

# Webservice Security

Example webservice-security can be browsed at <https://github.com/apache/tomee/tree/master/examples/webservice-security>

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## CalculatorImpl

```
package org.superbiz.calculator;

import javax.annotation.security.DeclareRoles;
import javax.annotation.security.RolesAllowed;
import javax.ejb.Stateless;
import javax.jws.WebService;

/**
 * This is an EJB 3 style pojo stateless session bean
 * Every stateless session bean implementation must be annotated
 * using the annotation @Stateless
 * This EJB has a single interface: CalculatorWs a webservice interface.
 */
//START SNIPPET: code
@DeclareRoles(value = {"Administrator"})
@Stateless
@WebService(
    portName = "CalculatorPort",
    serviceName = "CalculatorWsService",
    targetNamespace = "http://superbiz.org/wsdl",
    endpointInterface = "org.superbiz.calculator.CalculatorWs")
public class CalculatorImpl implements CalculatorWs, CalculatorRemote {

    @RolesAllowed(value = {"Administrator"})
    public int sum(int add1, int add2) {
        return add1 + add2;
    }

    @RolesAllowed(value = {"Administrator"})
    public int multiply(int mul1, int mul2) {
        return mul1 * mul2;
    }
}
```

## CalculatorRemote

```

package org.superbiz.calculator;

import javax.ejb.Remote;

@Remote
public interface CalculatorRemote {

    public int sum(int add1, int add2);

    public int multiply(int mul1, int mul2);
}

```

## CalculatorWs

```

package org.superbiz.calculator;

import javax.jws.WebService;

//END SNIPPET: code

/**
 * This is an EJB 3 webservice interface
 * A webservice interface must be annotated with the @Local
 * annotation.
 */
//START SNIPPET: code
@WebService(targetNamespace = "http://superbiz.org/wsdl")
public interface CalculatorWs {

    public int sum(int add1, int add2);

    public int multiply(int mul1, int mul2);
}

```

## ejb-jar.xml

```
<ejb-jar/>
```

## openejb-jar.xml

```

<openejb-jar xmlns="http://tomee.apache.org/xml/ns/openejb-jar-2.2">
  <enterprise-beans>
    <session>
      <ejb-name>CalculatorImpl</ejb-name>
      <web-service-security>
        <security-realm-name/>
        <transport-guarantee>NONE</transport-guarantee>
        <auth-method>BASIC</auth-method>
      </web-service-security>
    </session>
  </enterprise-beans>
</openejb-jar>

```

## CalculatorTest

```

package org.superbiz.calculator;

import junit.framework.TestCase;

import javax.naming.Context;
import javax.naming.InitialContext;
import javax.xml.namespace.QName;
import javax.xml.ws.BindingProvider;
import javax.xml.ws.Service;
import java.net.URL;
import java.util.Properties;

public class CalculatorTest extends TestCase {

    //START SNIPPET: setup
    private InitialContext initialContext;

    protected void setUp() throws Exception {
        Properties properties = new Properties();
        properties.setProperty(Context.INITIAL_CONTEXT_FACTORY,
"org.apache.openejb.core.LocalInitialContextFactory");
        properties.setProperty("openejb.embedded.remotable", "true");

        initialContext = new InitialContext(properties);
    }
    //END SNIPPET: setup

    /**
     * Create a webservice client using wsdl url
     *
     * @throws Exception
     */
    //START SNIPPET: webservice

```

```

public void testCalculatorViaWsInterface() throws Exception {
    URL url = new URL("http://127.0.0.1:4204/CalculatorImpl?wsdl");
    QName calcServiceQName = new QName("http://superbiz.org/wsdl",
"CalculatorWsService");
    Service calcService = Service.create(url, calcServiceQName);
    assertNotNull(calcService);

    CalculatorWs calc = calcService.getPort(CalculatorWs.class);
    ((BindingProvider) calc).getRequestContext().put(BindingProvider
.USERNAME_PROPERTY, "jane");
    ((BindingProvider) calc).getRequestContext().put(BindingProvider
.PASSWORD_PROPERTY, "waterfall");
    assertEquals(10, calc.sum(4, 6));
    assertEquals(12, calc.multiply(3, 4));
}
//END SNIPPET: webservice
}

```

## Running

### ----- T E S T S -----

```

Running org.superbiz.calculator.CalculatorTest
Apache OpenEJB 4.0.0-beta-1    build: 20111002-04:06
http://tomee.apache.org/
INFO - openejb.home = /Users/dblevins/examples/webservice-security
INFO - openejb.base = /Users/dblevins/examples/webservice-security
INFO - Configuring Service(id=Default Security Service, type=SecurityService,
provider-id=Default Security Service)
INFO - Configuring Service(id=Default Transaction Manager, type=TransactionManager,
provider-id=Default Transaction Manager)
INFO - Found EjbModule in classpath: /Users/dblevins/examples/webservice-
security/target/classes
INFO - Beginning load: /Users/dblevins/examples/webservice-security/target/classes
INFO - Configuring enterprise application: /Users/dblevins/examples/webservice-
security/classpath.ear
INFO - Configuring Service(id=Default Stateless Container, type=Container, provider-
id=Default Stateless Container)
INFO - Auto-creating a container for bean CalculatorImpl: Container(type=STATELESS,
id=Default Stateless Container)
INFO - Enterprise application "/Users/dblevins/examples/webservice-
security/classpath.ear" loaded.
INFO - Assembling app: /Users/dblevins/examples/webservice-security/classpath.ear
INFO - Jndi(name=CalculatorImplRemote) --> Ejb(deployment-id=CalculatorImpl)
INFO - Jndi(name=global/classpath.ear/webservice-
security/CalculatorImpl!org.superbiz.calculator.CalculatorRemote) --> Ejb(deployment-
id=CalculatorImpl)

```

```
INFO - Jndi(name=global/classpath.ear/webservice-security/CalculatorImpl) -->
Ejb(deployment-id=CalculatorImpl)
INFO - Created Ejb(deployment-id=CalculatorImpl, ejb-name=CalculatorImpl,
container=Default Stateless Container)
INFO - Started Ejb(deployment-id=CalculatorImpl, ejb-name=CalculatorImpl,
container=Default Stateless Container)
INFO - Deployed Application(path=/Users/dblevins/examples/webservice-
security/classpath.ear)
INFO - Initializing network services
INFO - Creating ServerService(id=httpejbd)
INFO - Creating ServerService(id=cxf)
INFO - Creating ServerService(id=admin)
INFO - Creating ServerService(id=ejbd)
INFO - Creating ServerService(id=ejbds)
INFO - Initializing network services
  ** Starting Services **
  NAME                IP            PORT
  httpejbd            127.0.0.1    4204
  admin thread        127.0.0.1    4200
  ejbd                 127.0.0.1    4201
  ejbd                 127.0.0.1    4203
  -----
Ready!
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 3.481 sec

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
```