



JUDCon

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



Q & A

Arquillian Swag



HackFest

7:30pm - 2:00am



#testrevolution

Aslak Knutsen
Red Hat

@aslakknutsen
aslak@redhat.com

Dan Allen
Red Hat

@mojavelinux
dallen@redhat.com

<http://jboss.org/arquillian>
<http://jboss.org/shrinkwrap>
[#jbosstesting](#) irc.freenode.net

