

JBoss World 2006
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JBoss & .NET Interop

Microsoft 

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What is Interop?

- Nerd Definition - the ability to exchange and use information (usually in a large heterogeneous network made up of several local area networks)
- The rest of humanity definition – ability to ask for a process or data to be manipulated and for that manipulation to provide back useful data or results. Not necessarily computer data.

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What is Interop b/w MS and JBoss?

- Several Areas
 - ✓ Active Directory to JNDI
 - ✓ System Center Operations Manager 2007
 - ✓ SQL Server 2005 and MS JDBC Native Driver support for JBoss AS and Hibernate
 - ✓ Web Services

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Web Services

- What level of interop are MS and JBoss working on?
- WS-I Standards (<http://www.ws-i.org/>)
 - ✓ Basic Profile 1.0
 - ✓ SOAP 1.1, 1.2 & MTOM
 - ✓ WS-Security
 - ✓ WS-Addressing
 - ✓ WS-Coordination
 - ✓ WS-AtomicTransaction
 - ✓ WS-BusinessActivity

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MTOM

- Message Transmission Optimization Mechanism
- <http://www.w3.org/TR/soap12-mtom/>
- Used to send large files efficiently
- Examples include:
 - ✓ CLOB data
 - ✓ Images
 - ✓ Video
 - ✓ Big database result sets

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MTOM Demo

- Today you will have to use the JBoss Web Services SVN head to get the code that supports MTOM.
- It is being put into a patch/bug fix release. (will appear very soon)

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wse3policyCache.config

```
<policy name="AliceOne">
  <mutualCertificate10Security establishSecurityContext="false" renewExpiredSecurityContext="false"
    requireSignatureConfirmation="false" messageProtectionOrder="SignBeforeEncrypt" requireDerivedKeys="false"
    tillInSeconds="300">
    <clientToken>
      <x509 storeLocation="CurrentUser" storeName="My" findValue="CN=WSE2QuickStartClient"
        findType="FindBySubjectDistinguishedName" />
    </clientToken>
    <serviceToken>
      <x509 storeLocation="LocalMachine" storeName="My" findValue="E=jason.greene@boss.com,CN=Jason Greene,
        O=JBoss Inc., S=Washington, C=US" findType="FindBySubjectDistinguishedName" />
    </serviceToken>
  </protection>
  <request signatureOptions="IncludeAddressing, IncludeTimestamp, IncludeSoapBody" encryptBody="true" />
  <response signatureOptions="IncludeAddressing, IncludeTimestamp, IncludeSoapBody" encryptBody="false" />
  <fault signatureOptions="IncludeAddressing, IncludeTimestamp, IncludeSoapBody" encryptBody="false" />
  <protectors>
    <mutualCertificate10Security>
      <requireActionHeader />
    </mutualCertificate10Security>
  </protectors>
</policy>
```

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App.config

Policy setup

```
<policy fileName="wse3policyCache.config" />
<security>
  <binarySecurityTokenManager>
    <add valueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3">
      <keyAlgorithm name="RSA15" />
    </add>
  </binarySecurityTokenManager>
  <securityTokenManager>
    <add localName="EncryptedKey"
      type="Microsoft.Web.Services3.Security.Tokens.EncryptedKeyTokenManager, Microsoft.Web.Services3,
      Version=3.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35"
      nameValue="http://www.w3.org/2001/04/xmlenc#"
      keyAlgorithm name="AES128" />
    </add>
  </securityTokenManager>
  <cryptography>
    <encryptionFormatters>
      <add uri="http://www.w3.org/2001/04/xmlenc#aes128-cbc"
        type="Microsoft.Web.Services3.Security.Cryptography.AES128EncryptionFormatter" />
      <add uri="http://www.w3.org/2001/04/xmlenc#rsa-1_5"
        type="Microsoft.Web.Services3.Security.Cryptography.RSA15EncryptionFormatter" />
    </encryptionFormatters>
  </cryptography>
  <x509 allowTestRoot="true" storeLocation="CurrentUser" />
</security>
```

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WS-Security

- Important files
 - .NET
 - wse3policyCache.config
 - App.config

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App.config

Signing setup

```
<applicationSettings>
  <SecureJBossWebServiceClient.Properties.Settings>
    <setting name="SecureJBossWebServiceClient_secureJBossService_HelloService"
      serialize="String">
      <value>http://localhost:8080/jbossws-samples-wssecurity-sign</value>
    </setting>
  </SecureJBossWebServiceClient.Properties.Settings>
</applicationSettings>
```

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WS-Security – Install Demo Certs on Windows

Assuming you have VS 2005 Pro

- Go to:
 - C:\Program Files\Microsoft WSE\3.0\Samples
 - Run Setup.exe
 - This will create Demo Public & Private Certificates and put them in the Windows keystore.
- You can see this windows keystore at:
 - Ran "mmc" from the Windows "Run" menu
 - When it comes up, in the "File" menu, choose "Add/Remove Snap-in..."
 - In the dialog that pops up, choose "Certificates"
 - Click "Add" button
 - Choose "My User Account"
 - Repeat again for "Computer Account"
 - Choose "Local Computer"

Once this is done, you've got the certs added and you can view them in the MMC. You'll see them in the MMC Console Root as "Certificates - Current User" and "Certificates (Local Computer)"

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Generate Public Keys

- We need public keys to use on the Jboss side of the Web Service conversation
- Under "Certificates – Current User"
 - ✓ Open the Personal Folder
 - Choose Certificates
 - ✓ Select the WSE2QuickStartClient certificate
 - ✓ Right mouse click and choose "All Tasks" menu item
 - ✓ Choose "Export..." menu Item
 - ✓ Select "Do not export private key"
 - ✓ Choose base64
 - ✓ Give it at file name (publicKeyFile)
 - ✓ It will export the file name to your "Documents" folder. File will be called publicKeyFile.cer.
 - ✓ ????

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WS-Security Demo

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