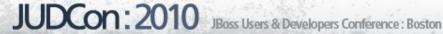
# JUDION JBoss Users & Developers Conference Boston: 2010

### Real Java EE Testing

with Arquillian & ShrinkWrap







#### Agenda

- Introduction
- ShrinkWrap
- Arquillian
- Demos
- Supported containers
- Future
- Q&A and swag!





#### Introduction

- Unit testing EE
- Integration testing EE





# What if integration testing could be;

- as easy as writing Unit tests
- done without the Big Bang effect
- done without a complete system build
- done with component isolation control



#### ShrinkWrap

- Programmatic archive creation
- Simple fluent API
- IDE incremental compilation
  - Save and re-run
  - Skip the build
- Micro deployment



#### ShrinkWrap API

```
ShrinkWrap.create("test.jar", JavaArchive.class)
         .addClasses(
                  GreetingManager.class,
                  GreetingManagerBean.class);
ShrinkWrap.create("test.war", WebArchive.class)
         .addPackage(
                  ProxyTest.class.getPackage());
ShrinkWrap.create("test.ear", EnterpriseArchive.class)
         .addModule(
                  ShrinkWrap.create("test.jar", JavaArchive.class)
                            .addPackage(BootstrapTest.class.getPackage()));
ShrinkWrap.create("test.rar", ResourceAdapterArchive.class)
         .addLibrary(
                  ShrinkWrap.create("test.jar", JavaArchive.class)
                            .addPackage(TestConnectionFactory.class.getPackage()));
```





## Arquillian

- Multiple Test frameworks
- Multiple Run modes
- Multiple Enrichers
- Multiple Containers





#### **Arquillian API**

```
@RunWith(Arquillian.class)
public class MyTestCase
   @Deployment
   public static JavaArchive createDeployment()
         return ShrinkWrap.create("test.jar", JavaArchive.class)
                   .addClasses(
                            GreetingManager.class,
                            GreetingManagerBean.class);
   @EJB
   private GreetingManager greetingManager;
   @Test
   public void shouldBeAbleToGreetUser() throws Exception
         Assert.assertEquals(
                   "Hello" + userName,
                   greetingManager.greet(userName));
```





#### **Demos**

- Context & Dependency Injection (JSR-299)
- EJB (JSR-153, JSR-220, JSR-318)
- JMS (JSR-250, JSR-914)
- JAX-RS (JSR-311)
- **JSF** (JSR-314)





#### **Supported Containers**

- JBoss AS 5.0, 5.1 Remote & Managed
- JBoss AS 6.0 Remote, Managed & Embedded
- JBoss Reloaded Embedded
- JBoss JCA Embedded
- GlassFish 3.0 Remote & Embedded
- Weld SE Embedded & EE Mock Embedded
- Apache OpenWebBeans Embedded
- Apache OpenEJB Embedded





#### **Future**

- More containers
- CirrAS, JClouds
- Performance monitor
- Package-time class manipulation (Byteman, Javassist)
  - Exception, Callback, Assertion injection
- Component coverage
- Tooling JBoss Developer Studio
- Framework integration
  - Selenium, HTTPUnit, DBUnit, easyB















# HackFest

7:30pm - 2:00am





#### #testrevolution

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