



Maven 3 New Features

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Wer bin ich?

Software-Entwickler und Architekt

Trainer und Coach

Autor und Sprecher





Märkte

- Java
- SOA
- ORACLE
- BI/DWH
- Outtasking



Kunden

- Branchen-
übergreifend
- Über 600
Kunden

Industrie / Versorger /
Telekommunikation 38%



39%
Öffentliche Auftraggeber /
Banken & Versicherungen /
Vereine & Verbände

Leistungs- angebot

- IT-Strategie
- Beratung
- Implementierung
- Betrieb
- Training



Fakten

- Gründung 1990
- 400 Mitarbeiter
- 8 Standorte in
D/P/CH



Wer sind Sie?



Was ist Maven?

Ein deklaratives Build-System
Convention over Configuration
Wiederverwendung durch Plugins
Dependency Management

Ein Tool für technisches Projekt-Reporting

ein „Software Project Management Tool“



Was ist Maven?

Ein Open-Source-Projekt bei Apache

Ziel:

Vereinheitlichen von
Build, Verteilung, Projekt-Webseite

Zweck:

Don't repeat yourself!

Siehe auch <http://maven.apache.org/what-is-maven.html>



Release-Historie

1.0 Beta	2003
1.0	2004 / Juli
2.0 Alpha	2005 / April
2.0 Beta	2005 / September
2.0	2005 / Oktober
3.0 Alpha	2009 / Februar
3.0 Beta	2010 / April

8. Oktober 2010: Maven 3.0

Quelle: <http://archive.apache.org/dist/maven/binaries/>



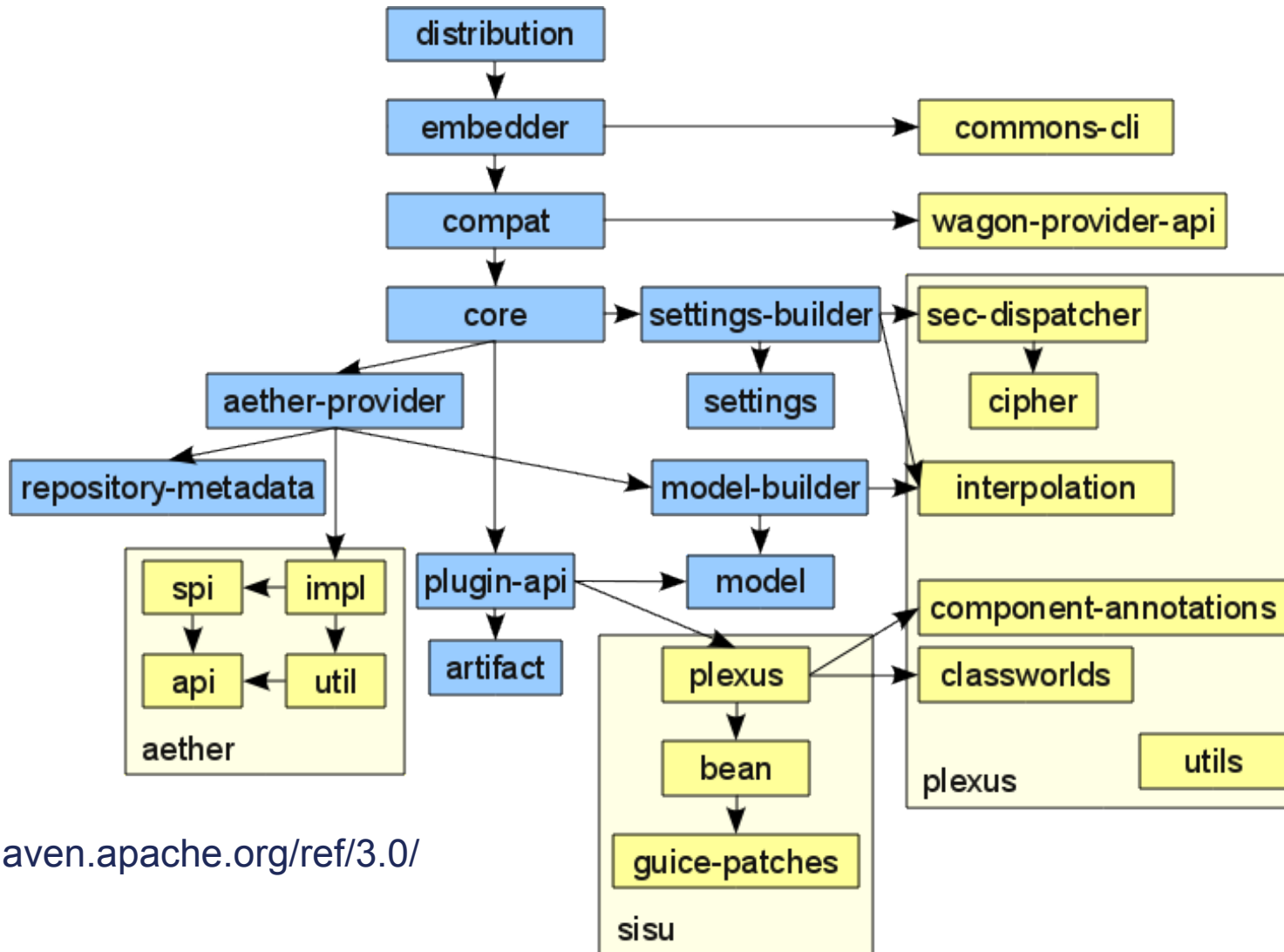
Primäre Ziele für Maven 3.0

Refactoring der Code Base

Interne Modularisierung



Modularisierung



Quelle:
<http://maven.apache.org/ref/3.0/>



Primäres Anliegen

Backward Compatibility

Dafür viele Integrationstests

Siehe <https://grid.sonatype.org/ci/view/Maven/job/maven-3.0.x-ITs/>



Compatibility Notes

<https://cwiki.apache.org/MAVEN/maven-3x-compatibility-notes.html>

No more profiles.xml

Support for profiles outside of the POM
or the settings.xml has been removed

Advise: move affected profiles into settings.xml

(Hint: `mvn --settings some/settings/file.xml`)



Compatibility Notes

Stricter POM Validation

More Errors

More Warnings

Explanations based on Exceptions

Links to Maven Wiki

<https://cwiki.apache.org/confluence/display/MAVEN/Errors+and+Solutions>



Compatibility Notes

Dependency Resolution from Local Repository

builds can only access locally cached artifacts if they have the proper repositories configured

(Maven 3 keeps track of artifact origin)



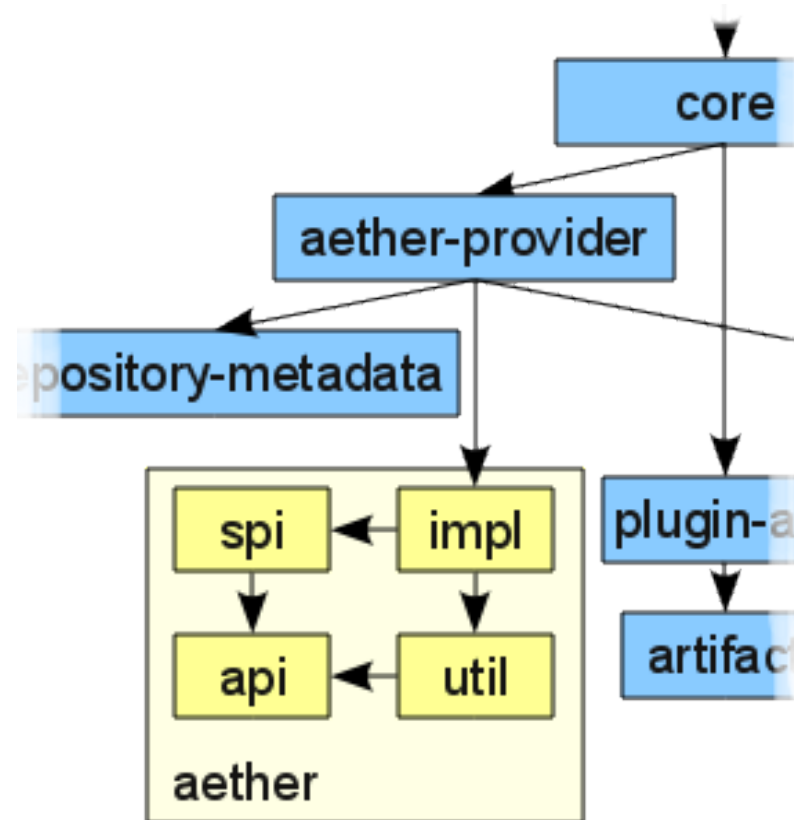
Einschub: Aether

A library for interacting with artifact repositories

Local / Remote Repositories
Workspaces
Transport
Artifact Resolution



Einschub: Maven benutzt Aether



Einschub: Aether – Ziele

„We want to ensure that projects building with SBT, Leinigen, Gradle, Buildr, Ant, or a homegrown system interoperate reliably with Maven repositories.“

Jason van Zyl, Aether questions answered for JAX



Compatibility Notes

Class Path Issues

Maven 3 using Aether
can result in different class paths

Warning: `mvn dependency:tree`
still uses legacy resolution code!

(Hint: use `mvn --debug`)



Compatibility Notes

Plugin Repositories

Build extensions, plugins and plugin dependencies
are only resolved from `<pluginRepositories>`

(and no longer from `<repositories>`)



Compatibility Notes

Plugin Version Resolution

automatic plugin version resolution
is scheduled for removal

Till then: latest *release* version is used,
not latest *snapshot* version



Compatibility Notes

Snapshot Deployments

snapshot artifacts will always be deployed
using a timestamped version

`<uniqueVersion>>false</uniqueVersion>` has no effect)



Compatibility Notes

Site Generation

All reporting related code
has been removed from Maven core

Therefore one must use Maven Site Plugin 3.x

Siehe <https://cwiki.apache.org/MAVEN/maven-3x-and-site-plugin.html>



Compatibility Notes

Configuration of reporting plugins

plugin configuration in `<reporting>`
no longer affects plugins in `<build>`

(when executing a plugin during build lifecycle or from cli,
only configuration from `<build>` is considered)



Plugin Compatibility

Plugin Compatibility Matrix

<https://cwiki.apache.org/MAVEN/maven-3x-plugin-compatibility-matrix.html>

Reporting Plugins Compatibility Matrix

<https://cwiki.apache.org/MAVEN/maven-3x-and-site-plugin.html>



Maven Shell

<http://shell.sonatype.org/>

<https://docs.sonatype.org/display/MVNSH/Home>

CLI for Maven

standalone Java process

keeps POMs in memory for faster builds

replaces maven-cli-plugin



Performance

	mini			small		
	2.2.1	3.0 Beta 3	Shell 0.10	2.2.1	3.0 Beta 3	Shell 0.10
clean	1	0,795	0,715	1	0,942	0,803
1. install	4	4,007	3,550	9	8,916	7,286
2. install	3	3,072	1,835	7	6,584	4,715
3. install	3	3,634	1,856	7	6,683	4,239



Performance: Parallel builds

<https://cwiki.apache.org/confluence/display/MAVEN/Parallel+builds+in+Maven+3>

Experimental Feature since 3.0 Beta 1

```
mvn -T 4 clean install      # Builds with 4 threads
mvn -T 1C clean install    # 1 thread per cpu core
mvn -T 1.5C clean install  # 1.5 thread per core
```

„20-50% speed improvement is quite common“

Depends on distribution of tests



Maven 3 und IDEs

**Major Java IDEs already include
(some version of) Maven 3**

Eclipse via m2eclipse, IntelliJ, NetBeans

Still no support by Oracle JDeveloper



Maven 3 und CI-Systeme

Hudson

No support for Maven 3 yet, vote for
<http://issues.hudson-ci.org/browse/HUDSON-4988>

Work Around: Free Style Projects

Shell Command:

```
export M2_HOME=/path/to/apache-maven-3.0-beta-3
export M2=$M2_HOME/bin
export PATH=$M2:$PATH
cd someproject
mvn clean install
```



Maven 3 und CI-Systeme

Teamcity

No Support in Teamcity 5
Support announced for Teamcity 6



Maven 3 und Sonar

Sonar 2.2 supports Maven 3

But you need to use sonar-maven3-plugin:2.2
(`mvn org.codehaus.sonar:sonar-maven3-plugin:2.2:sonar`)

Siehe <http://www.sonatype.com/people/2010/08/maven-3-and-sonar/>



Polyglot Maven

<http://polyglot.sonatype.org/>

Bringing the power of JVM language diversity, DSLs, and terse markup languages to Maven



This is not your father's Maven. If you're looking to leverage the power of Maven through modern JVM language implementations like Groovy, Scala, Clojure and JRuby then you've come to the right place.

Some of the languages we are trying to provide first-class support for!



Groovy DSL.

[READ MORE](#)



Scala DSL.

[READ MORE](#)



Clojure DSL.

[READ MORE](#)



Ruby DSL.

[READ MORE](#)

We're not forgetting about the terse markup users have been asking for. We only have support for YAML right now, but you can easily add more!



Ausblicke

m2eclipse will move to eclipse.org

Release of m2eclipse 1.0 „soon“

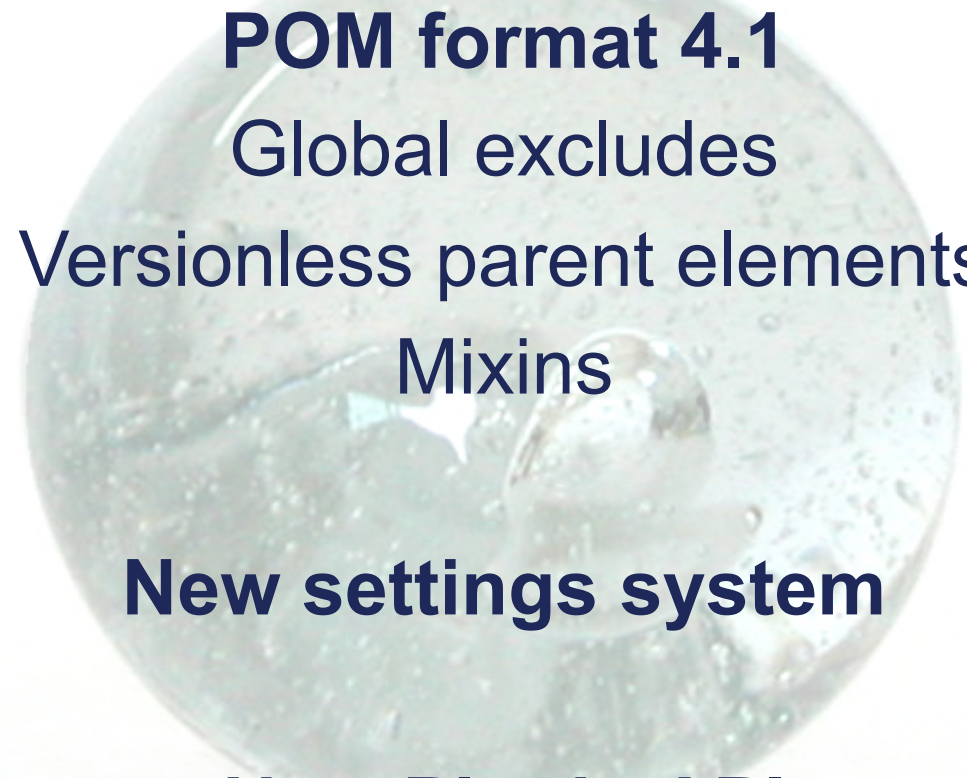
Release of mvnsh „fairly soon“

new phase of work on Polyglot Maven

OSGi runtime in future release



Ausblicke: Maven 3.1



POM format 4.1
Global excludes
Versionless parent elements
Mixins
New settings system
New Plugin API



Ausblicke - Quellen

<http://java.profect.nl/presentaties/maven.pdf>

<http://www.sonatype.com/people/2010/10/maven-3-0-has-landed/>

<http://www.infoq.com/news/2010/10/maven-3-0-released>



Fazit

„We see this as a new beginning for Maven“

Jason van Zyl



Fragen und Antworten



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