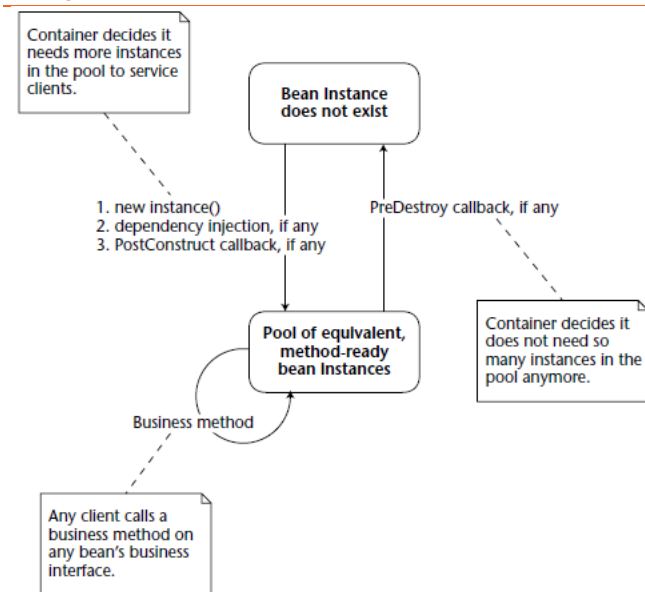
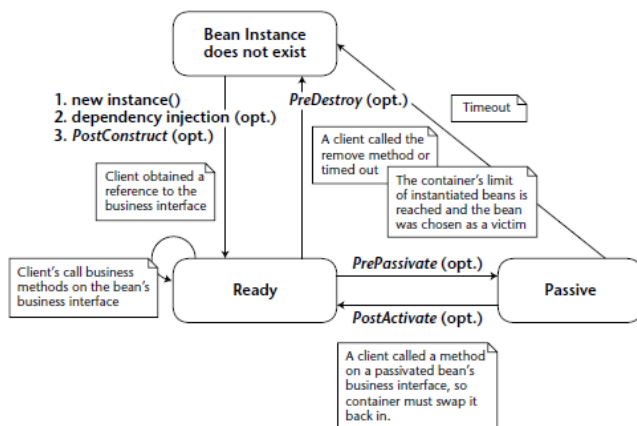


Lifecycle Callbacks



Stateless Session Bean



Stateful Session Bean

- Bean needs no-arg Constructor (Container loads Bean with `Class.getInstance()`)
- the same interface cannot be both Local and Remote
- On a `SystemException`, there is no call of the `PreDestroy` callback.
- `@Remove`, only on Stateful Beans, after finishing that method, Bean can be removed, if `retainIfException` is true, Bean is not getting removed on Exception

Annotations

- `@Stateless` or `@Stateful`
- `@Remote`
- `@Local`

Web Service

- Only on Stateless Beans, `@WebService`
- If `@WebMethod` given, only those methods over WS accessible, which has this Annotation
- `@WebMethod(operationName=...)` to overwrite name
- Special Interface for `WebService`, use `@WebService(endpointInterface=...)`
- Interface extends `java.rmi.Remote`

Timer Service

- Implements `javax.ejb.TimerObject` or `@Timeout`
- `Timer a = timerService.createTimer(1st occur, repeat after ms, Serializable to pass information)`
- On Stateless Beans, MDBs and 2.1 Entity Beans
- 2x `Cancel` → `NoSuchObjectException`

Interceptors

- `@Interceptors` on the Bean method
- `@AroundInvoke` on the Interceptor method
- Call of `InvocationContext.proceed()` needed
- Order: Default-Interceptor, Interceptors on outside class, on super classes, on own class.
- Default-Interceptor is `<ejb-name>*</ejb-name>`
- `@ExcludeDefaultInterceptor`
- Are also passivated in Stateful Beans

EJB 2.X

- Access to 2.X beans over Home Interface.
- `@EJB AHome ahome;`
`ahome.create();`

Deployment Descriptor

- DD does overwrite Annotations.
- But `@Stateful/@Stateless` cannot be overwritten.

```
<session>
  <ejb-name>EJBX</ejb-name>
  <pre-destroy>
    <lifecycle-callback-method>
      test
    </lifecycle-callback-method>
  </pre-destroy>

  <env-entry>
    <env-entry-name>numberOfX</env-entry-name>
    <env-entry-type>Integer</env-entry-type>
    <env-entry-value>99</env-entry-value>
  </env-entry>

  <resource-ref>
    <res-ref-name>jdbc/TestDB</res-ref-name>
    <res-type>javax.sql.DataSource</res-type>
    <res-auth>Container</res-auth>
    <res-sharing-scope>Shareable
  </res-sharing-scope>
  </resource-ref>

  <ejb-ref>
    <ejb-ref-name>ejb/EJBZ</ejb-ref-name>
    <ejb-ref-type>Session</ejb-ref-type>
    <injection-target>
      <injection-target-class>
        ch.sja.EJBX
      </injection-target-class>
      <injection-target-name>
        EJBX_reference
      </injection-target-name>
    </injection-target>
  </ejb-ref>
</session>

<assembly-descriptor>
  <interceptor-binding>
    <ejb-name>EJBX</ejb-name>
    <interceptor-class>Z</interceptor-class>
    <method-name>test</method-name>
  </interceptor-binding>
</assembly-descriptor>
```