Building CDI Extensions using Apache DeltaSpike

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What does CDI (Contexts and Dependency Injection) do for us?

Context

Manage a bean's lifecycle

Bind a bean to a context

Dependency

Discover and resolve

Bean Metadata

Loose coupling

Injection

Injection
Strong typing

Life without CDI

constructor injection

setter injection

string based injection (Seam 2 / Spring)

JNDI lookups

Session / Request lookup and storage

Tight coupling to 3rd party libraries

Life with CDI

Minimal configuration

Compiler checked mistakes

Fail fast at deploy time

Standardized Injection

Multiple scopes

Very loose coupling to 3rd party libraries

How does CDI improve the Development Experience?

Easy & smooth ramp up

Great Tooling support

NetBeans

JBoss Tools

IntelliJ IDEA

Simplicity

```
@Inject
@Produces
```

Useful at every stage

Development

Testing -- Arquillian

Production

Alternatives,

Specialization

Improve Productivity

Interceptors

Decorators

Events

Quick Feedback

Wait! There's more

The best part is what isn't there

Photo Credit "Granddad's suitcase" is Copyrighted by Flickr user: Martin Thomas under the Creative Commons Attribution license.

What can CDI Extensions do?

Register additional beans

Satisfy Injection Points

Create new Scopes and backings
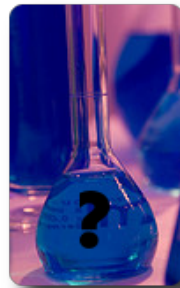
Modify Bean metadata

What is the secret ingredient?

Deploy Application

Before Bean Discovery

add scope   add interceptor binding

add annotated type   add stereotype

add qualifier

Scan Archives

Process Annotated Types

veto bean candidate

replace annotated type

Process Injection Targets

replace injection targets

Process Beans

prepare additional beans

Process Producer

modify producer

Process Observer

After Bean Discovery

add bean

add observer method

add context

After Deployment Validation

assessment

Application Running

Before Shutdown

Undeploy Application

Apache DeltaSpike

**We believe the community can create
awesome extensions and easily
share them**

These extensions close the gaps

History

Apache MyFaces CODI

Seam 3

History (cont)

December 2011 - Entered Apache Incubation

February 2012 - Released v0.1-incubating

Releasing often ~2 months

Contributors - Companies

Red Hat	**SoftwareMill**
Oracle	**CDI Source**

Contributors - Individuals

Andy Gibson

Antoine Sabot-Durand

Arne Limburg

Cody Lerum

David Blevins

George Gastaldi

Gerhard Petracek

Jakob Korherr

John Ament

Mark Struberg

Matthias Wessendorf

Pete Royle

YOU!

Testing is a priority

unit

integration w/ Arquillian

Compatibility taken seriously

Weld

Open WebBeans

Resin (Coming soon)

AS7

WebLogic 12c

Glassfish

TomEE

WebSphere

Status

v0.1-incubating

  SE compatible

  Utilities

  Author tools

v0.2-incubating: releasing ~1-2 weeks

  Security

  Exception Handling

  Additional core features

BeanProvider

BeanManagerProvider

Extension Activation

Bean Exclude

Stages

AnnotatedTypeBuilder

Resources

Mailing lists

```
deltaspike-users@incubator.apache.org
deltaspike-dev@incubator.apache.org
deltaspike-commits@incubator.apache.org
```

Git - https://git-wip-us.apache.org/repos/asf/incubator-deltaspike.git

JIRA - https://issues.apache.org/jira/browse/DELTASPIKE

Wiki - https://cwiki.apache.org/confluence/display/DeltaSpike

```
@deltaspiketeam
```
#deltaspike on freenode

DEMO

Q&A