

Jakarta EE

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Introductions

- Mark Thomas
- Tomcat committer since 2003
- ASF member since 2007
- markt@apache.org
- ASF, Eclipse, VMware



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History



History

- Java EE
 - Collection of individual specifications
 - Platform specification
- Java Community Process
 - Produced the specifications
 - Each specification had a lead and an expert group
 - Essentially Oracle controlled
- Open source (mostly)

History

- Technology Compatibility Kit
 - TCK
 - Used to demonstrate compliance with the specification
 - Restrictively licensed
- In 2017 Oracle announce donation of Java EE
 - Eclipse
 - Becomes Jakarta EE

History

- Java EE 8
 - 2017/08
 - Java 8
- Jakarta EE 8
 - Identical to Java EE 8
 - Just a rebrand
 - 2019/09
 - A lot of behind the scenes admin

History

- Jakarta EE 9
 - 2020/12
 - Packages renamed from javax... to jakarta...
 - Java 8
- Jakarta EE 9.1
 - 2021/05
 - No functional changes
 - Added Java 11

Present

- Jakarta EE 10
 - 2022/H2
 - Java 11 and 17
 - First release with functional changes



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Specifications

Specifications



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- Servlet
- Pages (JSPs)
- Expression Language
- WebSocket
- Authentication (JASPIC)
- Annotations



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Servlet 6.0

Servlet 6.0

- Deprecated classes and methods removed
 - SingleThreadModel
 - HttpSessionContext
 - HttpUtils
- Cookies
 - RFC 6265
 - Generic attribute support

Servlet



- URI normalization and decoding
 - Suspicious URIs / . . ; /
- Container responsible for handling HEAD requests
 - legacy mode still available
- • Request and connection identifiers
- • Relax wrapping requirements
- • Various clarifications



Pages 3.1

Pages 3.1

- PropertyNotFoundException for unknown EL
- identifier
- Deprecations
 - EL alignment
 - isThreadSafe (SingleThreadModel)
 - jsp:plugin



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Expression Language 5.0



Expression Language 5.0

- Generics
- Usage improvements
 - Default method support for BeanELResolver
 - Array coercion
- Clarify method matching rules
 - Standard Java plus coercion
- Coerce LambdaExpression to FunctionalInterface invocation

Expression Language 5.0



- Deprecate `getFeatureDescriptors()`
 - JPMS remove `java.desktop` dependency
- Add `MethodReference` class
- `ELResolver.getType()` changes
 - Must return null if resolved property is read-only.
 - Changes `StaticFieldELResolver`



WebSocket 2.1

WebSocket 2.1



- Client TLS configuration
 - SSLContext
- Remove register at deployment only restriction
- Packaging improvements
 - JPMS
- Clarifications



Others

Others

- Annotations
 - Added @Nullable and @Nonnull
 - Minor changes
- Authentication
 - Simplify the typical case



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Jakarta EE 11

Jakarta EE 11

- Remove SecurityManager
- Servlet
 - Low level HTTP API
 - Lots of clarifications
 - Minor improvements
- JSP
 - Remove deprecated code

Jakarta EE 11

- Expression Language
 - Remove deprecated code
 - Usage improvements
- WebSocket
 - Clarifications
 - Interaction with Servlet and originating HTTP request
 - Enhancements

Jakarta EE 11

- Annotations
 - Not known
- Authentication
 - Possible merger with Authorization

THANK YOU

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<https://tomcat.apache.org/>

A dark blue silhouette of a city skyline is positioned at the bottom of the slide, featuring various building shapes and heights against the lighter blue background.