EJB, Annotation)
- TCK dependency need to be adopted (xmlunit 1.6 → xmlunit-legacy 2.9.1)
- TCK depends on Platform spec [Jakarta Authorization](#)
- TCK is not configured as module on root
- TCK uses strange Maven coordinates (!)
- FIXME: Run jQA on TCK
 - check possible wave impact → none (manually checked)
 - update TCK dependencies in umbrella specs → done

3.0.1

Issues:

- Patch Release
 - Patch CVEs

3.1.0

Issues:

- Plan Review

2.2.5. Jakarta Authorization

Project: <https://projects.eclipse.org/projects/ee4j.authorization>

Source:

- <https://github.com/jakartaee/authorization> (specification and API)
- <https://github.com/jakartaee/platform-tck> (TCK)

2.1.0

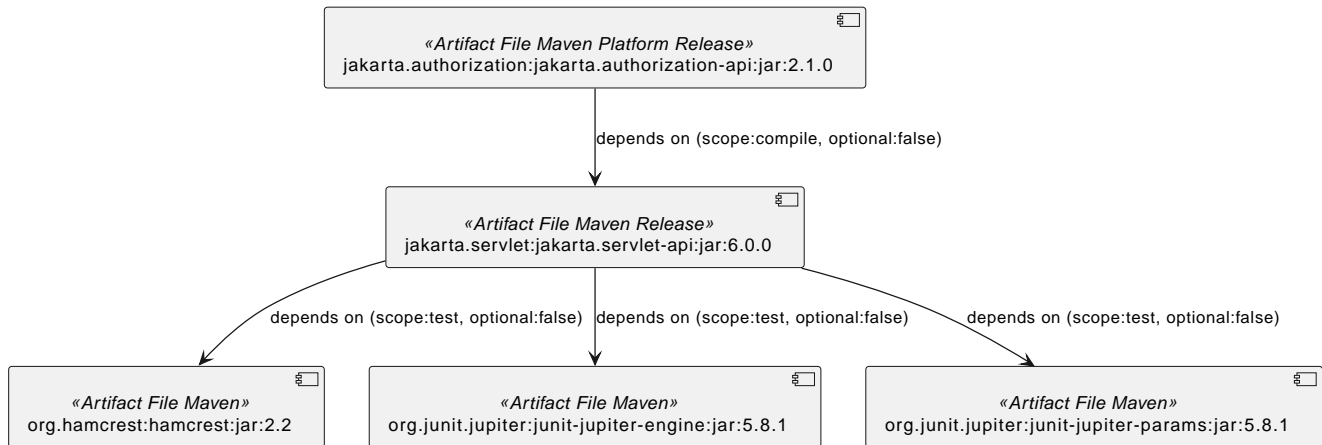


Figure 11. Jakarta Authorization API 2.1.0 actual

Java SE version:

- 11 (source, target, javadoc)
- 11+ (build)

Issues:

- CVEs https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- should be moved to [Jakarta Platform](#) Web Profile
- depends on [Jakarta Platform TCK](#)
- check for dependency and plugin dependency updates

2.1.1

Issues:

- Patch Release
 - Patch CVEs

3.0.0

Issues:

- Plan Review

- CVEs https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- TCK has out-dated dependencies
- Parent version definitions deviate from Maven conventions
- Add more jQA targets

2.1.2

Issues:

- Patch Release
 - Patch CVEs
- fix TCK dependencies

2.2.7. Jakarta (Bean) Validation

Project: <https://projects.eclipse.org/projects/ee4j.bean-validation>

Source:

- <https://github.com/jakartaee/validation-spec> (specification)
- <https://github.com/jakartaee/validation> (API)
- <https://github.com/jakartaee/validation-tck> (TCK)

3.0.2/3.0.1

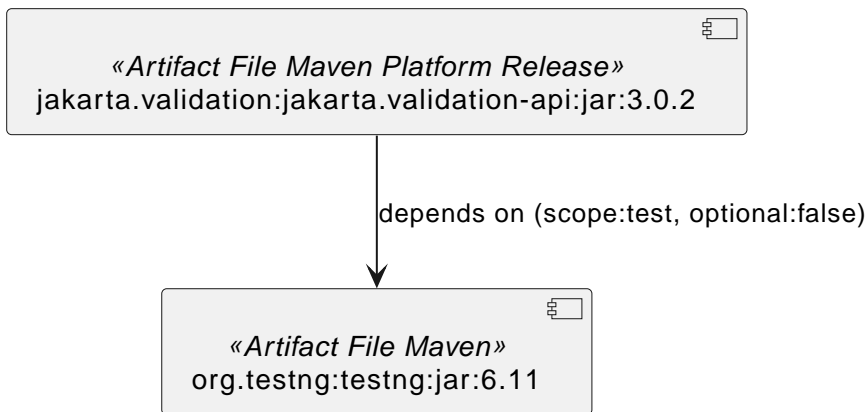


Figure 14. Jakarta Validation API 3.0.2 actual

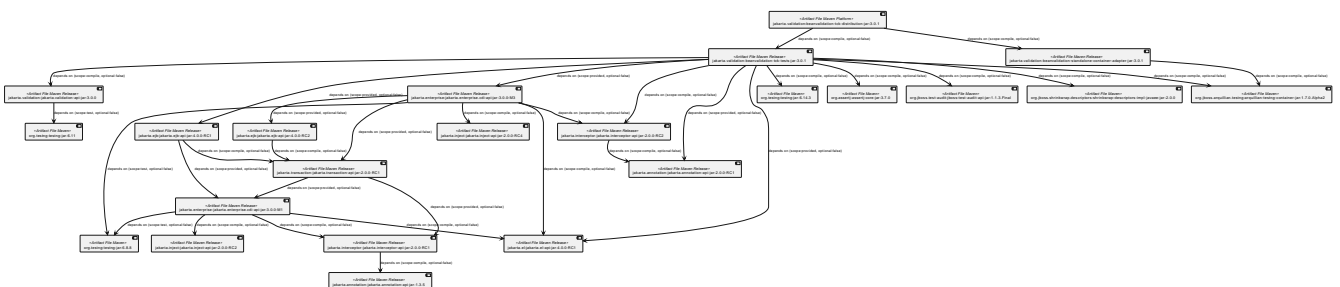


Figure 15. Jakarta Validation TCK Distribution 3.0.1 actual

Java SE version:

- specification
 - undefined
- API
 - 8 (source)
 - 9 (source module-info.java)
 - 8 (target, bundle)
 - 9+ (build)
- TCK
 - 8 (source, target)
 - 8 \leftarrow x < 9 (build)

Issues:

- specification is still script based!
- TCK is out-dated
- CVEs
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581588
- check for dependency and plugin dependency updates

3.0.3

Issues:

- Patch Release
 - Patch CVEs

3.1.0

Issues:

- Plan Review
 - <https://github.com/jakartaee/validation/issues/174>
 - <https://github.com/jakartaee/validation-spec/issues/267>

2.2.8. Jakarta CDI

Project: <https://projects.eclipse.org/projects/ee4j.cdi>

Source:

- <https://github.com/jakartaee/cdi> (specification and API)
- <https://github.com/jakartaee/cdi-tck> (TCK)



Figure 16. Jakarta CDI Spec Doc 4.0.1 actual

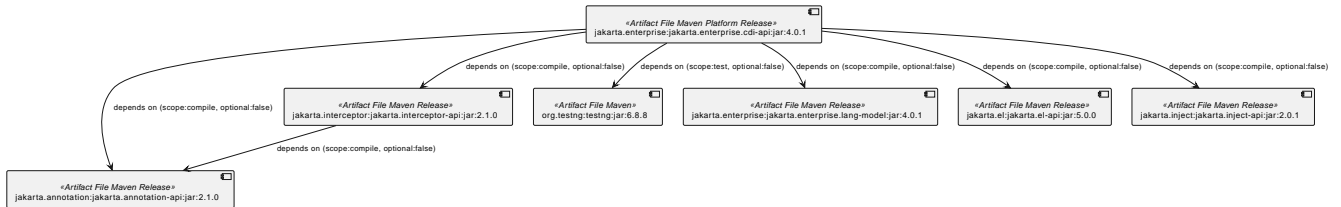


Figure 17. Jakarta CDI API 4.0.1 actual

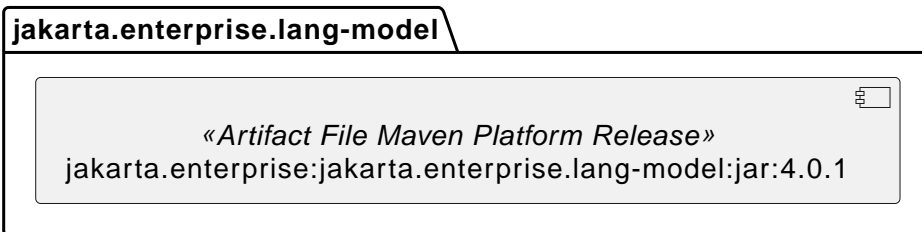


Figure 18. Jakarta Lang Model 4.0.1 actual

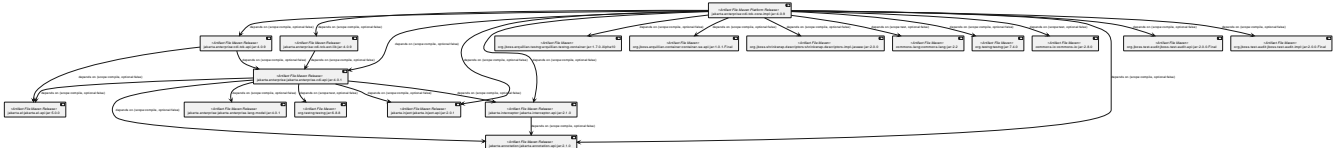


Figure 19. Jakarta CDI TCK Core Impl 4.0.9 actual

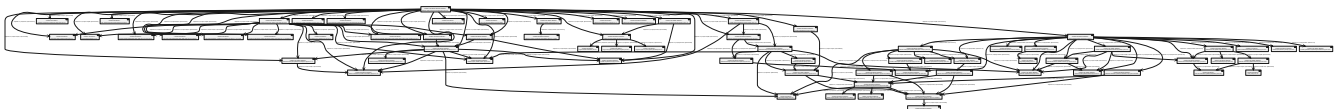


Figure 20. Jakarta CDI TCK Web Impl 4.0.9 actual

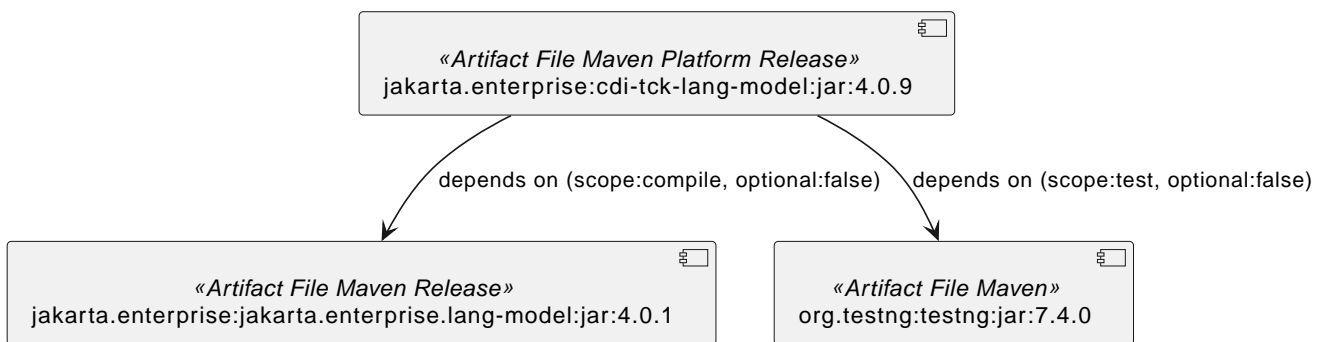


Figure 21. Jakarta CDI TCK Lang Model Impl 4.0.9 actual

Figure 22. Jakarta CDI TCK Distribution 4.0.9 actual

Java SE version:

- API and specification
 - 11 (release)
 - 11+ (build)
- TCK parent
 - 11 (release)
 - 11+ (build)
- TCK Core Impl
 - 11 (release)
 - 11+ (build)
- TCK Web Impl
 - 1.8 (source, target)

Issues:

- Circular dependencies via TCK
 - <https://github.com/jakartaee/cdi/issues/687>
- Naming issue with (CDI) Lang Model
- CVEs
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581588
- Spec references TCK version 2.0.3.Final
- TCK uses out-dated dependencies
- TCK profile verify-release requires Java SE 1.8
- TCK Web Impl mentions out-dated waves
- check for dependency and plugin dependency updates

4.0.1/4.0.10

TBD

4.0.2/4.0.11

Issues:

- Patch Release
 - Patch CVEs

- Java SE 11 for release (requires cherry picking)

3.1.0

Issues:

- Plan Review

2.2.10. Jakarta (Dependency) Inject(ion)

Project: <https://projects.eclipse.org/projects/ee4j.cdi> (Jakarta CDI)

Source:

- <https://github.com/jakartaee/inject-spec> (specification)
- <https://github.com/jakartaee/inject> (API)
- <https://github.com/jakartaee/inject-tck> (TCK)

2.0.1

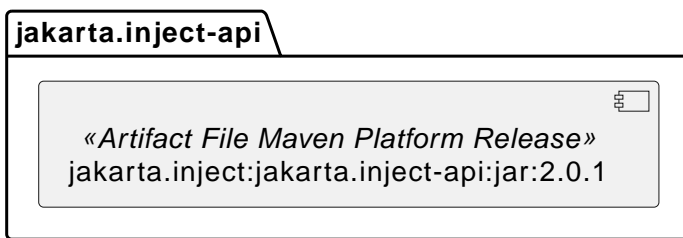


Figure 25. Jakarta Inject API 2.0.1 actual

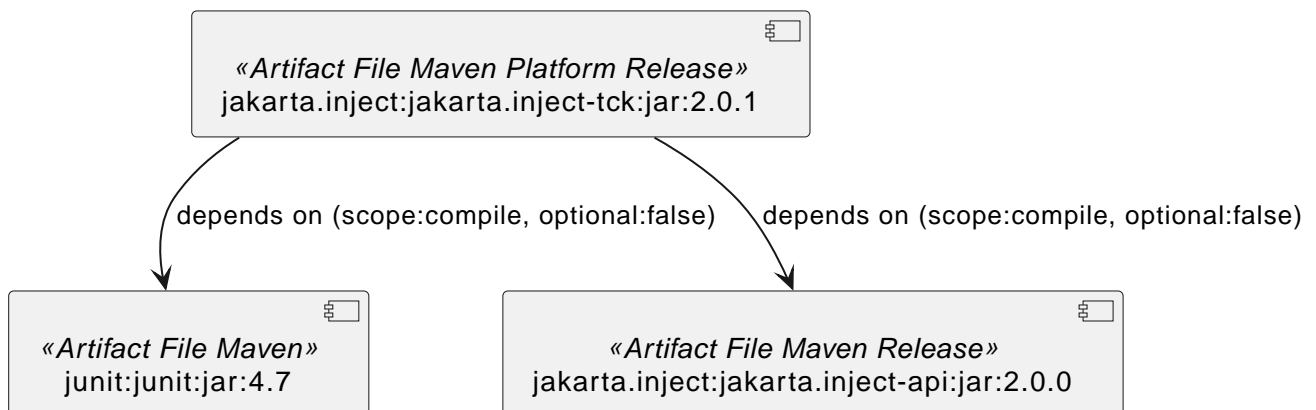


Figure 26. Jakarta Inject TCK 2.0.1 actual

Java SE version:

- specification
 - $8 \leq x < 9$ (build)
- API
 - 8 (release)
 - 9 (release module-info.java)

- 8 (target)
- ? (bundle)
- 9+ (build)
- TCK
 - 8 (source, target)
 - 8+ (build)

Issues:

- Specification enforcer message is wrong ("or lower" need to be deleted)
- API dependency out-dated (JUnit)
- TCK dependency out-dated (JUnit)
- CVEs
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
 - JUnit 4.7 → 4.13.2 [CVE-2020-15250](#)
- check for dependency and plugin dependency updates
- [check multi-release JAR release](#)

2.0.2

Issues:

- Patch Release
 - Patch CVEs

2.2.11. Jakarta Expression Language (EL)

Project: <https://projects.eclipse.org/projects/ee4j.el>

Source:

- <https://github.com/jakartaee/expression-language> (specification and API)
- <https://github.com/jakartaee/platform-tck> (TCK)

5.0.1

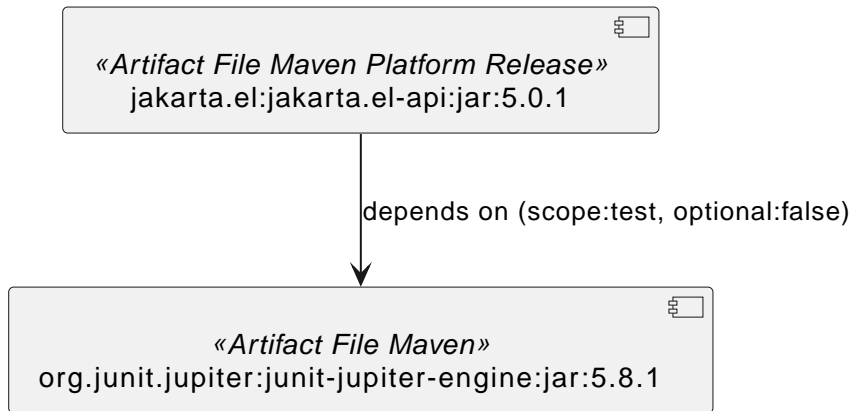


Figure 27. Jakarta EL API 5.0.1 actual

Java SE version:

- Parent
 - undefined
- Specification
 - 11
- API
 - 11 (release, javadoc)
 - ? (bundle)
 - 11+ (build)

Issues:

- depends on [Jakarta Platform TCK](#)
- Inconsistent naming
- CVEs https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- check for dependency and plugin dependency updates

5.0.2

Issues:

- Patch Release
 - Patch CVEs

6.0.0

Issues:

Plan Release

2.2.12. Jakarta Interceptor(s)

Project: <https://projects.eclipse.org/projects/ee4j.interceptors>

Source:

- <https://github.com/jakartaee/interceptors> (specification and API)
- ? (TCK)

2.1.0

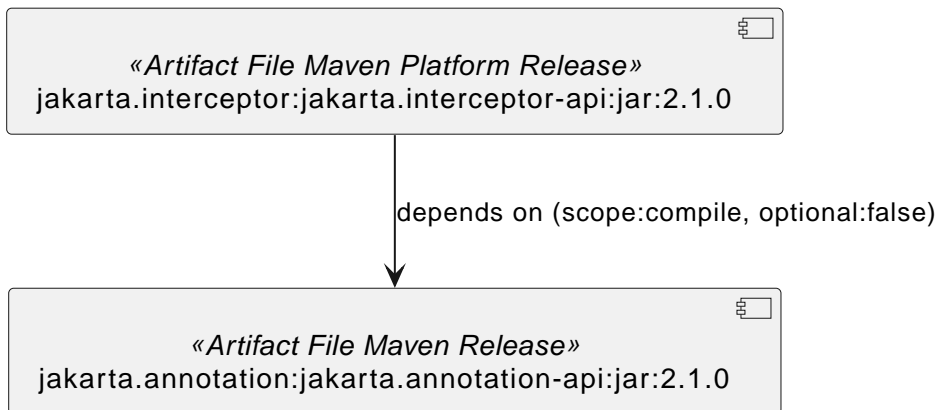


Figure 28. Jakarta Interceptor API 2.1.0 actual

Java SE version:

- Parent
 - undefined (will be changed with 2.2.0 to 11 release)
- specification
 - undefined (will be changed with 2.2.0 to 11 release and bundle)
- API (will be changed with 2.2.0 to 11 release and bundle)
 - 8 (release)
 - 9 (release module-info.java)
 - 8 (target)
 - ? (bundle)
 - 9+ (build)

Issues:

- TCK is missing
- Inconsistent naming
- API depends on out-dated and compile dependency for [Jakarta Annotation\(s\)](#)
- CVEs https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- check for dependency and plugin dependency updates

2.1.1

Issues:

- Patch Release
 - Patch CVEs
- Potential cherry-picking required

2.2.0-RC1

TBD

Issues:

- Minor Release - but should be a Major Release!
 - Patch CVEs
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580 patched
- Plugin updates
- Defining Java SE 11 release
- Tag <https://github.com/jakartaee/interceptors/releases/tag/2.2.0-RC1-RELEASE>

2.2.0

Issues:

Plan Release

2.2.13. Jakarta JSON (Processing)

Project: <https://projects.eclipse.org/projects/ee4j.jsonp>

Source: <https://github.com/jakartaee/jsonp-api> (specification, API and TCK)

2.1.1

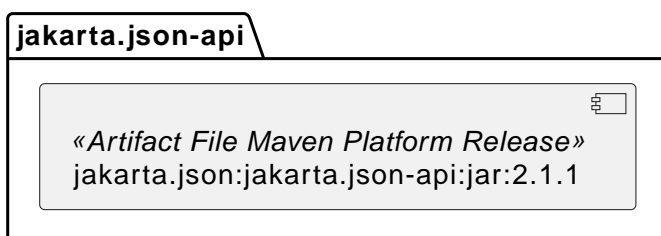


Figure 29. Jakarta JSON API 2.1.1 actual

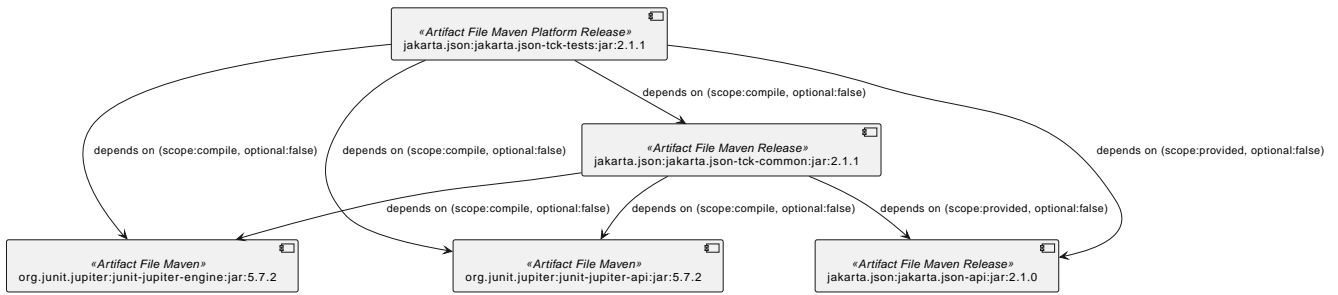


Figure 30. Jakarta JSON TCK Tests 2.1.1 actual

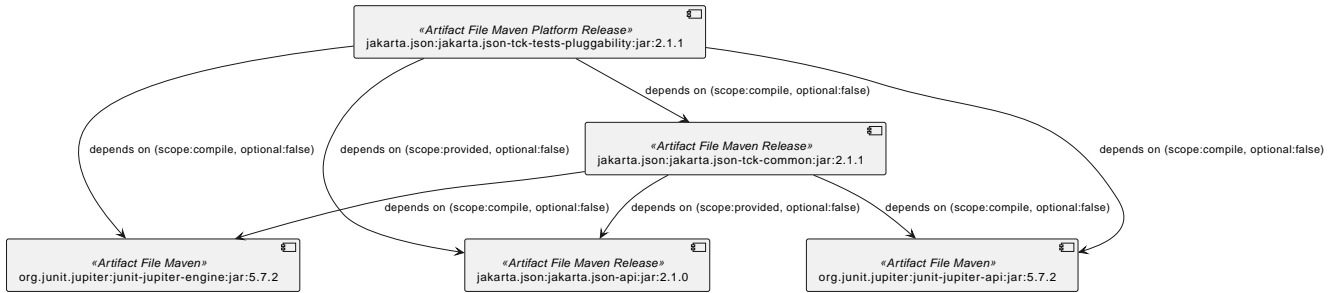


Figure 31. Jakarta JSON TCK Tests Pluggability 2.1.1 actual

Java SE version:

- specification
 - 8+ (build)
- API
 - 8 (release)
 - 9 (release module-info.java)
 - 11+ (build)
- TCK
 - 11 (source, target)
 - 11+ (build)

Issues:

- Non-consistent naming
- No parent defined
- CVEs https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- Repo naming issue (jsonp-api contains specification and TCK too)

2.1.2

TBD

Issues:

- Patch Release <https://github.com/jakartaee/jsonp-api/releases/tag/2.1.2-RELEASE>
 - Plugin and Java SE Version build updates, spec omitted

- Other bug fixes

2.1.3

Issues:

- Patch Release
 - Patch CVEs

2.2.14. Jakarta JSON Bind(ing)

Project: <https://projects.eclipse.org/projects/ee4j.jsonb>

Source: <https://github.com/jakartaee/jsonb-api> (specification, API and TCK)

3.0.0

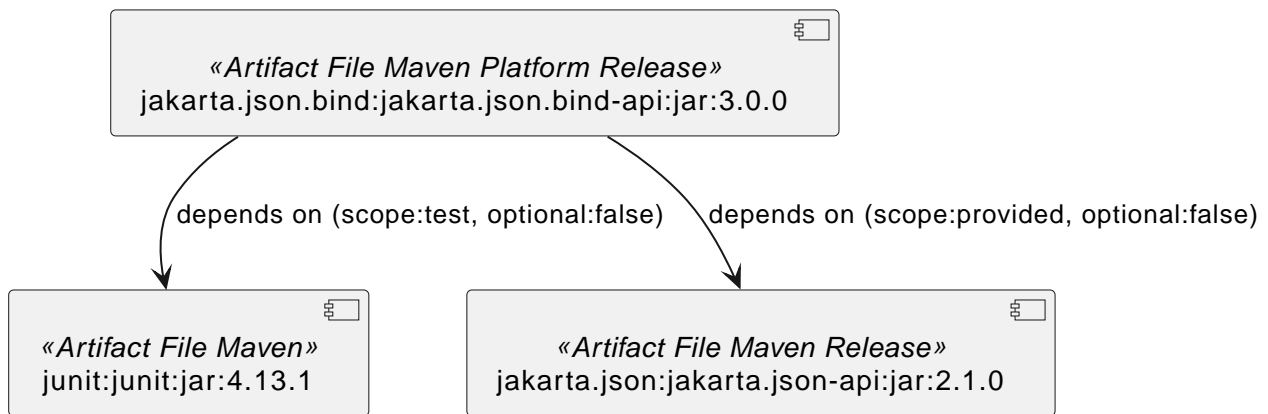


Figure 32. Jakarta JSON Bind API 3.0.0 actual

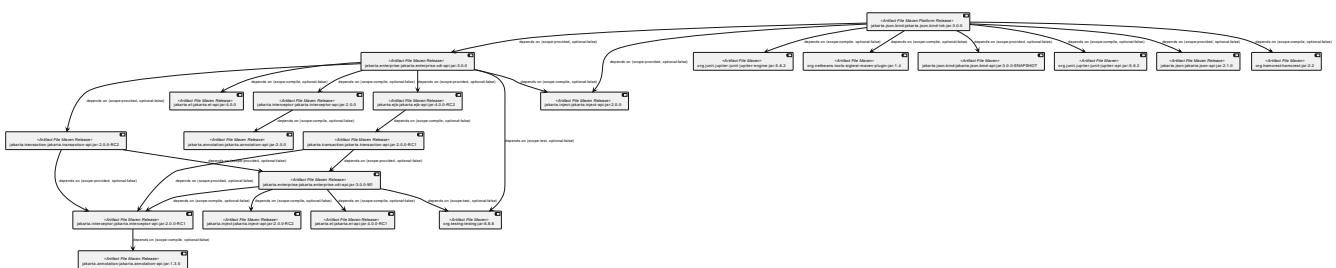


Figure 33. Jakarta JSON Bind TCK 3.0.0 actual

Java SE version:

- specification
 - 8+ (build)
- API
 - 11 (release)
 - 11+ (build)
 - 11 (javadoc)
- TCK

- 11 (source, target)
- 11+ (build)

Issues:

- Non-consistent naming
- No parent defined
- TCK uses out-dated CDI 3.0.0!
- TCK uses snapshot version of API!
- Signature test deactivated?
- CVEs
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- check for dependency and plugin dependency updates

3.0.1

Issues:

- Patch Release
 - Patch CVEs
- Fix TCK dependencies?

2.2.15. Jakarta REST(ful Web Services)

Project: <https://projects.eclipse.org/projects/ee4j.rest>

Source: <https://github.com/jakartaee/rest> (specification, API and TCK)

3.1.0/3.1.3

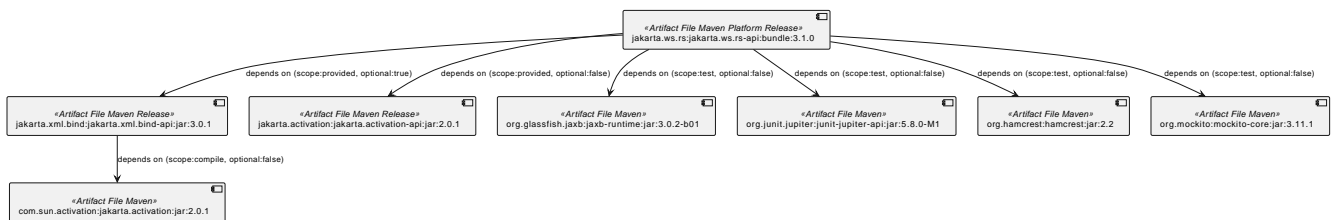


Figure 34. Jakarta REST API 3.1.0 actual



Figure 35. Jakarta REST API JAR 3.1.0 actual



Bug: Existing dependencies (like to [Jakarta Authentication](#) are not shown here!

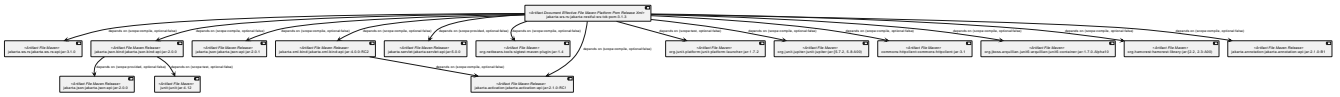


Figure 36. Jakarta REST TCK 3.1.3 actual on Staging

Java SE version:

- specification
 - undefined
- API
 - 11 (release)
 - 11+ (build)
- TCK
 - 11 (source, target)
 - 11+ (build)

Issues:

- Non-consistent naming
- Parent is called **all**
- Spec is not configured as default module on parent POM
- API uses packaging **bundle**
- TCK is not available on Maven Central
- TCK references out-dated repo for issue management
- Version ranges are used
- Out-dated versions in dependencies, where some where fixed after the release, i.e.:
 - TCK JSON Bind 2.0.0 as compile dependency - Major Release difference!
 - TCK Servlet 5.0.0 as provided dependency - Major Release difference!
 - API Activation 2.0.1 as provided - Minor Release difference!
 - API XML Bind 3.0.1 as provided, optional dependency - Major Release difference!
 - API XML Bind implementation 3.0.2-b01 as test dependency
 - API Mockito Core 3.11.1 → 5.4.0 as test dependency - two Major Releases difference!
 - API others...
- CVEs
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- FIXME: Run jQA on TCK
 - Run jQA on API → done

- check possible wave impact → none (manually checked)!
- update TCK dependencies in umbrella specs → done
- create jQA issue for packaging **bundle**
- check for dependency and plugin dependency updates

3.1.1/3.1.4

Issues:

- Patch Release
 - Patch CVEs

4.0.0

Issues:

- Plan Review

2.2.16. Jakarta Security

Project: <https://projects.eclipse.org/projects/ee4j.security>

Source: <https://github.com/jakartaee/security> (specification, API and TCK)

3.0.0

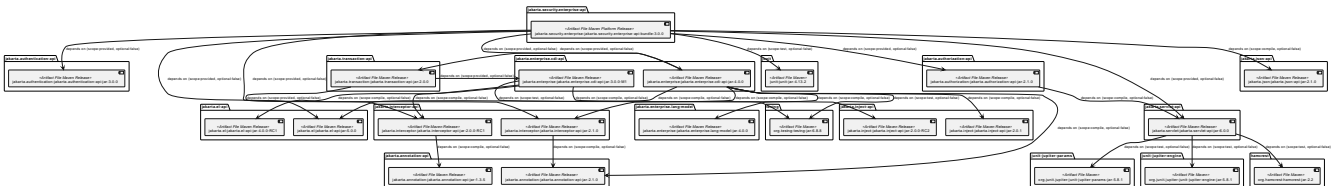


Figure 37. Jakarta Security API 3.0.0 actual



Figure 38. Jakarta Security API 3.0.0 JAR actual



Bug: Existing dependencies (like to [Jakarta Authentication](#) are not shown here!

Java SE version:

- 11 (source, target and in TCK release)
- 11+ (build)

Issues:

- CVEs
 - https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
 - jsoup (1.15.3 → 1.16.1, [CVE-2023-26049](#) and [CVE-2023-26048](#))
 - arquillian-protocol-servlet → arquillian-protocol-servlet-jakarta (1.7.0.Final)
 - [CVE-2023-26049](#)
 - [CVE-2023-26048](#)
 - [CVE-2021-34428](#)
 - [CVE-2019-10247](#)
 - [CVE-2019-10241](#)
 - [CVE-2017-7658](#)
 - [CVE-2017-7657](#)
 - [CVE-2017-7656](#)
 - [CVE-2015-2080](#)
- API depends on Platform spec [Jakarta Authorization](#)
- API uses packaging **bundle**
- API uses out-dated dependencies (i.e. CDI)
- TCK uses out-dated dependencies (i.e. nimbusds-jose-jwt, jsoup)
- TCK dependency versions not managed (i.e. arquillian-*)
- TCK is not configured as module on root
- TCK uses strange Maven coordinates (!)
- FIXME: Run jQA on TCK
 - Run jQA on API → done
 - check possible wave impact → changes required (manually checked)!
 - update TCK dependencies in umbrella specs → done
 - create jQA issue for packaging **bundle**

3.0.1

Issues:

- Patch Release
 - Patch CVEs
- Fix TCK dependencies

4.0.0

Issues:

- Plan Review
- Website out-dated

2.2.17. Jakarta XML Bind(ing)

Project: <https://projects.eclipse.org/projects/ee4j.jaxb>

Source:

- <https://github.com/jakartaee/jaxb-api> (specification and API)
- <https://github.com/jakartaee/jaxb-tck> (TCK)

4.0.0

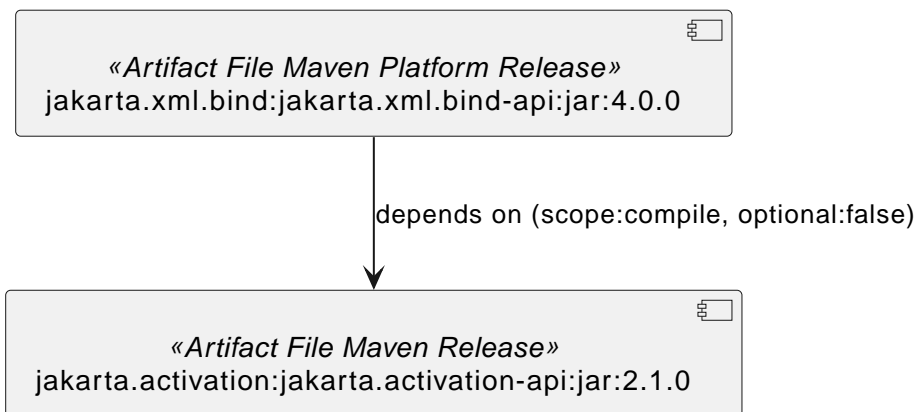


Figure 39. Jakarta XML Bind API 4.0.0 actual

Java SE version:

- Specification
 - 11+
- API
 - 11+
 - ? (javadoc, bundle)
- TCK
 - 11, 12, 13, 14, 15 or 16 (regarding [commit message](#))

Issues:

- Non-consistent naming
- CVEs https://bugs.eclipse.org/bugs/show_bug.cgi?id=581580
- TCK README.md is out-dated (regarding Java SE version)
- TCK is not available on Maven Central
- TCK is still script based
- TCK tck.properties points to version 3.0

- check for dependency and plugin dependency updates

4.0.1

Issues:

- Patch Release
 - Patch CVEs

Chapter 3. MicroProfile

<https://microprofile.io>

Project: <https://projects.eclipse.org/projects/technology.microprofile>



MicroProfile is organized within one single Eclipse Foundation Project. The specifications using a Maven multi-module setup with a common parent as default.

3.1. MicroProfile Umbrella Specifications

3.1.1. MicroProfile (Platform)

Source: <https://github.com/eclipse/microprofile> (specification only)

6.0.0

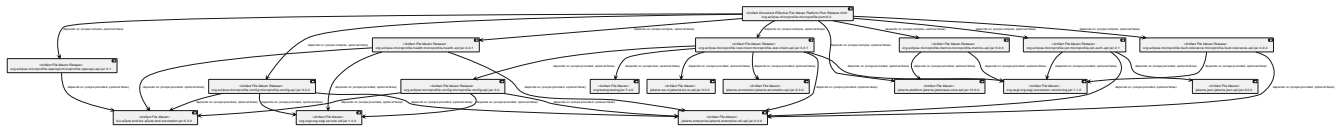


Figure 40. MicroProfile POM 6.0.0 actual

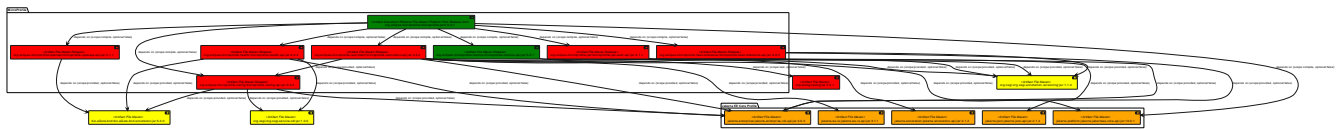


Figure 41. MicroProfile POM 6.0.1 target

TBD:

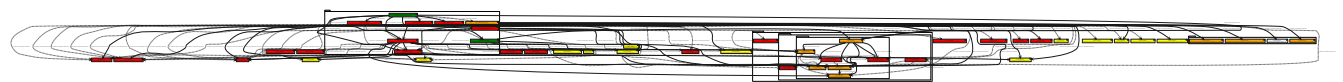


Figure 42. MicroProfile POM 6.0.1 target including TCK dependencies

3.2. MicroProfile Component Specifications

3.2.1. MicroProfile Config

Source: <https://github.com/eclipse/microprofile-config>

3.0.3

- TCK MP Config version is outdated
- TCK Jakarta EJB is not part of Jakarta Core Profile
- TCK Jakarta EJB version is outdated
- TCK contains Jakarta CDI 3.0.0 (!) dependency to API additionally
- TCK Jakarta REST version is outdated
- TCK contains Jakarta JSON 2.0.0 (!) dependency to API additionally
- TCK Jakarta REST version is outdated Non-semver versioning scheme

3.2.5. MicroProfile Metrics

Source: <https://github.com/eclipse/microprofile-metrics>

5.0.0

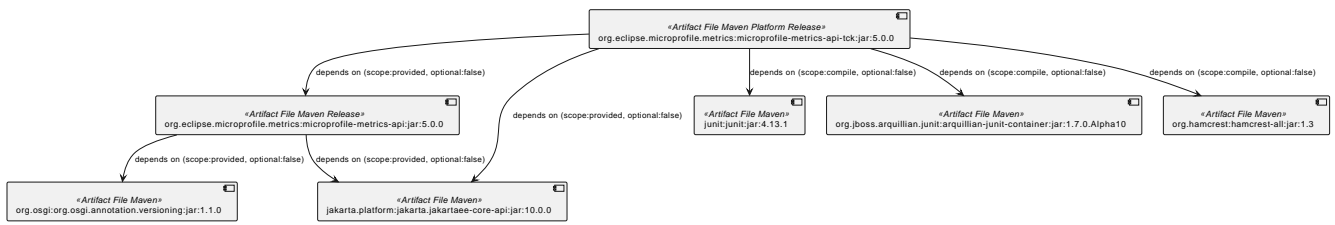


Figure 51. MicroProfile Metrics API 5.0.0 actual

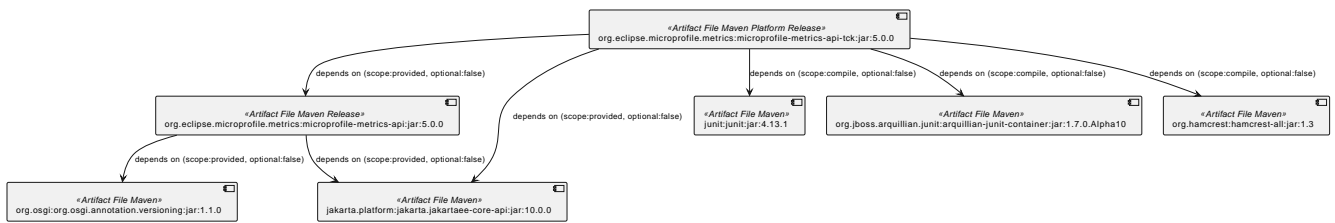


Figure 52. MicroProfile Metrics API TCK 5.0.0 actual

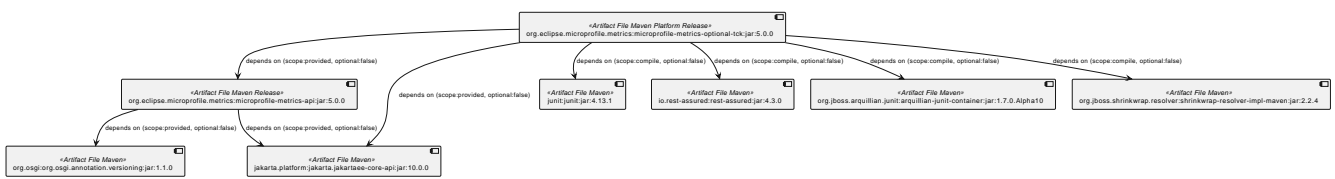


Figure 53. MicroProfile Metrics Optional TCK 5.0.0 actual

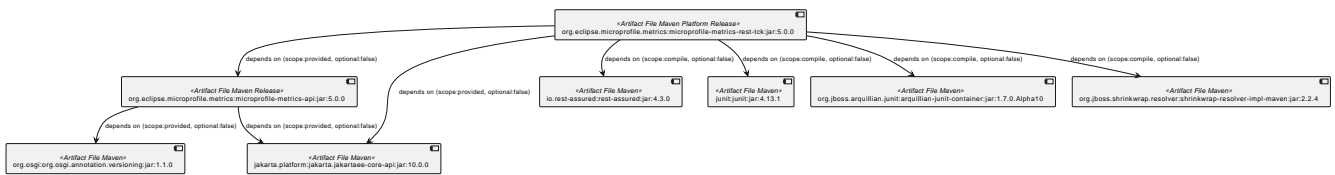


Figure 54. MicroProfile Metrics REST TCK 5.0.0 actual

Issues:

- API contains outdated dependency
- TCK contains Jakarta Core Profile 10.0.0 dependency to API additionally
- TCK contains outdated dependencies

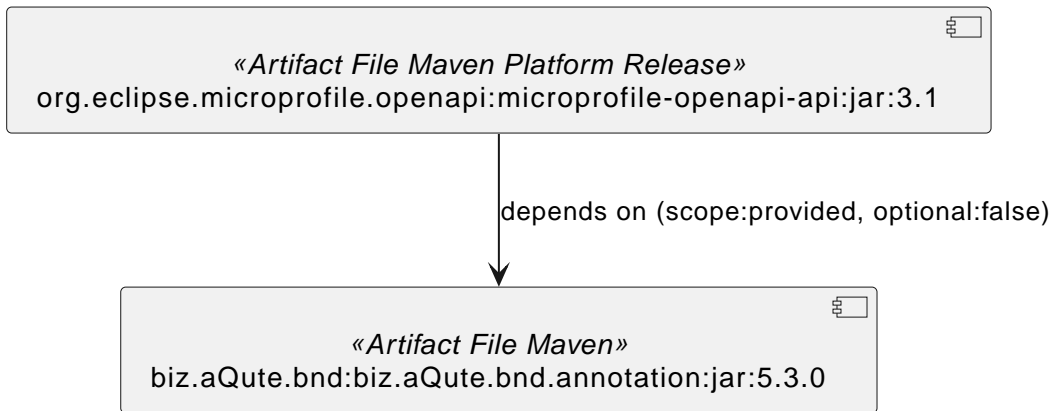


Figure 57. MicroProfile OpenAPI API 3.1 actual

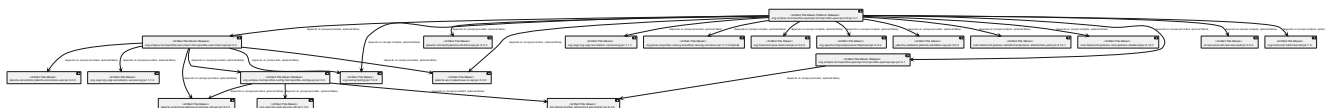


Figure 58. MicroProfile OpenAPI TCK 3.1 actual

Issues:

- TCK Java Hamcrest package must be replaced with it's successor Hamcrest
- TCK Jakarta Validation is not part of the Core Profile
- TCK Jakarta Validation version is outdated
- TCK Jakarta REST dependency version is outdated
- TCK MP REST Client version is outdated
- Jackson dependencies scope deviates
- TCK OSGi Annotation Versioning version is outdated
- TCK contains outdated dependencies

3.2.8. MicroProfile Telemetry (Tracing)

Source: <https://github.com/eclipse/microprofile-telemetry>

1.0.0



This specification has no API artifact (yet), as the API of OpenTelemetry is used directly.

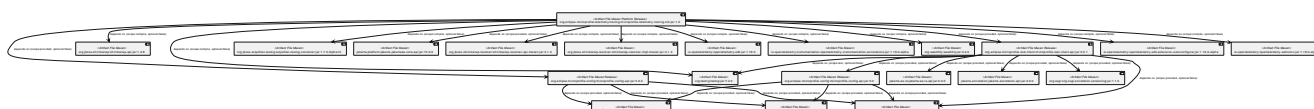


Figure 59. MicroProfile Telemetry Tracing TCK 1.0.0 actual

Issues:

- TCK contains compile dependencies to OpenTelemetry