

**Seam JCR**

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# Seam JCR - Introduction

## 1.1. Introduction

The Seam JCR Module aims to simplify the integration points between JCR implementations and CDI applications.

The Seam JCR module is compatible with JCR 2.0 implementations. It strictly compiles against JCR 2.0. However, test cases are executed against both ModeShape and JackRabbit to ensure compatibility.

## 1.2. Maven dependency configuration

If you are using [Maven](http://maven.apache.org/) [http://maven.apache.org/] as your build tool, you can add the following single dependency to your pom.xml file to include Seam JCR:

```
<dependency>
  <groupId>org.jboss.seam.jcr</groupId>
  <artifactId>seam-jcr</artifactId>
  <version>${seam.jcr.version}</version>
</dependency>
```



### Tip

Substitute the expression `${seam.jcr.version}` with the most recent or appropriate version of Seam JCR. Alternatively, you can create a [Maven user-defined property](#) to satisfy this substitution so you can centrally manage the version.

Alternatively, you can use the API at compile time and only include the implementation at runtime. This protects you from inadvertently depending on an implementation class.

```
<dependency>
  <groupId>org.jboss.seam.jcr</groupId>
  <artifactId>seam-jcr-api</artifactId>
  <version>${seam.jcr.version}</version>
  <scope>compile</scope>
</dependency>

<dependency>
  <groupId>org.jboss.seam.jcr</groupId>
```

```
<artifactId>seam-jcr-impl</artifactId>  
<version>${seam.jcr.version}</version>  
<scope>runtime</scope>  
</dependency>
```

In addition to your Seam JCR dependencies, you must also declare a dependency on a JCR Implementation.

# Seam JCR - JBoss ModeShape Integration

## 2.1. ModeShape Integration Installation

In order to activate ModeShape support within your application, you need to include ModeShape on your classpath. At a minimum, the following maven dependencies must be satisfied.

```
<dependency>
  <groupId>org.modeshape</groupId>
  <artifactId>modeshape-jcr</artifactId>
  <version>${modeshape.version}</version>
</dependency>
<dependency>
  <groupId>org.apache.lucene</groupId>
  <artifactId>lucene-core</artifactId>
  <version>${lucene.version}</version>
</dependency>
```



### Tip

Substitute `${modeshape.version}` for the ModeShape version you are running against. Currently, Seam JCR tests against 2.5.0.Final. In addition, Lucene is required to run ModeShape. Please consult the ModeShape getting started guide for exact versions.

## 2.2. Usage

In order to use ModeShape's Repository and Session objects in your application, you must define an injection point using the `JcrConfiguration` annotation based on ModeShape's required configuration parameters. Please review the ModeShape getting started guide for further details.

```
@Inject @JcrConfiguration(name="org.modeshape.jcr.URL",value="file:path/to/
modeshape.xml?repositoryName=MyRepo")
Repository repository;
```

```
@Inject @JcrConfiguration(name="org.modeshape.jcr.URL",value="file:path/to/  
modeshape.xml?repositoryName=MyRepo")  
Session session;
```



# Seam JCR - JackRabbit Integration

## 3.1. JackRabbit Integration Installation

In order to activate JackRabbit support within your application, you need to include JackRabbit on your classpath. At a minimum, the following maven dependency must be satisfied.

```
<dependency>
  <groupId>org.apache.jackrabbit</groupId>
  <artifactId>jackrabbit-core</artifactId>
  <version>${jackrabbit.version}</version>
</dependency>
```



### Tip

Substitute `${jackrabbit.version}` for the JackRabbit version you are running against. Currently, Seam JCR tests against 2.2.4. Please review JackRabbit documentation to determine any additional dependencies.

## 3.2. Usage

In order to use JackRabbit's Repository and Session objects in your application, you must define an injection point using the `JcrConfiguration` annotation based on JackRabbit's required configuration parameters.

```
@Inject @JcrConfiguration(name="org.apache.jackrabbit.repository.home",value="target")
Repository repository;
```

```
@Inject @JcrConfiguration(name="org.apache.jackrabbit.repository.home",value="target")
Session session;
```



## Seam JCR - Event Mapping

Seam JCR provides functionality to fire CDI Events based on events found in JCR. The rules of how events are fired are based around the underlying implementation.



### Tip

You will not have an active JCR Session during the event firing, a new one will need to be created.



### Tip

Some JCR implementations, like Modeshape fires events on a separate thread, so probably you will get errors if your observer method is declared on a @RequestScoped object, for example.

To observe an event, use the @Observes and the additional qualifiers on seam-jcr-api module (Check package org.jboss.seam.jcr.annotations.events). If you need to watch any JCR event, then avoid using any Qualifier at all.

```
import javax.jcr.observation.Event;

public void observeAdded(@Observes @NodeAdded Event evt) {
    // Called when a node is added
}

public void observeAll(@Observes javax.jcr.observation.Event evt) {
    // Called when any node event occurs
}
```

