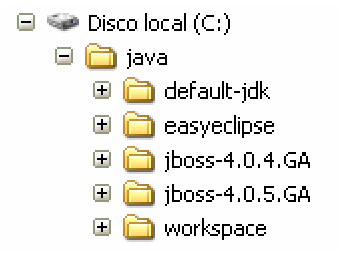
Tutorial JBOSS

Padrão de ambiente

Para garantir um ambiente de desenvolvimento homogêneo entre os desenvolvedores os seguintes diretórios deverão ser criados na máquina de desenvolvimento.



Descrição dos diretórios

default-jdk	Java development Kit
easyeclipse	EasyEclipse IDE
jboss-4.0.4.GA	JBoss Application Server
workspace	área de trabalho para armazenamento de projetos eclipse

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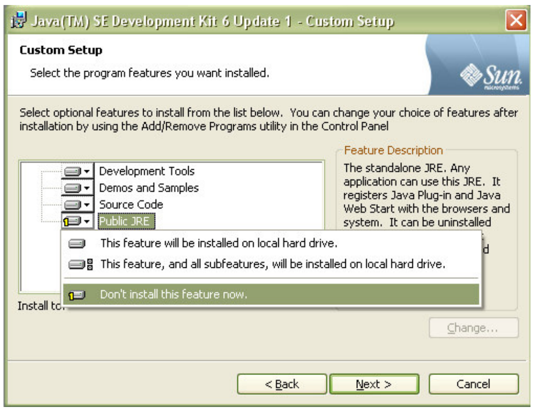
Tutorial JBOSS

Java JDK

Nome atualizado:	Java(TM) SE Development Kit 6 Update 1
Categoria:	Windows Platform - Java(TM) SE Development Kit 6 Update 1
Tipo:	Windows Offline Installation, Multi-language
Arquivo de instalação:	jdk-6u1-windows-i586-p.exe
Descrição:	The Java SE Development Kit (JDK) includes the Java Runtime Environment (JRE) and command-line development tools that are useful for developing applets and applications.
URL para download:	http://java.sun.com/javase/downloads/
Diretório de instalação:	C:\java\default-jdk
Data do registro:	20 de junho de 2007

Instruções:

1. É aconselhavel você remova todas as instalações de JRE ou JDK existentes no seu sistema antes de instalar uma nova.
2. Localize e faça do download do arquivo de instalação da última versão disponível.
3. Execute o instalador.
4. Na tela Custom setup selecione o item Development Tools e altere o caminho de instalação para que aponte para C:\java\default-jdk.
5. Em Public JRE opte por não instalar uma JRE pública.
6. Prosiga com a instalação até que o termino.



Java(TM) SE Development Kit 6 Update 1 - Custom Setup

Custom Setup

Select the program features you want installed.

Select optional features to install from the list below. You can change your choice of features after installation by using the Add/Remove Programs utility in the Control Panel

Development Tools
Demos and Samples
Source Code
Public JRE

This feature will be installed on local hard drive.
This feature, and all subfeatures, will be installed on local hard drive.
Don't install this feature now.

Feature Description

The standalone JRE. Any application can use this JRE. It registers Java Plug-in and Java Web Start with the browsers and system. It can be uninstalled

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EasyEclipse

Nome atualizado:	EasyEclipse Server Java
Categoria:	Windows Distribution
Arquivo de instalação:	easyeclipse-server-java-1.2.1.exe
Descrição:	EasyEclipse Server Edition contains lots of plugins to manage different application servers (Tomcat, JBoss, WebLogic), develop on some server-side frameworks (Struts, Java Server Faces), and manipulate common file types on servers (HTML, XML, JSPs).
URL para download:	http://www.easyeclipse.org/site/distributions/index.html
Release:	1.2.1
Diretório de instalação:	C:\java\easyeclipse
Data do registro:	20 de junho de 2007

Instruções:

1. Localize e faça o download do arquivo de instalação.
2. Na tela **Chose Install Location** altere o caminho de instalação para que aponte para C:\java\easyeclipse (Verifique que após selecionar o diretório, o instalador ira adicionar um novo subdiretório EasyEclipse Server Java 1.2.1 que deverá ser removido).
3. Execute o instalador.
4. Execute o eclipse.
5. Na primeira execução aparecerá uma janela solicitando o diretório para o espaço de trabalho. Aponte para o diretório C:\java\workspace anteriormente criado.

Apontando o eclipse para a JDK:

1. Localize e faça o download do arquivo de instalação.
2. Abra o menu **Window > Preferences** e na opção **Java > Installed JREs** adicione a JDK instalada em C:\java\default-jdk.
3. Selecione default-jdk para ser a instalação que será usada como build-path do eclipse.
4. Remova a entrada easyeclipse da lista.
5. Termine a configuração pressionando OK.
6. Encerre o eclipse.
7. Remova o diretório C:\java\easyeclipse\ jre da instalação.

Configurando o easyeclipse:

1. Efetue a instalação do JBoss (conforme este tutorial na seção **Instalação do JBoss**).
2. Em **window > preferences > server > installed runtimes** clique em no botão adicionar (add...).
3. Na janela **New Server Runtime** selecione **JBoss Inc > JBoss 4.0 Server Adapter Runtime**.
4. Prossiga para a próxima janela e localize o **Home Directory** do seu JBoss AS que deverá ser **C:\java\jboss-4.0.4.GA**.
5. Para Name (unique identifier) utilize o diretório do JBoss como identificador: **jboss-4.0.4.GA**.
6. Finalize pressionando OK.
7. Selecione a perspectiva JBoss AS.
8. Caso não seja apresentada a janela JBoss Server View abra a **opção window > show view > other... > Server > JBoss Server View**.
9. Posicione a janela no ambiente de trabalho de acordo com sua preferência.
10. Dentro da área da janela JBoss Server View clique com o botão direito do mouse e selecione **new > server** para criar um nova configuração de servidor JBoss.
11. Em server host name mantenha localhost.
12. Em server type selecione **JBoss Inc > JBoss AS 4.0**.
13. O Campo Server runtime deverá apontar para o servidor configurado no passo 2 até o 5: **jboss-4.0.4.GA**. Prossiga para a próxima janela.
14. Para Name (unique identifier) utilize o mesmo identificador **jboss-4.0.4.GA**.
15. Pressione Finish.

Iniciando o AS sob o easyeclipse:

1. Pressione o botão play da janela JBoss Server View.
   Todas as informações de startup e de execução que são normalmente apresentadas em console serão redirecionadas para o console do eclipse.

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Resultado apresentado no console:

```
15:43:46,015 INFO  [Server] Starting JBoss (MX MicroKernel)...
15:43:46,015 INFO  [Server] Release ID: JBoss [Zion] 4.0.4.GA (build: CVSTag=JBoss_4_0 (...)
15:43:46,031 INFO  [Server] Home Dir: C:\java\jboss-4.0.4.GA
15:43:46,031 INFO  [Server] Home URL: file:/C:/java/jboss-4.0.4.GA/
15:43:46,031 INFO  [Server] Patch URL: null
15:43:46,031 INFO  [Server] Server Name: default
15:43:46,031 INFO  [Server] Server Home Dir: C:\java\jboss-4.0.4.GA\server\default
15:43:46,031 INFO  [Server] Server Home URL: file:/C:/java/jboss-4.0.4.GA/server/default/
15:43:46,031 INFO  [Server] Server Log Dir: C:\java\jboss-4.0.4.GA\server\default\log
15:43:46,031 INFO  [Server] Server Temp Dir: C:\java\jboss-4.0.4.GA\server\default\tmp
15:43:46,031 INFO  [Server] Root Deployment Filename: jboss-service.xml
15:43:48,640 INFO  [ServerInfo] Java version: 1.6.0_01,Sun Microsystems Inc.
15:43:48,640 INFO  [ServerInfo] Java VM: Java HotSpot(TM) Client VM 1.6.0_01-b06,Sun (...)
                                                 .
                                            (prossegue)
                                                 .
15:44:30,750 INFO  [ConnectionFactoryBindingService] Bound ConnectionManager (...)
15:44:31,640 INFO  [A] Bound to JNDI name: queue/A
15:44:31,656 INFO  [B] Bound to JNDI name: queue/B
15:44:31,656 INFO  [C] Bound to JNDI name: queue/C
15:44:31,671 INFO  [D] Bound to JNDI name: queue/D
15:44:31,671 INFO  [ex] Bound to JNDI name: queue/ex
15:44:31,843 INFO  [testTopic] Bound to JNDI name: topic/testTopic
15:44:31,843 INFO  [securedTopic] Bound to JNDI name: topic/securedTopic
15:44:31,843 INFO  [testDurableTopic] Bound to JNDI name: topic/testDurableTopic
15:44:31,906 INFO  [testQueue] Bound to JNDI name: queue/testQueue
15:44:32,078 INFO  [UILServerILService] JBossMQ UIL service available at : (...)
15:44:32,265 INFO  [DLQ] Bound to JNDI name: queue/DLQ
15:44:32,625 INFO  [ConnectionFactoryBindingService] Bound ConnectionManager (...)
15:44:32,828 INFO  [TomcatDeployer] deploy, ctxPath=/jmx-console, (...)
15:44:34,687 INFO  [ChannelSocket] JK: ajp13 listening on localhost/127.0.0.1:8009
15:44:35,078 INFO  [JkMain] Jk running ID=0 time=0/688  config=null
15:44:35,093 INFO  [Server] JBoss (MX MicroKernel) [4.0.4.GA (build: CVSTag=JBoss_4_0_4_GA
date=200605151000)] Started in 49s:47ms
```

Tutorial JBOSS

Instalação do JBOSS

Nome atualizado:	JEMS Installer 1.2.0.BETA2 (AS 4.0.4.GA, EJB3 1.0.0.CR8, Portal 2.4.GA)
Arquivo de instalação:	jems-installer-1.2.0.BETA2.jar
Descrição:	The JEMS Installer allows to install various JBoss products. It's an easy way for customers to get started using AS. Installer is going to support other products pretty soon.
URL para download:	http://labs.jboss.com/jemsinstaller/ (veja a seção JEMS Installer Downloads). Selecione 1.2.0.BETA2.
Diretório de instalação:	C:\java\jboss-4.0.4.GA
Data do registro:	20 de junho de 2007

Instruções:

1. Localize e faça o download do arquivo de instalação.
2. Executo o instalador com o comando **java -jar jems-installer-1.2.0.BETA2.jar**.
3. Selecione o caminho para instalação: C:\java\jboss-4.0.4.GA.
4. Selecione a instalação ejb3. Prossiga duas telas.
5. Em configuration name mantenha o nome default.
6. Em datasource mantenha defaut.
7. Selecione o checkbox Enable deployment isolation.
8. Em jmx security deselecione todas as opções selecionadas e defina uma senha para o usuario admin. Recomenda-se utilizar admin como senha.
9. Prossiga com a instalação até o termino.

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Ant-Contrib Tasks

Pacote:	ant-contrib-1.0b3-bin.zip
Descrição:	The Ant-Contrib project is a collection of tasks (and at one point maybe types and other tools) for Apache-Ant.
URL para download:	http://ant-contrib.sourceforge.net/
Ant-Contrib Tasks:	http://ant-contrib.sourceforge.net/tasks/tasks/index.html
Data do registro:	21 de junho de 2007

Instruções:

1. Localize e faça o download do arquivo de instalação.
2. Descompacte o pacote em um diretório temporário.
3. Copie o arquivo **ant-contrib-1.0b3.jar** para o diretório C:\java\easyeclipse\plugins\org.apache.ant_1.6.5\lib.
4. Em **window > preferences > ant > runtime** adicione o jar ao grupo Ant Home Entries.
5. Para utilizar as taks do ant-contrib basta adicionar a tag **<taskdef resorce="net/sf/antcontrib/antlib.xml"/>** ao arquivo **packaging-build.xml** do seu projeto.

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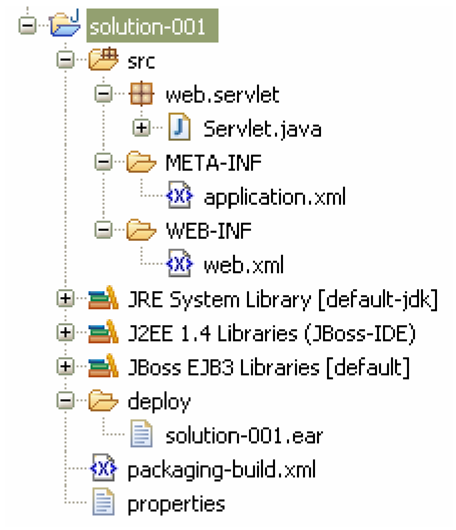
Criar um novo projeto J2EE 1.4

1. Abrir o menu **file > new > project**.
2. No **Select Wizard** que abrirá selecione a pasta **JBoss Eclipse IDE** e a sub-**pasta J2EE Projects**.
3. Selecione **J2EE 1.4 Project**.
4. Clique em Next.
5. Mantenha selecionado **Use default location** e crie um nome para o projeto.
6. Clique em Next.
7. Na janela **J2EE 1.4 Project** clique em **add folder**.
8. De o nome da pasta de **src**.
9. Clique em Finish.
10. Selecione a opção **Allow output folders for source folders**.
11. Certifique-se que em Default output folder esteja sendo apresentado **<nome do projeto>\bin**.
12. Na aba Libraries remova a biblioteca **Web Services 1.0 Libraries (JBoss-IDE)**.
13. Clique em **Add Library...**
14. Selecione **JBoss EJB3 Libraries** e clique Next.
15. Selecione a instancia do jboss.
16. Clique em Finish e Finish novamente.

Tutorial JBOSS

Servlet



```
solution-001
  src
    web.servlet
      Servlet.java
    META-INF
      application.xml
    WEB-INF
      web.xml
  JRE System Library [default-jdk]
  J2EE 1.4 Libraries (JBoss-IDE)
  JBoss EJB3 Libraries [default]
  deploy
    solution-001.ear
  packaging-build.xml
  properties
```

Servlet.java

```java
package web.servlet;

import java.io.IOException;

import javax.servlet.http.HttpServlet;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class Servlet extends HttpServlet {

      @Override
      protected void doGet(
            HttpServletRequest req,
            HttpServletResponse resp
      ) throws ServletException, IOException {
            System.out.println("Hello");
            resp.getWriter().print("<HTML>");
            resp.getWriter().print("<BODY>");
            resp.getWriter().print("<H1>Hello</H1>");
            resp.getWriter().print("</BODY>");
            resp.getWriter().print("</HTML>");
      }
}
```

application.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<application version="1.4"
      xmlns="http://java.sun.com/xml/ns/j2ee"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee
      http://java.sun.com/xml/ns/j2ee/application_1_4.xsd">
    <description>Servlet mínima ea</description>
    <display-name>Servlet mínima ea</display-name>
    <module>
        <web>
            <web-uri>solution-001.war</web-uri>
            <context-root>solution-001</context-root>
```

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```
        </web>
    </module>
</application>
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="2.4"
      xmlns="http://java.sun.com/xml/ns/j2ee"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee
http://java.sun.com/xml/ns/j2ee/web-app_2_4.xsd">

    <display-name>Hello World Servlet</display-name>

    <servlet>
            <servlet-name>Servlet</servlet-name>
            <servlet-class>web.servlet.Servlet</servlet-class>
      </servlet>
      <servlet-mapping>
            <servlet-name>Servlet</servlet-name>
            <url-pattern>/Servlet</url-pattern>
      </servlet-mapping>

</web-app>
```

packaging-build.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<project name="Packaging Generator" default="main">
      <property file="properties"/>
      <target name="main" depends="war,ear,deploy"/>
      <target name="war" description="${project.name}.war">
            <delete file="deploy/${project.name}.war"/>
            <jar destfile="deploy/${project.name}.war">
                  <zipfileset
                        dir="bin/web"
                        prefix="WEB-INF/classes/web" includes="**"/>
                  <zipfileset
                        dir="bin/WEB-INF"
                        prefix="WEB-INF" includes="*.xml"/>
            </jar>
      </target>
      <target name="ear" description="${project.name}.ear">
            <delete file="deploy/${project.name}.ear"/>
            <jar destfile="deploy/${project.name}.ear">
                  <zipfileset dir="deploy"
                        includes="${project.name}.war"/>
                  <zipfileset dir="bin/META-INF"
                        prefix="META-INF" includes="*.xml"/>
            </jar>
            <delete file="deploy/${project.name}.war" />
      </target>
      <target name="deploy" description="deploy">
            <delete file="${deploy.dir}/${project.name}.ear" />
            <copy file="deploy/${project.name}.ear"
                  todir="${deploy.dir}" />
      </target>
</project>
```

properties.xml

```
jboss.server=jboss-4.0.4.GA
deploy.dir=C:\\java\\${jboss.server}\\server\\default\\deploy
conf.dir=C:\\java\\${jboss.server}\\server\\default\\conf
lib.dir=C:\\java\\${jboss.server}\\server\\default\\lib
project.name=solution-001
```

Tutorial JBOSS

Deploy

Habilitar o Build automático:

1. Clique na pasta do projeto com o botão direito e selecione **Properties** ou tecle Alt+Enter.
2. Em **Packaging Configurations** selecione **Enable Packaging** e Clique em OK.

Execução do Build:

1. Clique na pasta do projeto com o botão direito e selecione **Run Packaging**.

Resultado apresentado no console:

```
Buildfile: C:\java\workspace\solution-001\packaging-build.xml
war:
      [jar] Building jar: C:\java\workspace\solution-001\deploy\solution-001.war
ear:
   [delete] Deleting: C:\java\workspace\solution-001\deploy\solution-001.ear
      [jar] Building jar: C:\java\workspace\solution-001\deploy\solution-001.ear
   [delete] Deleting: C:\java\workspace\solution-001\deploy\solution-001.war
deploy:
   [delete] Deleting: C:\java\jboss-4.0.4.GA\server\default\deploy\solution-001.ear
     [copy] Copying 1 file to C:\java\jboss-4.0.4.GA\server\default\deploy
main:
BUILD SUCCESSFUL
Total time: 1 second
```

```
16:00:32,359 INFO  [EARDeployer] Init J2EE application: file:/C:/java/jboss-
4.0.4.GA/server/default/deploy/solution-001.ear
16:00:32,562 INFO  [TomcatDeployer] deploy, ctxPath=/solution-001,
warUrl=.../tmp/deploy/tmp62851solution-001.ear-contents/solution-001-exp.war/
16:00:32,859 INFO  [EARDeployer] Started J2EE application: file:/C:/java/jboss-
4.0.4.GA/server/default/deploy/solution-001.ear
```

Undeploy

1. Basta remover o pacote **.ear/.war/.ejb3** do diretório **${deploy.dir}** definido no arquivo **properties**.

Resultado apresentado no console:

```
16:01:48,093 INFO  [TomcatDeployer] undeploy, ctxPath=/solution-001,
warUrl=.../tmp/deploy/tmp62851solution-001.ear-contents/solution-001-exp.war/
16:01:48,171 INFO  [EARDeployer] Undeploying J2EE application, destroy step: file:/C:/java/jboss-
4.0.4.GA/server/default/deploy/solution-001.ear
16:01:48,171 INFO  [EARDeployer] Undeployed J2EE application: file:/C:/java/jboss-
4.0.4.GA/server/default/deploy/solution-001.ear
```

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Acessar a aplicação Web

Acessar Servlet:

nome do projeto:	definido em context-root no arquivo application.xml
url-pattern:	definida no arquivo web.xml
servlet-name:	definida no arquivo web.xml

1. Abra o browser em
   http://localhost:8080/<nome do projeto>/<url-pattern da servlet>/<servlet-name>

Ex.: http://localhost:8080/solution-001/Servlet

Acessar Páginas JSP:

1. ?

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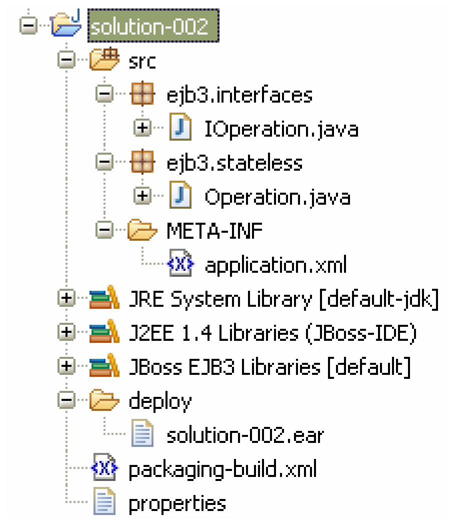
Tutorial JBOSS

Bean



IOperation.java

```
package ejb3.interfaces;
import javax.ejb.Remote;

@Remote
public interface IOperation {

      public int sum(int a, int b);
      public int subtract(int a, int b);
}
```

Operation.java

```
package ejb3.stateless;

import javax.ejb.Stateless;
import ejb3.interfaces.IOperation;

public @Stateless class Operation implements IOperation {

      public int sum(int a, int b) {
            return a+b;
      }

      public int subtract(int a, int b) {
            return a-b;
      }
}
```

application.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<application version="1.4"
      xmlns="http://java.sun.com/xml/ns/j2ee"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee
      http://java.sun.com/xml/ns/j2ee/application_1_4.xsd">
    <description>Bean ea</description>
    <display-name>Bean ea</display-name>
    <module>
```

```
        <ejb>solution-002.ejb3</ejb>
    </module>
</application>
```

packaging-build.xml

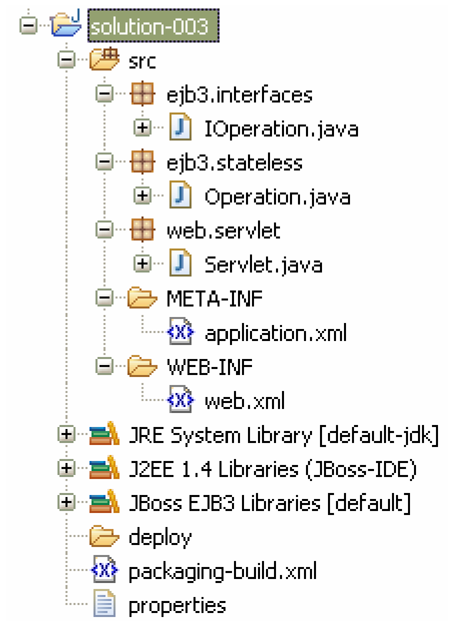
```
<?xml version="1.0" encoding="UTF-8"?>
<project name="Packaging Generator" default="main">
      <property file="properties" />
      <target name="main" depends="ejb3,ear,deploy"/>
      <target name="ejb3" description="${project.name}.ejb3">
            <delete file="deploy/${project.name}.ejb3"/>
            <jar destfile="deploy/${project.name}.ejb3">
                  <zipfileset dir="bin/ejb3"
                        prefix="ejb3" includes="**"/>
            </jar>
      </target>
      <target name="ear" description="${project.name}.ear">
            <delete file="deploy/${project.name}.ear"/>
            <jar destfile="deploy/${project.name}.ear">
                  <zipfileset dir="deploy"
                        includes="${project.name}.ejb3"/>
                  <zipfileset dir="bin/META-INF"
                        prefix="META-INF" includes="*.xml"/>
            </jar>
            <delete file="deploy/${project.name}.ejb3" />
      </target>
      <target name="deploy" description="deploy">
            <delete file="${deploy.dir}/${project.name}.ear" />
            <copy file="deploy/${project.name}.ear"
                  todir="${deploy.dir}" />
      </target>
</project>
```

properties.xml

```
jboss.server=jboss-4.0.4.GA
deploy.dir=C:\\java\\${jboss.server}\\server\\default\\deploy
conf.dir=C:\\java\\${jboss.server}\\server\\default\\conf
lib.dir=C:\\java\\${jboss.server}\\server\\default\\lib
project.name=solution-002
```

Tutorial JBOSS

Servlet com Bean Local e Remoto



É a junção do projeto para Servlet com o projeto para Bean. Os dois projetos serão sobrepostos e os arquivos **application.xml** e **packaging-build.xml** deverão refletir a junção da aplicação WEB e EJB3.

A propriedade **project.name** do arquivo properties recebera o nome do novo projeto, assim como as referências aos módulos no arquivo **application.xml**.

Tutorial JBOSS

Instruções:

1. Crie um novo projeto de nome **solution-003** como já descrito neste documento.
2. Abra a pasta C:\java\workspace e copie o conteúdo do projetos **solution-001** e **solution-002** diretamente para a pasta do novo projeto, sobrepondo os arquivos que já existirem.
3. De volta ao eclipse, clique com o botão direito na pasta do novo projeto e acione a opção **refresh** para que a disposição dos novos arquivos seja apresentada no eclipse.
4. Altere os arquivos **Operation.java** conforme segue. (O Bean do projeto solution-003 terá apenas interface local)

Operation.java

```
package ejb3.stateless;

import javax.ejb.Stateless;
import ejb3.interfaces.IOperationLocal;

public @Stateless class Operation implements IOperationLocal {

      public int multiply(int a, int b) {
            return a*b;
      }
}
```

5. Crie uma cópia da interface IOperation com o nome IoperationLocal e altere como indicado.

IOperationLocal.java

```
package ejb3.interfaces;
import javax.ejb.Local;

@Local
public interface IOperationLocal {

      public int multiply(int a, int b);
}
```

6. Altere o arquivo properties com o novo nome.

properties.xml

```
jboss.server=jboss-4.0.4.GA
deploy.dir=C:\\java\\${jboss.server}\\server\\default\\deploy
conf.dir=C:\\java\\${jboss.server}\\server\\default\\conf
lib.dir=C:\\java\\${jboss.server}\\server\\default\\lib
project.name=solution-003
```

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7. Copie o target **war** do projeto **solution-001** para o novo **packaging-build.xml** incluindo também a dependencia ao **target main**.
8. Faça a **junção do target ear** do projeto **solution-001** com o **target ear do novo projeto**.

packaging-build.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<project name="Packaging Generator" default="main">
      <property file="properties" />
      <target name="main" depends="war,ejb3,ear,deploy"/>
      <target name="ejb3" description="${project.name}.ejb3">
            <delete file="deploy/${project.name}.ejb3"/>
            <jar destfile="deploy/${project.name}.ejb3">
                  <zipfileset dir="bin/ejb3"
                        prefix="ejb3" includes="**"/>
            </jar>
      </target>
      <target name="war" description="${project.name}.war">
            <delete file="deploy/${project.name}.war"/>
            <jar destfile="deploy/${project.name}.war">
                  <zipfileset
                        dir="bin/web"
                        prefix="WEB-INF/classes/web" includes="**"/>
                  <zipfileset
                        dir="bin/WEB-INF"
                        prefix="WEB-INF" includes="*.xml"/>
            </jar>
      </target>
      <target name="ear" description="${project.name}.ear">
            <delete file="deploy/${project.name}.ear"/>
            <jar destfile="deploy/${project.name}.ear">
                  <zipfileset dir="deploy"
                        includes="${project.name}.war"/>
                  <zipfileset dir="deploy"
                        includes="${project.name}.ejb3"/>
                  <zipfileset dir="bin/META-INF"
                        prefix="META-INF" includes="*.xml"/>
            </jar>
            <delete file="deploy/${project.name}.ejb3" />
      </target>
      <target name="deploy" description="deploy">
            <delete file="${deploy.dir}/${project.name}.ear" />
            <copy file="deploy/${project.name}.ear"
                  todir="${deploy.dir}" />
      </target>
</project>
```

9. Adicione a referência do modulo web do projeto **solution-001** ao **application.xml** do novo projeto.
10. Corrija as referências ao nome dos módulos **ejb3 e war**, assim como o **description** e o **display-name** para que reflitam as propriedades do novo projeto.

application.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<application version="1.4"
      xmlns="http://java.sun.com/xml/ns/j2ee"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee
      http://java.sun.com/xml/ns/j2ee/application_1_4.xsd">
    <description>Servlet com Bean local e remoto</description>
    <display-name>Servlet com Bean local e remoto</display-name>
    <module>
        <web>
            <web-uri>solution-003.war</web-uri>
            <context-root>solution-003</context-root>
        </web>
    </module>
    <module>
        <ejb>solution-003.ejb3</ejb>
    </module>
</application>
```

11. Insira as **chamadas aos Beans** no Servlet.

Servlet.java

```
package web.servlet;

import javax.naming.Context;
import javax.naming.InitialContext;
import javax.servlet.http.HttpServlet;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import ejb3.interfaces.IOperation;
import ejb3.interfaces.IOperationLocal;

public class Servlet extends HttpServlet {

      @Override
      protected void doGet(
            HttpServletRequest req,
            HttpServletResponse resp
      ) throws ServletException, IOException {
            Context ctx = null;
            try {
                  ctx = new InitialContext();
                  IOperationLocal opm = (IOperationLocal)ctx.lookup(
                        "solution-003/Operation/local");
                  resp.getWriter().print(
                        "<br>multiply local : " + opm.multiply(2, 3));
            } catch (Exception e) {
                  e.printStackTrace();
            }
            try {
                  Properties properties = new Properties();
                  properties.put(
                        "java.naming.factory.initial",
                        "org.jnp.interfaces.NamingContextFactory");
                  properties.put(
                        "java.naming.factory.url.pkgs",
                        "=org.jboss.naming:org.jnp.interfaces");
                  properties.put(
                        "java.naming.provider.url",
                        "localhost:1099");
                  ctx = new InitialContext(properties);
                  IOperation ops = (IOperation)ctx.lookup(
                        "solution-002/Operation/remote");
                  resp.getWriter().print(
                        "<br>sum remote : " + ops.sum(2, 3));
            } catch (Exception e) {
                  e.printStackTrace();
            }
      }
}
```

Tutorial JBOSS

Criar um novo projeto J2SE

1. Abra o menu **file** > **new** > **project...** > **java** > **java project**.
2. Clique Next.
3. Nomeie o novo projeto **solution-004**.
4. Clique Next.
5. Na janela **Java Settings** clique em **<u>Create new source folder</u>**.
6. Preencha o campo **Folder name** com **src**.
7. Clique em Finish.
8. Selecione a opção **Allow output folders for source folders**.
9. Certifique-se que o campo **Default output folder** esteja exibindo **solution-004/bin**.
10. Selecione a aba **Libraries**.
11. Clique em **Add External JARs...**.
12. A partir do diretório **C:\java\jboss-4.0.4.GA\client** selecione as seguintes bibliotecas: "**jbossall-client.jar**" "**jboss-aop-jdk50-client.jar**" "**jboss-aspect-jdk50-client.jar" "jboss-ejb3-client.jar**".
13. Clique em Abrir e depois Finish.
14. Habilitar build automático no projeto como em demonstrado na sessão **Deploy**.

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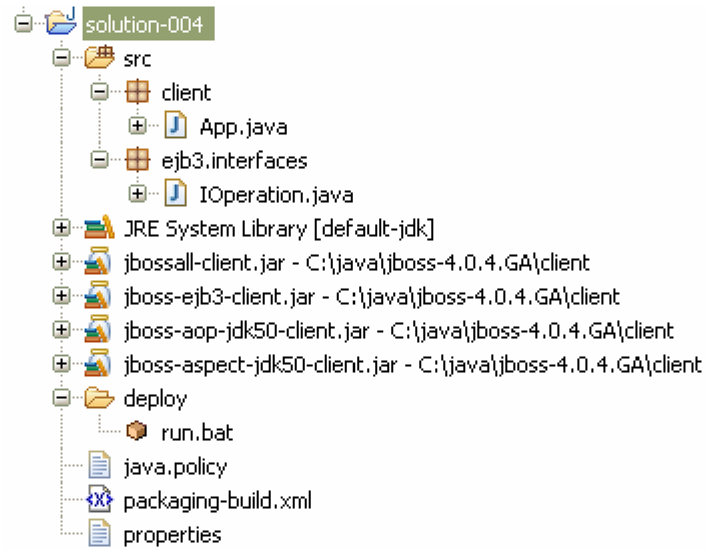
Tutorial JBOSS

Stand-Alone client acessa Bean



```
solution-004
  src
    client
      App.java
    ejb3.interfaces
      IOperation.java
  JRE System Library [default-jdk]
  jbossall-client.jar - C:\java\jboss-4.0.4.GA\client
  jboss-ejb3-client.jar - C:\java\jboss-4.0.4.GA\client
  jboss-aop-jdk50-client.jar - C:\java\jboss-4.0.4.GA\client
  jboss-aspect-jdk50-client.jar - C:\java\jboss-4.0.4.GA\client
  deploy
    run.bat
  java.policy
  packaging-build.xml
  properties
```

App.java

```java
package client;

import java.rmi.RMISecurityManager;
import java.util.Properties;
import javax.naming.Context;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import javax.swing.JFrame;
import ejb3.interfaces.IOperation;

public class App extends JFrame {


      App() {
            this.setSize(200,200);
            this.setVisible(true);
            this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            Context ctx;
            System.setProperty("java.security.policy","java.policy");
            if (System.getSecurityManager() == null) {
                  System.setSecurityManager(new RMISecurityManager());
            }
            try {
                  Properties properties = new Properties();
                  properties.put(
                        Context.INITIAL_CONTEXT_FACTORY,
                        "org.jnp.interfaces.NamingContextFactory");
                  properties.put(
                        Context.URL_PKG_PREFIXES,
                        "org.jboss.naming:org.jnp.interfaces.jnp");
                  properties.put(
                        Context.PROVIDER_URL,
                        "jnp://localhost:1099");

                  ctx = new InitialContext(properties);
                  IOperation op = (IOperation)ctx.lookup(
                        "solution-002/Operation/remote");
```

```
                int res = op.sum(2,2);
                System.out.println("a soma é: " + res );
                res = op.subtract(5, 2);
                System.out.println("a subtração é: " + res );
            } catch (NamingException e) {
                e.printStackTrace();
            }
        }

        public static void main(String[] args) {
            new App();
        }

}
```

IOperation.java

```
package ejb3.interfaces;
import javax.ejb.Remote;

@Remote
public interface IOperation {

        public int sum(int a, int b);
        public int subtract(int a, int b);
}
```

java.policy

```
grant {
        permission java.security.AllPermission;
};
```

packaging-build.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<project name="Packaging Generator" default="main">
        <property file="properties" />
        <target name="main" depends="jar"/>
        <target name="jar" description="${project.name}.jar">
                <delete file="deploy/${project.name}.jar"/>
                <copy file="${client.libs.dir}/jbossall-client.jar"
                        todir="deploy/lib" />
                <copy file="${client.libs.dir}/jnp-client.jar"
                        todir="deploy/lib" />
                <copy file="${client.libs.dir}/jboss-aop-jdk50-client.jar"
                        todir="deploy/lib" />
                <copy file="${client.libs.dir}/
                        jboss-aspect-jdk50-client.jar"
                        todir="deploy/lib" />
                <copy file="${client.libs.dir}/jboss-ejb3-client.jar"
                        todir="deploy/lib" />
                <copy file="java.policy" todir="deploy" />
                <jar destfile="deploy/${project.name}.jar">
                        <manifest>
                                <attribute
                                        name="Built-By"
                                        value="${user.name}"/>
                                <attribute
                                        name="Package-Title"
                                        value="${manifest.package.title}"/>
                                <attribute
```

```
                              name="Package-Version"
                              value="${manifest.package.version}"/>
                        <attribute
                              name="Package-Vendor"
                              value="${manifest.package.vendor}"/>
                        <attribute
                              name="Main-Class"
                              value="${manifest.main.class}"/>
                        <attribute
                              name="Class-Path"
                              value="${manifest.class.path}"/>
                  </manifest>
                  <zipfileset dir="bin" includes="**"/>
            </jar>
      </target>
</project>
```

properties

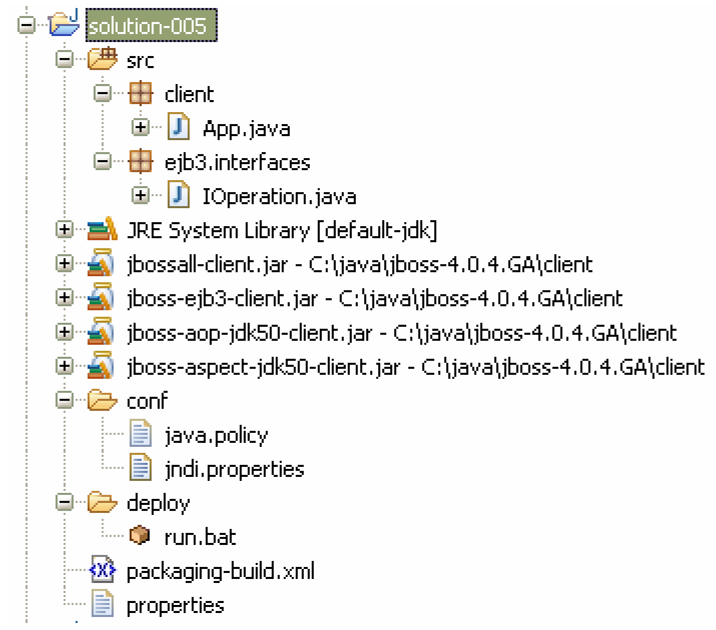
```
project.name=solution-004
manifest.package.title=Stand-alone Client Bean Acess
manifest.package.version=build1
manifest.package.vendor=BESC - Banco Estadual de Santa Catarina
manifest.main.class=client.App
manifest.class.path=lib/jbossall-client.jar lib/jnp-client.jar lib/jboss-aop-
jdk50-client.jar lib/jboss-aspect-jdk50-client.jar lib/jboss-ejb3-client.jar
```

run.bat

```
java -cp . -jar solution-004.jar
```

Tutorial JBOSS

Stand-Alone client acessa Bean
JNDI externalizado e java.policy embutido


solution-005
src
client
App.java
ejb3.interfaces
IOperation.java
JRE System Library [default-jdk]
jbossall-client.jar - C:\java\jboss-4.0.4.GA\client
jboss-ejb3-client.jar - C:\java\jboss-4.0.4.GA\client
jboss-aop-jdk50-client.jar - C:\java\jboss-4.0.4.GA\client
jboss-aspect-jdk50-client.jar - C:\java\jboss-4.0.4.GA\client
conf
java.policy
jndi.properties
deploy
run.bat
packaging-build.xml
properties

Instruções:
1. Crie um novo projeto de nome **solution-005** como já descrito neste documento.
2. Abra a pasta C:\java\workspace e copie o conteúdo do projetos **solution-004** diretamente para a pasta do novo projeto, sobrepondo os arquivos que já existirem.
3. De volta ao eclipse, clique com o botão direito na pasta do novo projeto e acione a opção **refresh** para que a disposição dos novos arquivos seja apresentada no eclipse.
4. Adicione o arquivo **jndi.properties** ao diretório **conf** e altere os arquivos **App.java** e **packaging-build.xml** conforme segue.

Objetivo:
O uso de um arquivo de propriedades permite que o provedor possa ser alterado sem alterar o código da aplicação. Ainda possibilita a utilização de vários arquivos de propriedades com os provedores correspondentes.
O deploy do arquivo java.policy dentro do jar do cliente.

jndi.properties

```
java.naming.factory.initial=org.jnp.interfaces.NamingContextFactory
java.naming.factory.url.pkgs=org.jboss.naming:org.jnp.interfaces.jnp
java.naming.provider.url=jnp://localhost:1099
```

App.java

```
package client;

import java.rmi.RMISecurityManager;
import java.util.Properties;
import javax.naming.Context;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import javax.swing.JFrame;
import ejb3.interfaces.IOperation;

public class App extends JFrame {


      App() {
            this.setSize(200,200);
```

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```
            this.setVisible(true);
            this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            Context ctx;
            ClassLoader cl = this.getClass().getClassLoader();
            URL policyURL = cl.getResource("conf/java.policy");
            System.setProperty("java.security.policy", policyURL.toString());
            if (System.getSecurityManager() == null) {
                  System.setSecurityManager(new RMISecurityManager());
            }
            try {
                  Properties properties = new Properties();
                  cl = this.getClass().getClassLoader();
                  InputStream is = cl.getResourceAsStream(
                        "jndi.properties");
                  try {
                        properties.load(is);
                  } catch (IOException e) {
                        e.printStackTrace();
                  }

                  ctx = new InitialContext(properties);
                  IOperation op = (IOperation)ctx.lookup(
                        "solution-002/Operation/remote");
                  int res = op.sum(2,2);
                  System.out.println("a soma é: " + res );
                  res = op.subtract(5, 2);
                  System.out.println("a subtração é: " + res );
            } catch (NamingException e) {
                  e.printStackTrace();
            }
      }

      public static void main(String[] args) {
            new App();
      }

}
```

packaging-build.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<project name="Packaging Generator" default="main">
      <property file="properties" />
      <target name="main" depends="jar"/>
      <target name="jar" description="${project.name}.jar">
            <delete file="deploy/${project.name}.jar"/>
            <copy file="${client.libs.dir}/jbossall-client.jar"
                  todir="deploy/lib" />
            <copy file="${client.libs.dir}/jnp-client.jar"
                  todir="deploy/lib" />
            <copy file="${client.libs.dir}/jboss-aop-jdk50-client.jar"
                  todir="deploy/lib" />
            <copy file="${client.libs.dir}/
                  jboss-aspect-jdk50-client.jar"
                  todir="deploy/lib" />
            <copy file="${client.libs.dir}/jboss-ejb3-client.jar"
                  todir="deploy/lib" />
            <jar destfile="deploy/${project.name}.jar">
                  <manifest>
                        <attribute
                              name="Built-By"
                              value="${user.name}"/>
                        <attribute
                              name="Package-Title"
                              value="${manifest.package.title}"/>
                        <attribute
                              name="Package-Version"
                              value="${manifest.package.version}"/>
                        <attribute
                              name="Package-Vendor"
                              value="${manifest.package.vendor}"/>
                        <attribute
                              name="Main-Class"
                              value="${manifest.main.class}"/>
                        <attribute
                              name="Class-Path"
                              value="${manifest.class.path}"/>
                  </manifest>
                  <zipfileset dir="bin" includes="**"/>
                  <zipfileset dir="conf" prefix="conf" includes="**"/>
            </jar>
      </target>
</project>
```

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Tutorial JBOSS

Stand-Alone client acessa Bean
referenciando libs fora do diretório da aplicação

Instruções:
1. Crie um novo projeto de nome **solution-006** como já descrito neste documento.
2. Abra a pasta C:\java\workspace e copie o conteúdo do projetos **solution-005** diretamente para a pasta do novo projeto, sobrepondo os arquivos que já existirem.
3. De volta ao eclipse, clique com o botão direito na pasta do novo projeto e acione a opção **refresh** para que a disposição dos novos arquivos seja apresentada no eclipse.
4. Altere o arquivo **properties** e **packaging-build.xml** conforme segue.

Objetivo:
Obter acesso compartilhado a bibliotecas jar.

properties

```
project.name=solution-006
manifest.package.title=Stand-alone Client Bean Acess
manifest.package.version=build1
manifest.package.vendor=BESC - Banco Estadual de Santa Catarina
manifest.main.class=client.App
manifest.class.path=${client.libs.url}/jbossall-client.jar
${client.libs.url}/jnp-client.jar ${client.libs.url}/jboss-aop-jdk50-client.jar
${client.libs.url}/jboss-aspect-jdk50-client.jar ${client.libs.url}/jboss-ejb3-
client.jar
client.libs.url=file:/c:/java/jboss-4.0.4.GA/client
```

packaging-build.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<project name="Packaging Generator" default="main">
      <property file="properties" />
      <target name="main" depends="jar"/>
      <target name="jar" description="${project.name}.jar">
            <delete file="deploy/${project.name}.jar"/>
            <jar destfile="deploy/${project.name}.jar">
                  <manifest>
                        <attribute
                              name="Built-By"
                              value="${user.name}"/>
                        <attribute
                              name="Package-Title"
                              value="${manifest.package.title}"/>
                        <attribute
                              name="Package-Version"
                              value="${manifest.package.version}"/>
                        <attribute
                              name="Package-Vendor"
                              value="${manifest.package.vendor}"/>
                        <attribute
                              name="Main-Class"
                              value="${manifest.main.class}"/>
                        <attribute
                              name="Class-Path"
                              value="${manifest.class.path}"/>
                  </manifest>
                  <zipfileset dir="bin" includes="**"/>
                  <zipfileset dir="conf" prefix="conf" includes="**"/>
            </jar>
      </target>
</project>
```

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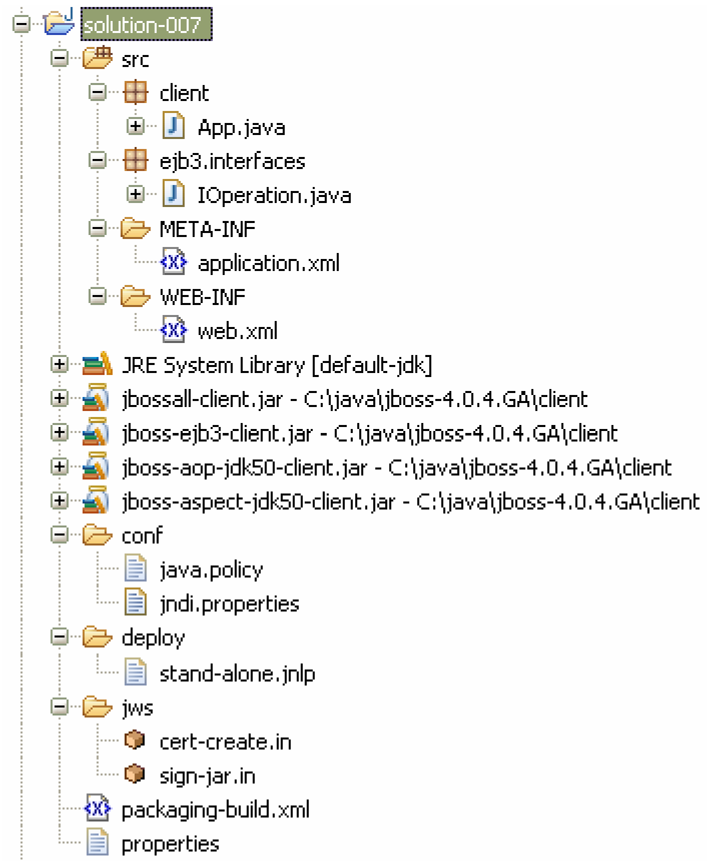
Stand-Alone client acessa Bean
JavaWebStart com full deploy (libs jboss incluidas)


solution-007
src
client
App.java
ejb3.interfaces
IOperation.java
META-INF
application.xml
WEB-INF
web.xml
JRE System Library [default-jdk]
jbossall-client.jar - C:\java\jboss-4.0.4.GA\client
jboss-ejb3-client.jar - C:\java\jboss-4.0.4.GA\client
jboss-aop-jdk50-client.jar - C:\java\jboss-4.0.4.GA\client
jboss-aspect-jdk50-client.jar - C:\java\jboss-4.0.4.GA\client
conf
java.policy
jndi.properties
deploy
stand-alone.jnlp
jws
cert-create.in
sign-jar.in
packaging-build.xml
properties

Instruções:

5. Crie um novo projeto de nome **solution-007** como já descrito neste documento.
6. Abra a pasta C:\java\workspace e copie o conteúdo do projetos **solution-006** diretamente para a pasta do novo projeto, sobrepondo os arquivos que já existirem.
7. De volta ao eclipse, clique com o botão direito na pasta do novo projeto e acione a opção **refresh** para que a disposição dos novos arquivos seja apresentada no eclipse.
8. Altere o arquivos, **App.java**, **properties** e **packaging-build.xml** conforme segue.
9. Inclua os descritores **.jnlp** , os arquivos **application.xml** e **web.xml** e os arquivos de entrada de teclado **cert-create.in** e **sign-jar.in**.

Objetivo:
Disponibilizar a aplicação através da web.

App.java

```
package client;

import java.awt.BorderLayout;
import java.io.IOException;
import java.io.InputStream;
import java.io.PrintWriter;
import java.io.StringWriter;
import java.net.URL;
import java.rmi.RMISecurityManager;
import java.util.Properties;
import javax.naming.Context;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import javax.swing.JFrame;
import javax.swing.JScrollPane;
import javax.swing.JTextArea;

import ejb3.interfaces.IOperation;

public class App extends JFrame {

	JTextArea debug;

	App() {
		this.setSize(200,200);
		this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
		debug = new JTextArea();
		JScrollPane scrollPane = new JScrollPane(debug);
		this.getContentPane().add(scrollPane,BorderLayout.CENTER);
		this.validate();
		this.setVisible(true);

		Context ctx;
		ClassLoader cl = this.getClass().getClassLoader();
		URL policyURL = cl.getResource("conf/java.policy");
		System.setProperty("java.security.policy",policyURL.toString());
		if (System.getSecurityManager() == null) {
			System.setSecurityManager(new RMISecurityManager());
		}
		try {
			Properties properties = new Properties();
			cl = this.getClass().getClassLoader();
			InputStream is = cl.getResourceAsStream(
				"conf/jndi.properties");
			try {
				properties.load(is);
			} catch (IOException e) {
				e.printStackTrace();
				this.debug( this.getStackTrace(e) );
			}

			ctx = new InitialContext(properties);
			IOperation op = (IOperation)ctx.lookup(
				"solution-002/Operation/remote");
			int res = op.sum(2,2);
			String text = "a soma é: " + Integer.toString(res);
			this.debug(text);
			res = op.subtract(5, 2);
			text = "a subtração é: " + Integer.toString(res);
			this.debug(text);
		} catch (NamingException e) {
			e.printStackTrace();
			this.debug( this.getStackTrace(e) );
		}
	}

	private String getStackTrace(Throwable t)
	{
		StringWriter sw = new StringWriter();
		PrintWriter pw = new PrintWriter(sw, true);
		t.printStackTrace(pw);
		pw.flush();
		sw.flush();
		return sw.toString();
	}
	private void debug(String text) {
		debug.insert("# " + text + "\n", 0 );
		debug.setCaretPosition(0);
	}

	public static void main(String[] args) {
		new App();
	}

}
```

properties

```
project.name=solution-007

manifest.package.title=Stand-alone Client Bean Acess
manifest.package.version=build1
manifest.package.vendor=BESC - Banco Estadual de Santa Catarina
manifest.main.class=client.App

jboss.server=jboss-4.0.4.GA
deploy.dir=C:\\java\\${jboss.server}\\server\\default\\deploy
conf.dir=C:\\java\\${jboss.server}\\server\\default\\conf
lib.dir=C:\\java\\${jboss.server}\\server\\default\\lib

client.libs.url=lib/
client.libs.dir=C:/java/jboss-4.0.4.GA/client

jar-01=jbossall-client.jar
jar-02=jnp-client.jar
jar-03=jboss-aop-jdk50-client.jar
jar-04=jboss-aspect-jdk50-client.jar
jar-05=jboss-ejb3-client.jar

jar.signed-01=${client.libs.url}${jar-01}
jar.signed-02=${client.libs.url}${jar-02}
jar.signed-03=${client.libs.url}${jar-03}
jar.signed-04=${client.libs.url}${jar-04}
jar.signed-05=${client.libs.url}${jar-05}

manifest.class.path=${jar.signed-01} ${jar.signed-02} ${jar.signed-03}
${jar.signed-04} ${jar.signed-05}
```

packaging-build.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<project name="Packaging Generator" default="main">
	<property file="properties" />
	<target name="main" depends="jar,jws,war,ear,deploy"/>
	<target name="jar" description="${project.name}.jar">
		<delete file="deploy/${project.name}.jar"/>
		<copy file="${client.libs.dir}/${jar-01}" todir="deploy/lib" />
		<copy file="${client.libs.dir}/${jar-02}" todir="deploy/lib" />
		<copy file="${client.libs.dir}/${jar-03}" todir="deploy/lib" />
		<copy file="${client.libs.dir}/${jar-04}" todir="deploy/lib" />
		<copy file="${client.libs.dir}/${jar-05}" todir="deploy/lib" />
		<jar destfile="deploy/${project.name}.jar">
			<manifest>
			<attribute name="Built-By" value="${user.name}"/>
			<attribute name="Package-Title"
				value="${manifest.package.title}"/>
			<attribute name="Package-Version"
```

```
                         value="${manifest.package.version}"/>
                   <attribute name="Package-Vendor"
                         value="${manifest.package.vendor}"/>
                   <attribute name="Main-Class"
                         value="${manifest.main.class}"/>
                   <attribute name="Class-Path"
                         value="${manifest.class.path}"/>
                   </manifest>
                   <zipfileset dir="bin" includes="**"/>
                   <zipfileset dir="conf" prefix="conf" includes="**"/>
             </jar>
       </target>
       <target name="jws" description="prepare jws certificate">
             <delete file="deploy/stand-alone-certificate" />
             <exec dir="deploy" executable="keytool" input="jws/cert-create.in">
                   <arg value="-genkey"/>
                   <arg value="-keystore"/>
                   <arg value="stand-alone-certificate"/>
                   <arg value="-alias"/>
                   <arg value="saclient"/>
             </exec>
             <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                   <arg value="-verbose"/>
                   <arg value="-keystore"/>
                   <arg value="stand-alone-certificate"/>
                   <arg value="solution-007.jar"/>
                   <arg value="saclient"/>
             </exec>
             <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                   <arg value="-verbose"/>
                   <arg value="-keystore"/>
                   <arg value="stand-alone-certificate"/>
                   <arg value="${jar.signed-01}"/>
                   <arg value="saclient"/>
             </exec>
             <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                   <arg value="-verbose"/>
                   <arg value="-keystore"/>
                   <arg value="stand-alone-certificate"/>
                   <arg value="${jar.signed-02}"/>
                   <arg value="saclient"/>
             </exec>
             <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                   <arg value="-verbose"/>
                   <arg value="-keystore"/>
                   <arg value="stand-alone-certificate"/>
                   <arg value="${jar.signed-03}"/>
                   <arg value="saclient"/>
             </exec>
             <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                   <arg value="-verbose"/>
                   <arg value="-keystore"/>
                   <arg value="stand-alone-certificate"/>
                   <arg value="${jar.signed-04}"/>
                   <arg value="saclient"/>
             </exec>
             <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                   <arg value="-verbose"/>
                   <arg value="-keystore"/>
                   <arg value="stand-alone-certificate"/>
                   <arg value="${jar.signed-05}"/>
```

```
                  <arg value="saclient"/>
            </exec>

      </target>
      <target name="war" description="${project.name}.war">
            <delete file="deploy/${project.name}.war"/>
            <jar destfile="deploy/${project.name}.war">
                  <zipfileset
                        dir="deploy"
                        prefix=""
                        includes="**"
                        excludes="${project.name}.ear,stand-alone-local.jnlp"/>
                  <zipfileset
                        dir="bin/WEB-INF"
                        prefix="WEB-INF/"
                        includes="**"/>
            </jar>
            <delete file="deploy/lib/${jar-01}" />
            <delete file="deploy/lib/${jar-02}" />
            <delete file="deploy/lib/${jar-03}" />
            <delete file="deploy/lib/${jar-04}" />
            <delete file="deploy/lib/${jar-05}" />
      </target>
      <target name="ear" description="${project.name}.ear">
            <delete file="deploy/${project.name}.ear"/>
            <jar destfile="deploy/${project.name}.ear">
                  <zipfileset dir="deploy" includes="${project.name}.war"/>
                  <zipfileset
                        dir="bin/META-INF"
                        prefix="META-INF"
                        includes="*.xml"/>
            </jar>
            <delete file="deploy/${project.name}.war" />
      </target>
      <target name="deploy" description="deploy">
            <delete file="${deploy.dir}/${project.name}.ear" />
            <copy file="deploy/${project.name}.ear" todir="${deploy.dir}" />
      </target>
</project>
```

stand-alone.jnlp

```
<?xml version="1.0" encoding="UTF-8"?>

<jnlp
      spec="1.0+"
      codebase="http://localhost:8080/solution-007"
      href="stand-alone.jnlp"
>

  <information>
     <title>Stand-Alone EJB3 Client</title>
     <vendor>BESC - BESC - Banco do Estado de Santa Catarina</vendor>
     <homepage href="http://www.besc.com.br" />
     <description>A simple swing EJB client with JWS.</description>
     <offline-allowed />
   </information>

  <resources>
     <j2se version="1.4+"/>
     <jar href="solution-007.jar" main="true" />
     <jar href="lib/jboss-ejb3-client.jar" />
```

```
      <jar href="lib/jbossall-client.jar" />
      <jar href="lib/jnp-client.jar" />
      <jar href="lib/jboss-aop-jdk50-client.jar" />
      <jar href="lib/jboss-aspect-jdk50-client.jar" />
    </resources>

   <application-desc main-class="client.App"/>

   <security>
      <all-permissions/>
   </security>


</jnlp>
```

cert-create.in

```
123456<ENTER>
123456<ENTER>
SADSI - Stand Alone Client<ENTER>
COMRE<ENTER>
BESC Banco do Estado de Santa Catarina<ENTER>
Florianópolis<ENTER>
Santa Catarina<ENTER>
br<ENTER>
yes<ENTER>
123456<ENTER>
123456<ENTER>
```

sign-jar.in

```
123456<ENTER>
```

application.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<application version="1.4"
      xmlns="http://java.sun.com/xml/ns/j2ee"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee
      http://java.sun.com/xml/ns/j2ee/application_1_4.xsd">
    <description>Java Web Start sample</description>
    <display-name>Java Web Start sample</display-name>
    <module>
        <web>
            <web-uri>solution-007.war</web-uri>
            <context-root>solution-007</context-root>
        </web>
    </module>
</application>
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="2.4"
      xmlns="http://java.sun.com/xml/ns/j2ee"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee
      http://java.sun.com/xml/ns/j2ee/web-app_2_4.xsd">


</web-app>
```

Tutorial JBOSS

Stand-Alone client acessa Bean
JavaWebStart utilizando biblioteca local compartilhada (deploy reduzido)

Instruções:
1. Crie um novo projeto de nome **solution-008** como já descrito neste documento.
2. Abra a pasta C:\java\workspace e copie o conteúdo do projetos **solution-007** diretamente para a pasta do novo projeto, sobrepondo os arquivos que já existirem.
3. De volta ao eclipse, clique com o botão direito na pasta do novo projeto e acione a opção **refresh** para que a disposição dos novos arquivos seja apresentada no eclipse.
4. Altere o arquivo **properties, stand-alone.jnlp** e **packaging-build.xml** conforme segue.

Objetivo:
Disponibilizar a aplicação através da web.

properties

```
project.name=solution-008

manifest.package.title=Stand-alone Client Bean Acess
manifest.package.version=build1
manifest.package.vendor=BESC - Banco Estadual de Santa Catarina
manifest.main.class=client.App

jboss.server=jboss-4.0.4.GA
deploy.dir=C:\\java\\${jboss.server}\\server\\default\\deploy
conf.dir=C:\\java\\${jboss.server}\\server\\default\\conf
lib.dir=C:\\java\\${jboss.server}\\server\\default\\lib

client.libs.url=c:/lib/
client.libs.dir=C:/java/jboss-4.0.4.GA/client

jar-01=jbossall-client.jar
jar-02=jnp-client.jar
jar-03=jboss-aop-jdk50-client.jar
jar-04=jboss-aspect-jdk50-client.jar
jar-05=jboss-ejb3-client.jar

jar.signed-01=${client.libs.url}${jar-01}
jar.signed-02=${client.libs.url}${jar-02}
jar.signed-03=${client.libs.url}${jar-03}
jar.signed-04=${client.libs.url}${jar-04}
jar.signed-05=${client.libs.url}${jar-05}

manifest.class.path=${jar.signed-01} ${jar.signed-02} ${jar.signed-03}
${jar.signed-04} ${jar.signed-05}
```

stand-alone.jnlp

```
<?xml version="1.0" encoding="UTF-8"?>

<jnlp
      spec="1.0+"
      codebase="http://localhost:8080/solution-008"
      href="stand-alone.jnlp"
>

  <information>
     <title>Stand-Alone EJB3 Client</title>
     <vendor>BESC - BESC - Banco do Estado de Santa Catarina</vendor>
     <homepage href="http://www.besc.com.br" />
     <description>A simple swing EJB client with java web start.</description>
```

```
      <offline-allowed />
    </information>

   <resources>
      <j2se version="1.4+"/>
      <jar href="solution-008.jar" main="true" />
      <jar href="file:/c:/lib/jboss-ejb3-client.jar" />
      <jar href="file:/c:/lib/jbossall-client.jar" />
      <jar href="file:/c:/lib/jnp-client.jar" />
      <jar href="file:/c:/lib/jboss-aop-jdk50-client.jar" />
      <jar href="file:/c:/lib/jboss-aspect-jdk50-client.jar" />
    </resources>

   <application-desc main-class="client.App"/>

   <security>
      <all-permissions/>
   </security>

</jnlp>
```

packaging-build.xml

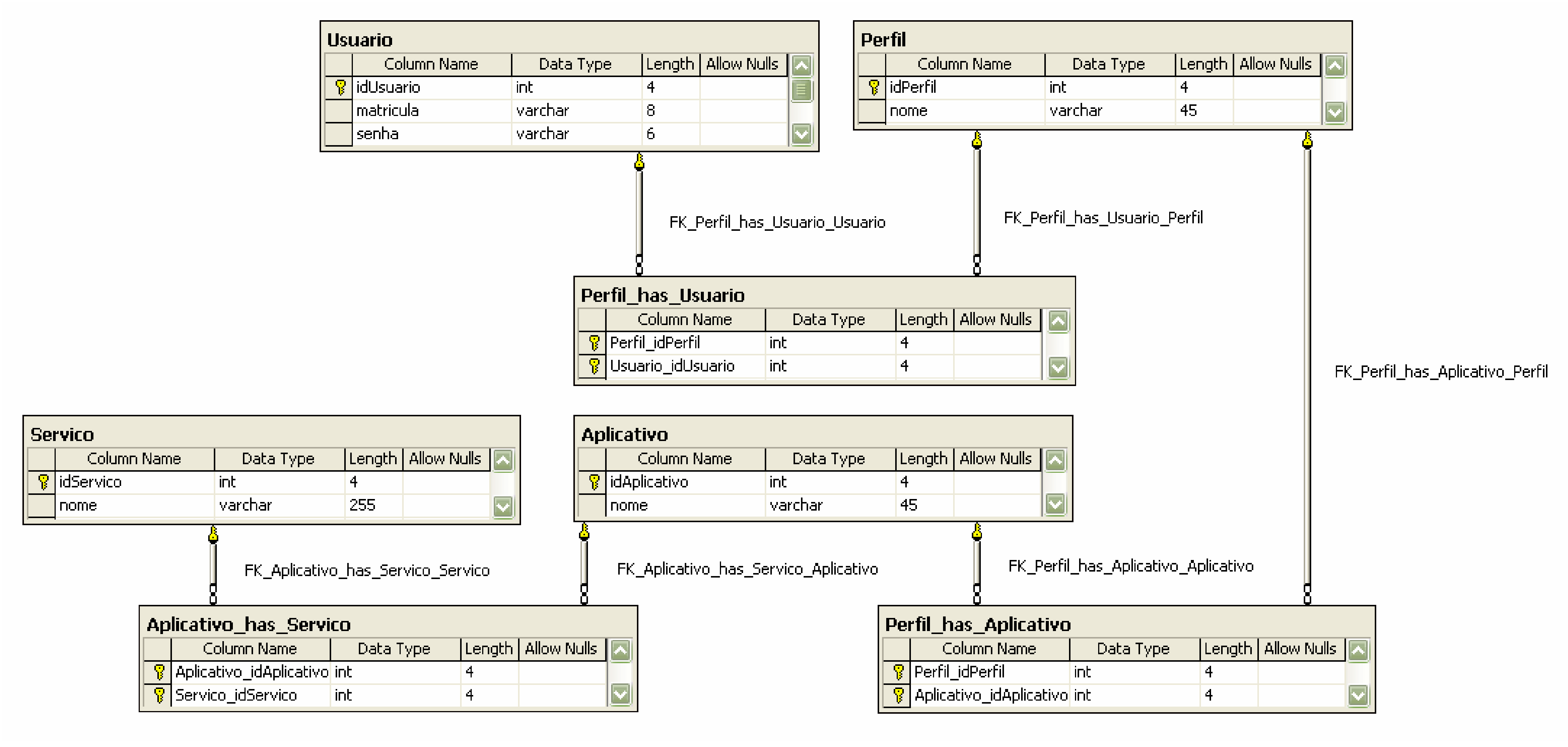
```
<?xml version="1.0" encoding="UTF-8"?>
<project name="Packaging Generator" default="main">
      <property file="properties" />
      <target name="main" depends="jar,jws,war,ear, deploy"/>
      <target name="jar" description="${project.name}.jar">
            <delete file="deploy/${project.name}.jar"/>
            <delete file="${jar.signed-01}"/>
            <delete file="${jar.signed-02}"/>
            <delete file="${jar.signed-03}"/>
            <delete file="${jar.signed-04}"/>
            <delete file="${jar.signed-05}"/>
            <copy file="${client.libs.dir}/${jar-01}"
                  todir="${client.libs.url}" />
            <copy file="${client.libs.dir}/${jar-02}"
                  todir="${client.libs.url}" />
            <copy file="${client.libs.dir}/${jar-03}"
                  todir="${client.libs.url}" />
            <copy file="${client.libs.dir}/${jar-04}"
                  todir="${client.libs.url}" />
            <copy file="${client.libs.dir}/${jar-05}"
                  todir="${client.libs.url}" />
            <jar destfile="deploy/${project.name}.jar">
                  <manifest>
                  <attribute name="Built-By" value="${user.name}"/>
                  <attribute name="Package-Title"
                        value="${manifest.package.title}"/>
                  <attribute name="Package-Version"
                        value="${manifest.package.version}"/>
                  <attribute name="Package-Vendor"
                        value="${manifest.package.vendor}"/>
                  <attribute name="Main-Class"
                        value="${manifest.main.class}"/>
                  <attribute name="Class-Path"
                        value="${manifest.class.path}"/>
                  </manifest>
                  <zipfileset dir="bin/client" prefix="client" includes="**"/>
                  <zipfileset dir="bin/ejb3" prefix="ejb3" includes="**"/>
                  <zipfileset dir="conf" prefix="conf" includes="**"/>
            </jar>
      </target>
      <target name="jws" description="prepare jws certificate">
            <delete file="deploy/stand-alone-certificate" />
            <exec dir="deploy" executable="keytool" input="jws/cert-create.in">
                  <arg value="-genkey"/>
                  <arg value="-keystore"/>
                  <arg value="stand-alone-certificate"/>
                  <arg value="-alias"/>
                  <arg value="saclient"/>
            </exec>
            <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                  <arg value="-verbose"/>
                  <arg value="-keystore"/>
                  <arg value="stand-alone-certificate"/>
                  <arg value="${project.name}.jar"/>
                  <arg value="saclient"/>
            </exec>
            <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                  <arg value="-verbose"/>
                  <arg value="-keystore"/>
                  <arg value="stand-alone-certificate"/>
                  <arg value="${jar.signed-01}"/>
                  <arg value="saclient"/>
            </exec>
            <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                  <arg value="-verbose"/>
                  <arg value="-keystore"/>
                  <arg value="stand-alone-certificate"/>
                  <arg value="${jar.signed-02}"/>
                  <arg value="saclient"/>
            </exec>
            <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                  <arg value="-verbose"/>
                  <arg value="-keystore"/>
                  <arg value="stand-alone-certificate"/>
                  <arg value="${jar.signed-03}"/>
                  <arg value="saclient"/>
            </exec>
            <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                  <arg value="-verbose"/>
                  <arg value="-keystore"/>
                  <arg value="stand-alone-certificate"/>
                  <arg value="${jar.signed-04}"/>
                  <arg value="saclient"/>
            </exec>
            <exec dir="deploy" executable="jarsigner" input="jws/sign-jar.in">
                  <arg value="-verbose"/>
                  <arg value="-keystore"/>
                  <arg value="stand-alone-certificate"/>
                  <arg value="${jar.signed-05}"/>
                  <arg value="saclient"/>
            </exec>

      </target>
      <target name="war" description="${project.name}.war">
            <delete file="deploy/${project.name}.war"/>
            <jar destfile="deploy/${project.name}.war">
                  <zipfileset
                        dir="deploy"
                        prefix=""
                        includes="**"
                        excludes="${project.name}.ear,stand-alone-local.jnlp"/>
                  <zipfileset
                        dir="bin/WEB-INF"
                        prefix="WEB-INF/"
                        includes="**"/>
            </jar>
      </target>
      <target name="ear" description="${project.name}.ear">
            <delete file="deploy/${project.name}.ear"/>
            <jar destfile="deploy/${project.name}.ear">
                  <zipfileset dir="deploy" includes="${project.name}.war"/>
                  <zipfileset
                        dir="bin/META-INF"
                        prefix="META-INF"
                        includes="*.xml"/>
            </jar>
            <delete file="deploy/${project.name}.war" />
      </target>
      <target name="deploy" description="deploy">
            <delete file="${deploy.dir}/${project.name}.ear" />
            <copy file="deploy/${project.name}.ear" todir="${deploy.dir}" />
      </target>

</project>
```

Tutorial JBOSS

Banco de dados


FK_Perfil_has_Usuario_Usuario
FK_Perfil_has_Usuario_Perfil
FK_Perfil_has_Aplicativo_Perfil
FK_Aplicativo_has_Servico_Servico
FK_Aplicativo_has_Servico_Aplicativo
FK_Perfil_has_Aplicativo_Aplicativo

Usuario

	Column Name	Data Type	Length	Allow Nulls
🔑	idUsuario	int	4	
	matricula	varchar	8	
	senha	varchar	6	

Perfil

	Column Name	Data Type	Length	Allow Nulls
🔑	idPerfil	int	4	
	nome	varchar	45	

Perfil_has_Usuario

	Column Name	Data Type	Length	Allow Nulls
🔑	Perfil_idPerfil	int	4	
🔑	Usuario_idUsuario	int	4	

Servico

	Column Name	Data Type	Length	Allow Nulls
🔑	idServico	int	4	
	nome	varchar	255	

Aplicativo

	Column Name	Data Type	Length	Allow Nulls
🔑	idAplicativo	int	4	
	nome	varchar	45	

Aplicativo_has_Servico

	Column Name	Data Type	Length	Allow Nulls
🔑	Aplicativo_idAplicativo	int	4	
🔑	Servico_idServico	int	4	

Perfil_has_Aplicativo

	Column Name	Data Type	Length	Allow Nulls
🔑	Perfil_idPerfil	int	4	
🔑	Aplicativo_idAplicativo	int	4	

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Tutorial JBOSS

MSSQL Stored Procedures/Functions

Usuario

sp_autentica

sp_autoriza

sp_cria_usuario

```
/*--------------------------------------------------------------------------------
 DESCRICAO:
      Rotina para criação de novo usuário.
 OBS.:
      Valores de retorno:
       0 - usuário e senha ok!
       1 - usuário não cadastrado
       2 - senha inválida
       3 - usuário inativo
       4 - senha alterada
       5 - usuário incluido
       6 - usuário alterado
       7 - usuário desativado
       8 - usuário ativado
       9 - usuário já cadastrado
----------------------------------------------------------------------------------
ALTERACOES:
AUTOR             DATA        OBS.:
Royquener         12/2005     Criação
Ruben Trancoso    06/2007     Migração da sp para o novo squema
+---------------------------------------------------------------------------------
*/

CREATE procedure [dbo].[sp_cria_usuario]
(
 @matricula varchar(8)
,@senha varchar(6)
)

as

set nocount on

if exists (select 1 from Usuario where matricula = @matricula )
      begin
            raiserror('Usuário já cadastrado',16,9)
            return 9
      end
else
      begin
            insert into dbo.Usuario
                     (matricula
                     ,senha)
             values
                     (@matricula
                     ,@senha)
      end

set nocount off
```

```
GO
```

sp_remove_usuario

sp_obtem_usuario

sp_altera_usuario

sp_reinicializa_senha

sp_troca_senha

Perfil

sp_cria_perfil

sp_remove_perfil

Aplicativo

sp_cria_aplicativo

sp_remove_aplicativo

sp_obtem_aplicativo

sp_altera_aplicativo

Servico

sp_cria_servico

sp_remove_servico

sp_obtem_servico

sp_altera_servico

Associações

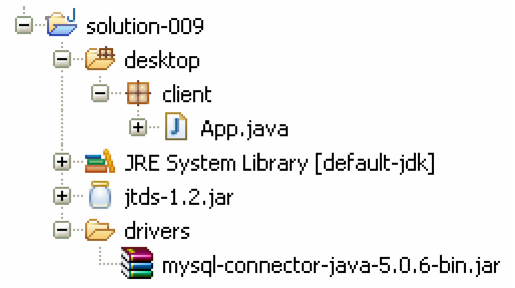
sp_usuario_associa_perfil

sp_aplicativo_associa_perfil

sp_servico_associa_aplicativo

Tutorial JBOSS

JDBC acessa stored procedure



```
solution-009
  desktop
    client
      App.java
  JRE System Library [default-jdk]
  jtds-1.2.jar
  drivers
    mysql-connector-java-5.0.6-bin.jar
```

Driver JDBC para MSSQL

Nome atualizado:	The jTDS Project
Biblioteca jar:	jtds-1.2.jar
Descrição:	jTDS is an open source 100% pure Java (type 4) JDBC 3.0 driver for Microsoft SQL Server (6.5, 7, 2000 and 2005) and Sybase (10, 11, 12, 15). jTDS is based on FreeTDS and is currently the fastest production-ready JDBC driver for SQL Server and Sybase. jTDS is 100% JDBC 3.0 compatible, supporting forward-only and scrollable/updateable ResultSets, concurrent (completely independent) Statements and implementing all the DatabaseMetaData and ResultSetMetaData methods.
URL para download:	http://jtds.sourceforge.net/
Data do registro:	27 de junho de 2007

Instanciamento

```
String driverName = "net.sourceforge.jtds.jdbc.Driver";
String connString = "jdbc:jtds:sqlserver://<server>[:<port>]/
                      <database>;tds=8.0;user=<user>;password=<password>";
Class.forName(driverName);
Connection connection = DriverManager.getConnection(connString);
```

Observações:
Port: 1433

Driver JDBC para MySQL

Nome atualizado:	MySQL JDBC Connector
Biblioteca jar:	mysql-connector-java-5.0.6-bin.jar
Descrição:	Standardized database driver for Java platforms and development.
URL para download:	http://dev.mysql.com/downloads/connector/j/5.0.html
Data do registro:	27 de junho de 2007

Instanciamento

```
String driverName = "com.mysql.jdbc.Driver";
String connString = "jdbc:mysql://<server>[:<port>]/
                      <database>?user=<user>&password=<password>";
Class.forName(driverName);
Connection connection = DriverManager.getConnection(connString);
```

Observações:
Port: 3306

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Tutorial JBOSS

Instruções:

1. Crie um novo projeto J2SE.
2. Adicione uma pasta **drivers** na raiz do projeto e copie a(s) biblioteca(s) para ela.
3. Adicione a(s) biblioteca(s) ao classpath do projeto como já explicado em **Criar um novo projeto J2SE**.

App.java

```
package client;

import java.sql.CallableStatement;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

import javax.swing.JFrame;

public class App extends JFrame {

      String driverName = "net.sourceforge.jtds.jdbc.Driver";
      String connString = "jdbc:jtds:sqlserver://db-vm:1433/security;
                                tds=8.0;user=sa;password=sadesis";

      App() {
            this.cria_usuario("teste","123456");
      }

      public void cria_usuario(String matricula, String senha) {
            CallableStatement sf;
            try {
                  Class.forName(driverName);
                  Connection connection
                        = DriverManager.getConnection(connString);
                  sf = connection.prepareCall("{ call sp_cria_usuario(?,?) }");
                  sf.setString(1, matricula);
                  sf.setString(2, senha);
                  sf.execute();
            } catch (ClassNotFoundException e) {
                  e.printStackTrace();
            } catch (SQLException e) {
                  e.printStackTrace();
            }
      }

      public static void main(String[] args) {
            new App();
      }
}
```

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Tutorial JBOSS

JAAS

SSL

Interceptor

Junit

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