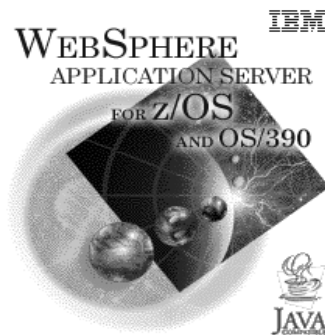


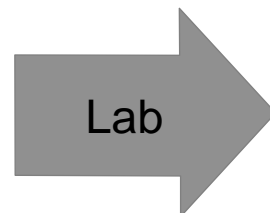
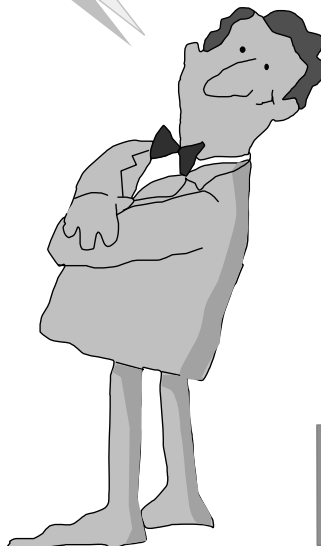
# WAS 390 Enablement

## LAB

### Installing and Running IVP



Now let's see  
if this thing  
really works?



# Installing and Running the J2EE IVP



In this lab, you verify the installation and customization of the WAS 390 runtime environment by installing and running the EJB Installation Verification Program (IVP).

Lab goals:

Install the J2EE IVP application into a WAS 390 server.  
Run the client accessing the IVP.

The general flow of this lab activity is:

1. Create a new conversation
2. Create a J2EE Resource for DB2
3. Create a J2EE Resource instance for DB2 on this OS390 image
4. Import the J2EE application
5. Assign the JNDI names and resolve resource references
6. Validate the conversation
7. Commit the conversation
8. Indicate the non-gui installation tasks have been performed(\*)
9. Activate the conversation
10. Perform the non-gui installation tasks
11. Run the IVP client.

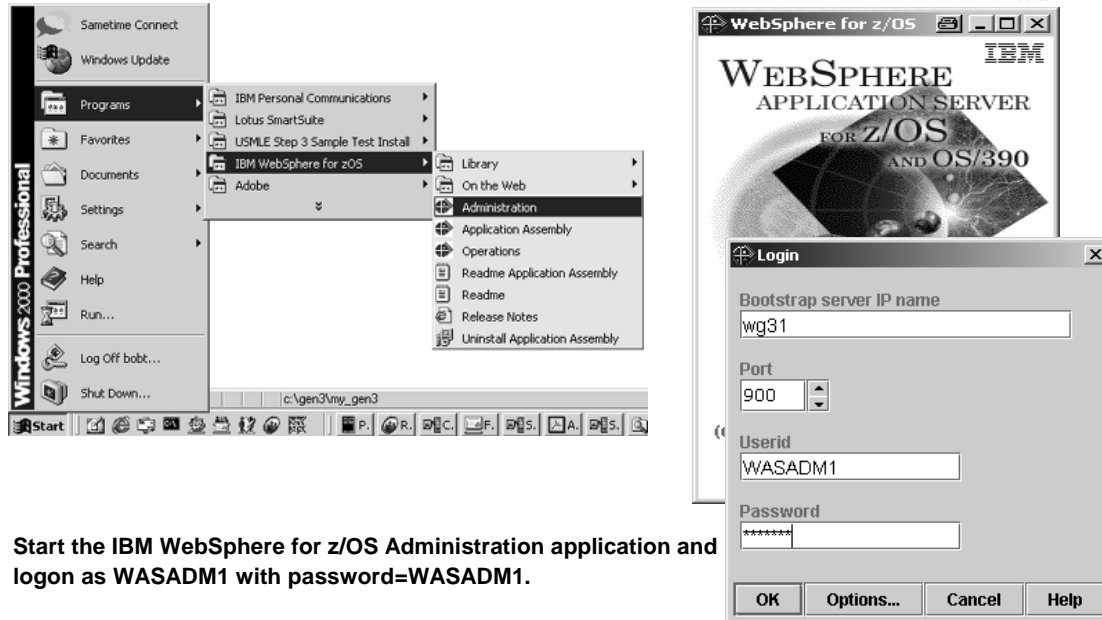
## Starting the Environment



Before starting your administration, you must make sure that WAS and the supporting infrastructure is running.

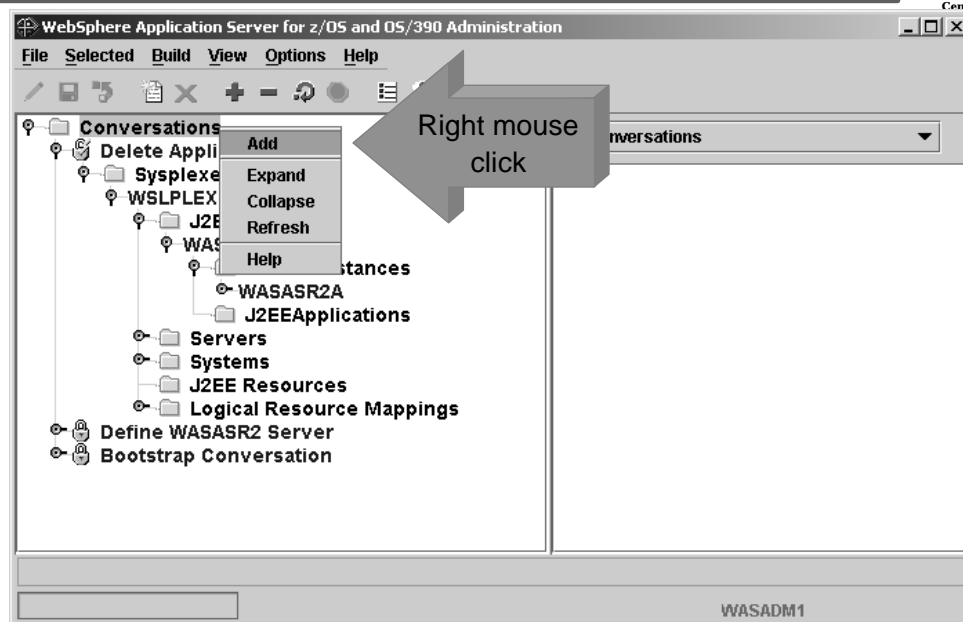
- Start RRS  
`s atrrrs,sub=mstr`
- Start DB2  
`-djb1 start db2`
- Start WASWTR  
`trace ct,wtrstart=waswtr`
- Start LDAP  
`s wasldap`
- Start WAS  
`s wasdmnc`

# Start SMS



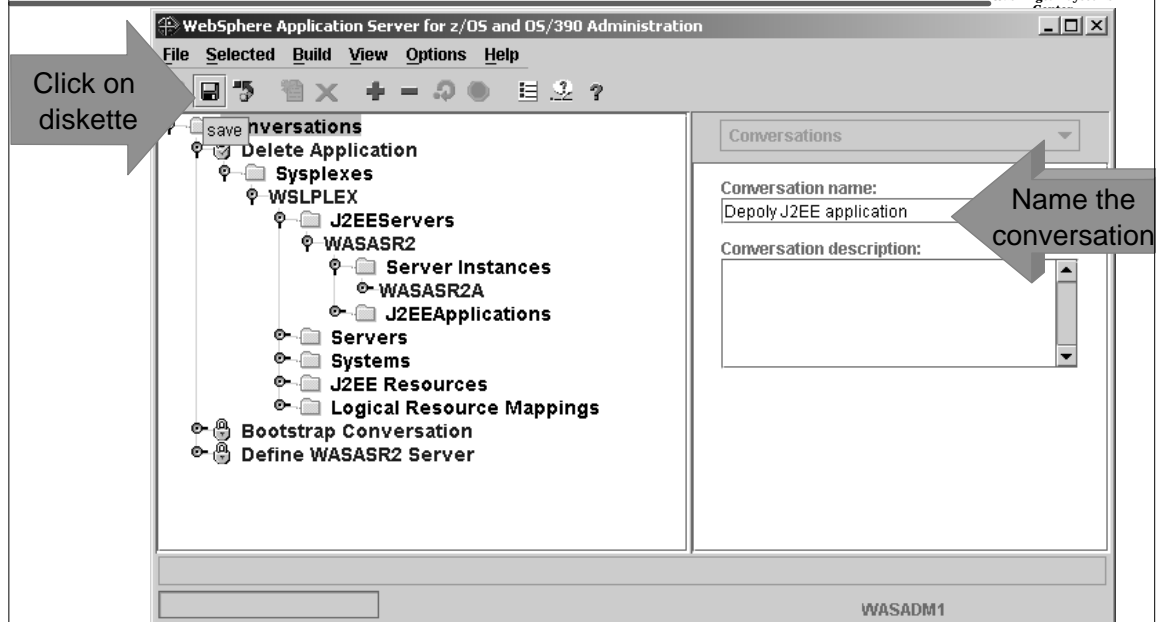
Start the IBM WebSphere for z/OS Administration application and login as WASADM1 with password=WASADM1.

# Creating a Conversation



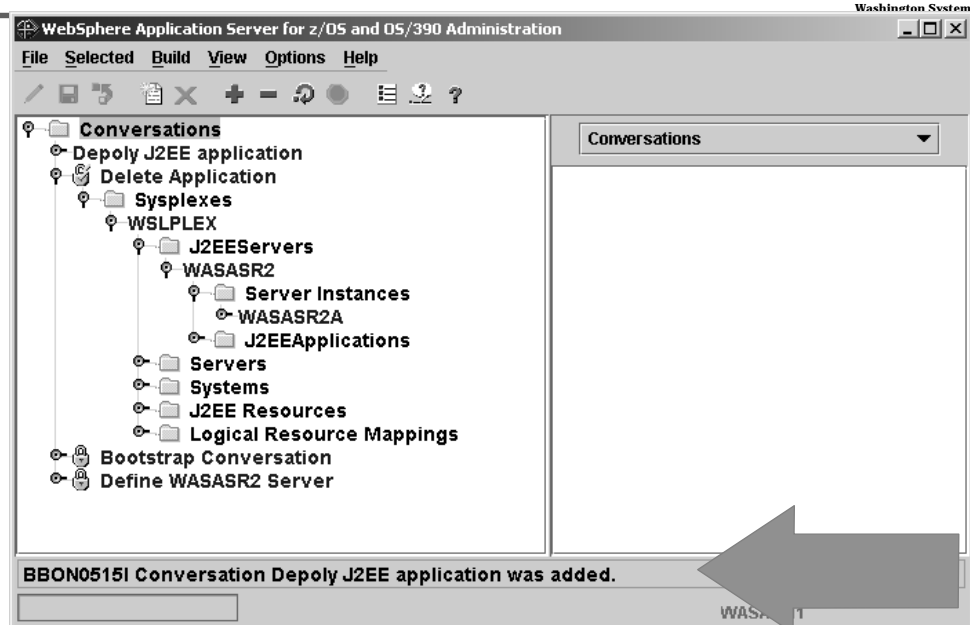
Highlight the "Conversation folder, click mouse button "2" and select Add.

## Saving the Conversation



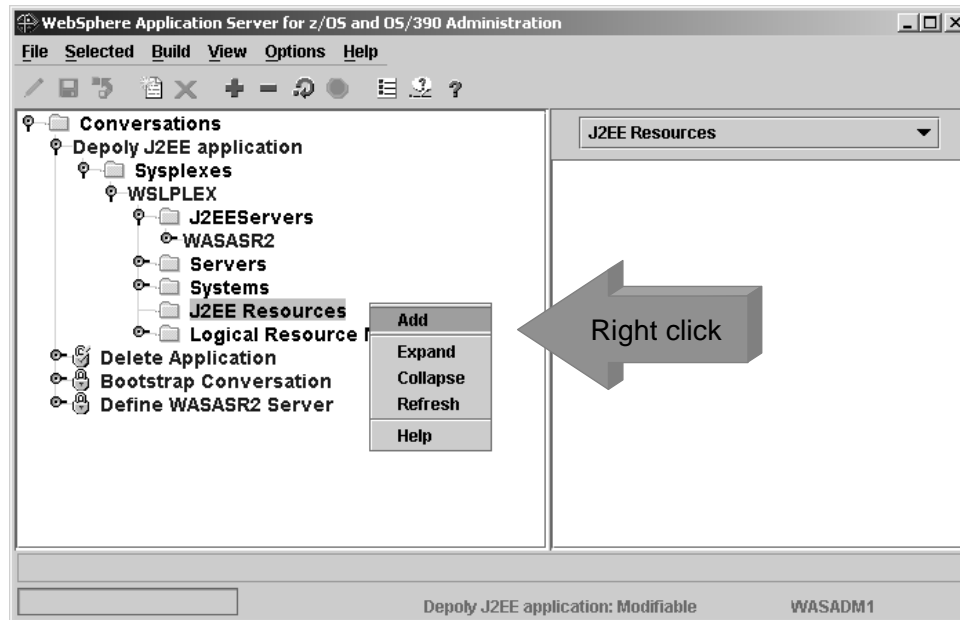
Give your conversation a new name (any name you like), and click the diskette icon to save the new conversation.

## New Modifiable Configuration



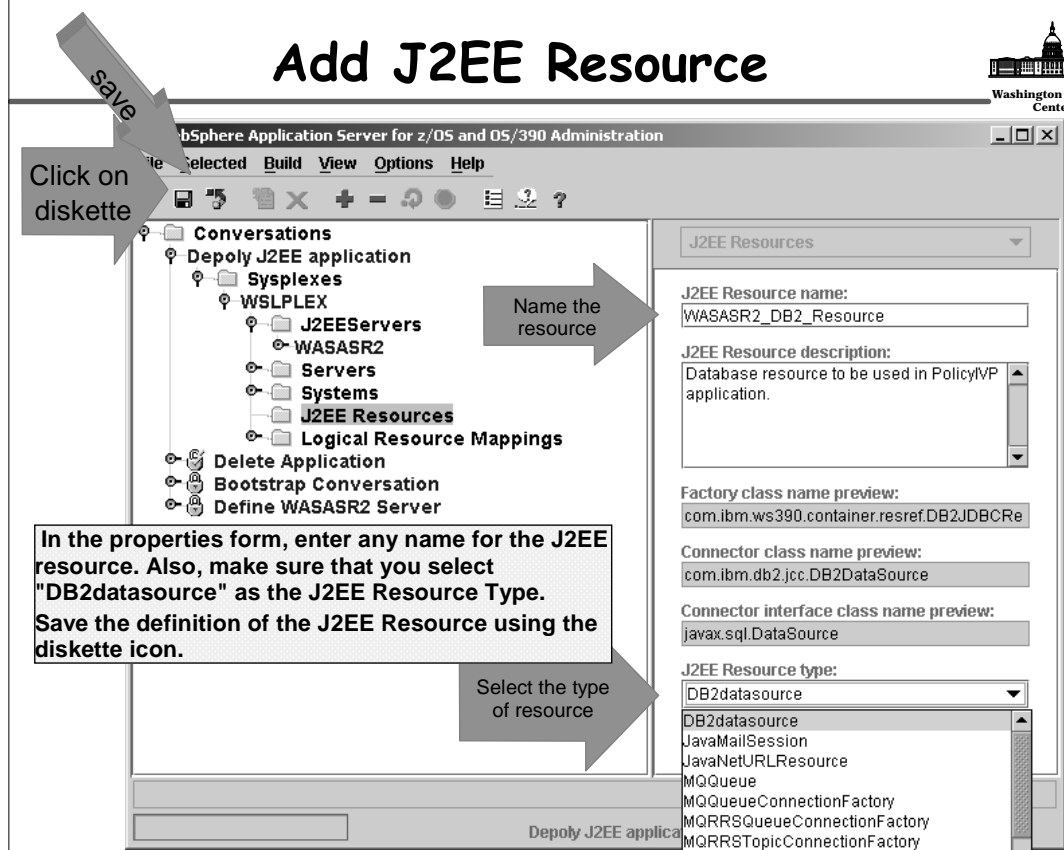
You should then see the above message and your new conversation at the top of the hierarchy of conversations. Expand all of the buttons in your new conversation.

# Add a Resource



At this point you will add a datasource to be used by the application.  
Select J2EE Resources with the left mouse button.  
Then, using the right mouse button, select Add.

# Add J2EE Resource

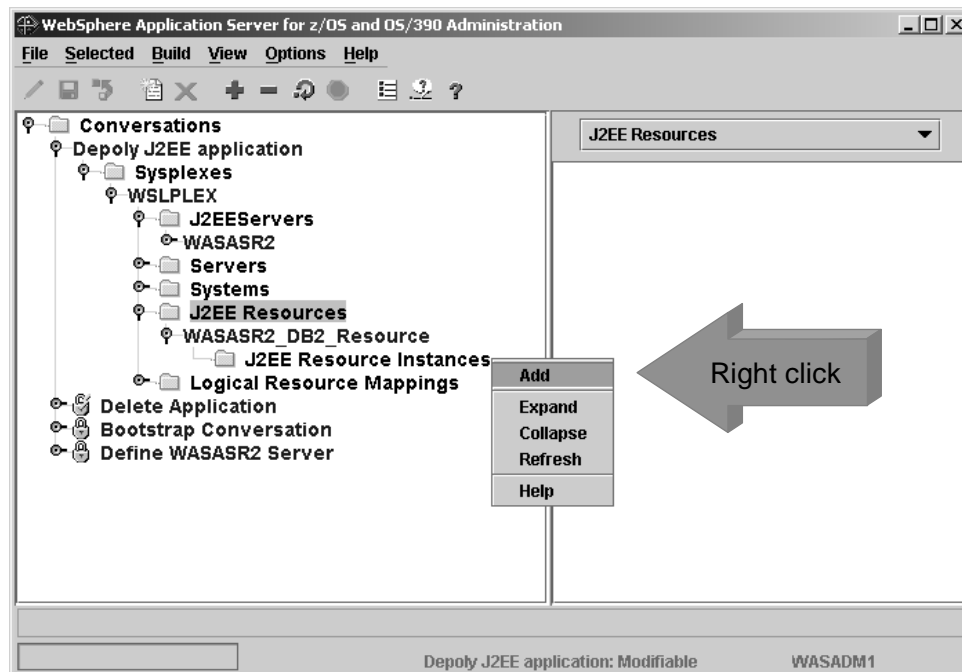


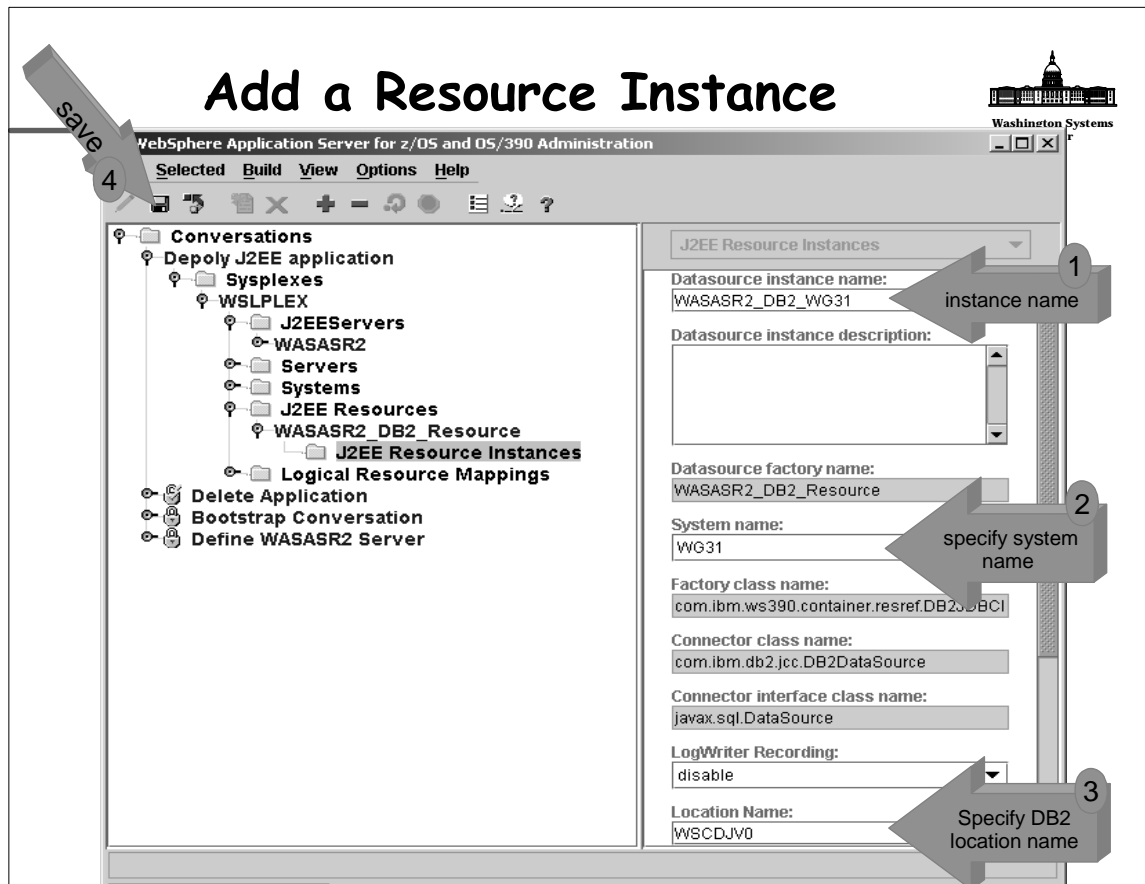
# Add a Resource Instance



- ▶ Next add a datasource instance to be used by session and entity beans. You need to tie the Datasource to the DB2 subsystem which we will use.  
**See visuals on next 2 pages.**
- ▶ Select J2EE Resource Instances with the left mouse button use the right mouse button and select Add.
- ▶ In the properties form, enter any name for the J2EE resource instance.
- ▶ Enter the system name. (wg31)
- ▶ The Database Name is the most important property to enter on this definition. Use your DB2 location name (wscdjv0).

## Add Instance





## FTP ear file from OS/390



Now let's import the application.

WAS 4.0 only knows how to install a EJB 1.1 package called an ear file... which is nothing more than a jar file containing jar files and some deployment meta-data.

Fortunately, the IVP ear file is shipped with the product.

The ear file must reside on your workstation for the GUI to access it.

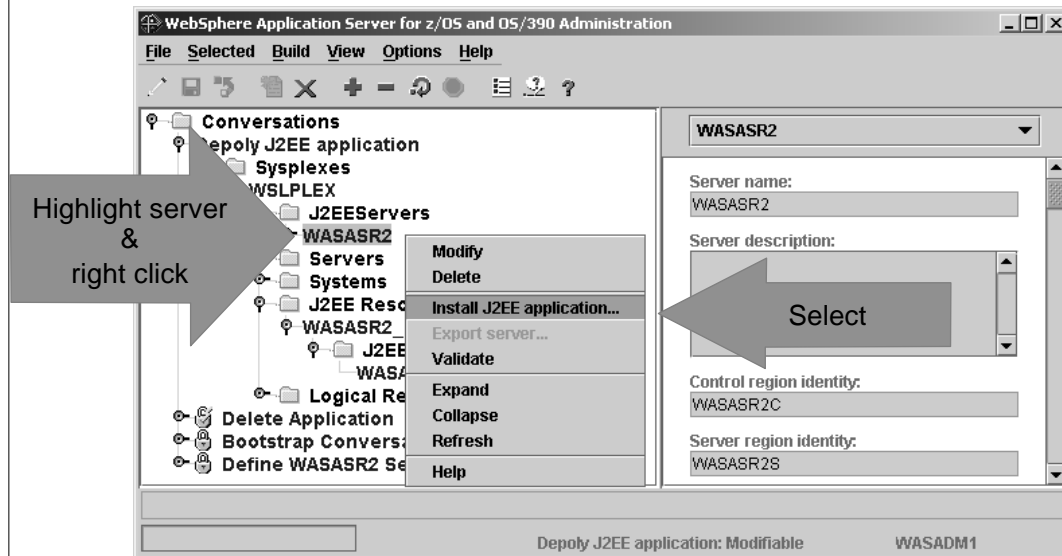
Open a command prompt window and FTP the file from your OS/390 system.

```
C:\ mkdir IVP
cd IVP
ftp wg31
```

```
User (wsg31:(none)): user1
331 Send password please.
Password: user1
```

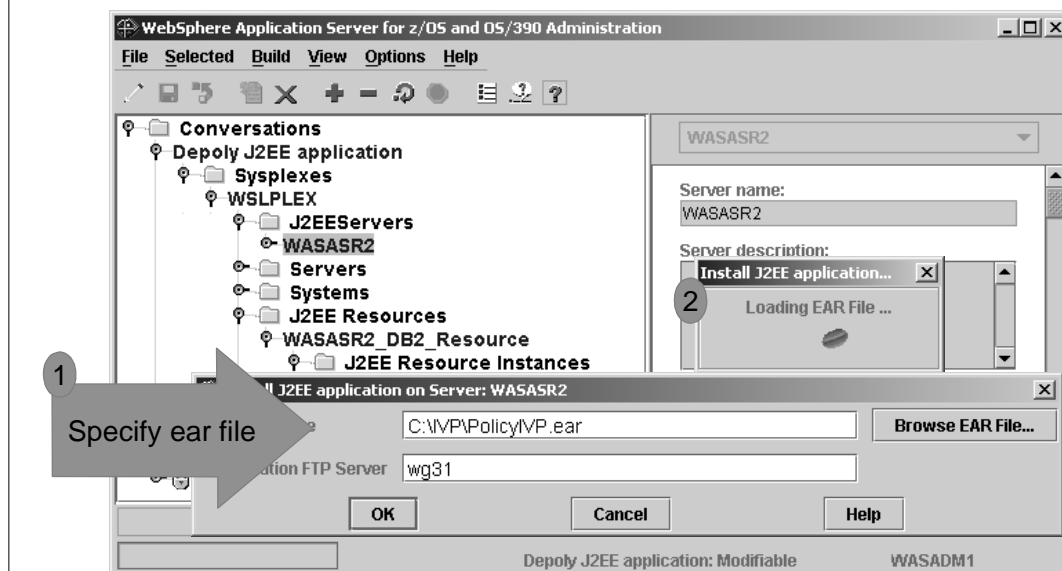
```
ftp> cd /usr/lpp/WebSphere401/samples/PolicyIVP/ejb
250 HFS directory /usr/lpp/WebSphere401/samples/PolicyIVP/ejb
ftp> bin
ftp> get PolicyIVP.ear
ftp> quit
exit
```

# Install Application



- Select the server folder: "WASASR2"
- Click mouse button "2" and
- Select "Install J2EE application".

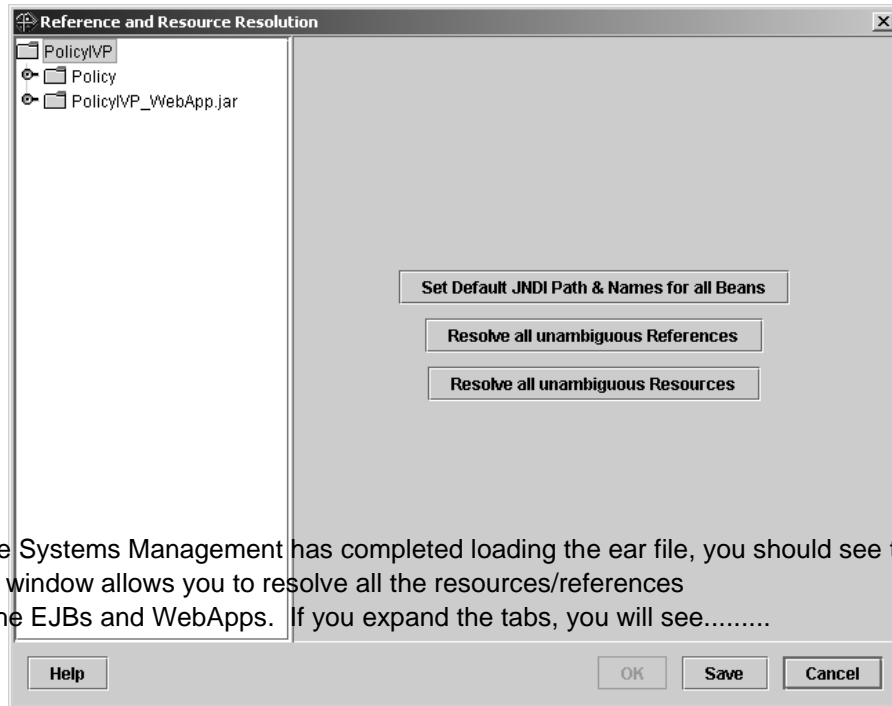
# Import EAR file



You will get the following popup asking for where the location of the ear file and the name of the server.

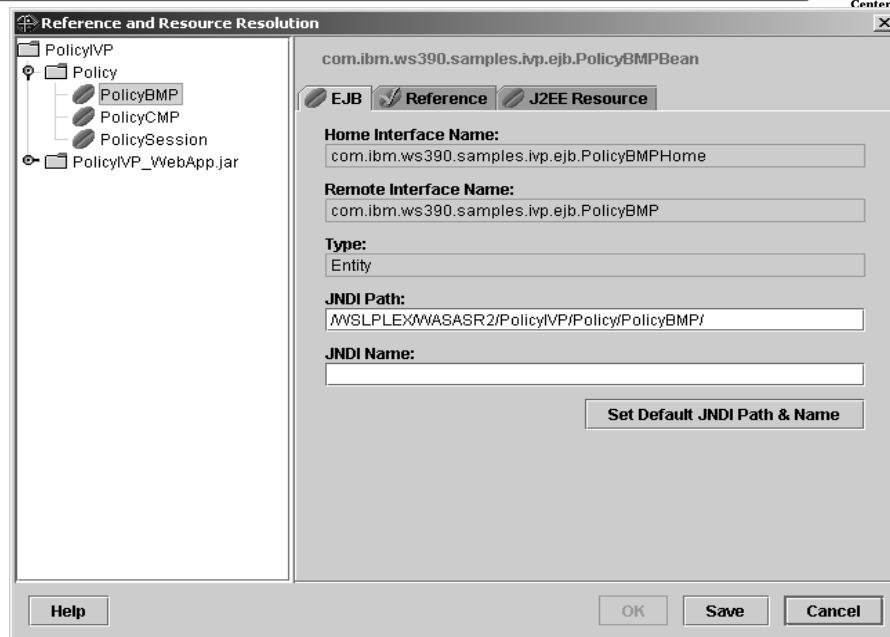
- 1 - Specify the fully qualified name of the ear file and your system name.
- 2 - Now press "OK" and you will see the popup window as the tool loads the .ear file.





Once Systems Management has completed loading the ear file, you should see the above. This window allows you to resolve all the resources/references for the EJBs and WebApps. If you expand the tabs, you will see.....

## Assign the JNDI Names and Resolve Resource References



## Assign the JNDI Names and Resolve Resource References



Note: None of the beans have all the required information to be deployed yet. This is indicated by the fact that none of the java beans has a check mark on it and the "OK" button is not functional.

## Set JNDI PATH



To resolve all the references for each bean:

- Highlight the bean (as shown in the previous panel)
- This will bring up the properties panel on the right side.
- Select the EJB folder tab.
- Click the "Set Default JNDI PATH and Name" button.
- Then..... (next page)

# J2EE Resource Association



**Reference and Resource Resolution**

com.ibm.ws390.samples.ivp.ejb.PolicyBMPBean

☒ EJB ☒ **Reference** ☐ J2EE Resource

Name	Type	J2EE Resource
jdbc/policy	com.ibm.db2.jcc.DB2DataSource	WASASR2_DB2_Re

Details  
Description:

Help OK Save Cancel

Select 1

2  
Associate with the appropriate resource

- Select the J2EE Resource folder tab.
- Using the pulldown under the J2EE Resource
- Select the Resource Instance that you created earlier.

# References Completed



**Reference and Resource Resolution**

com.ibm.ws390.wc.container.RemoteWebAppBean

☒ EJB ☒ **Reference** ☒ J2EE Resource

**Home Interface Name:**  
com.ibm.ws390.wc.container.RemoteWebAppHome

**Remote Interface Name:**  
com.ibm.ws390.wc.container.RemoteWebApp

**Type:**  
Session

**JNDI Path:**  
WSLPLEX/WASASR2/PolicyIVP/PolicyIVP\_WebApp/PolicyIVP\_v

**JNDI Name:**  
com.ibm.ws390.wc.container.RemoteWebAppHome

Set Default JNDI Path & Name

Help OK Save Cancel

➤ Perform the same set of operations on each of the beans.

The polycysession bean and the PolicyWebApp do not require a J2EE Resource definition.

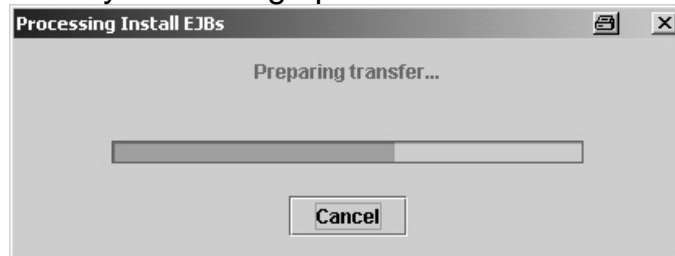
Once you have completed assigning the JNDI names and J2EE references, there should be a check mark next to all of the beans, and the "OK" button should be enabled.

➤ Click the "OK" button.

## ftp ear File



The completed ear file will then be sent to the OS/390 system using ftp.



This process takes a while. You will see a message at the bottom:  
WG31 FTP not busy.....

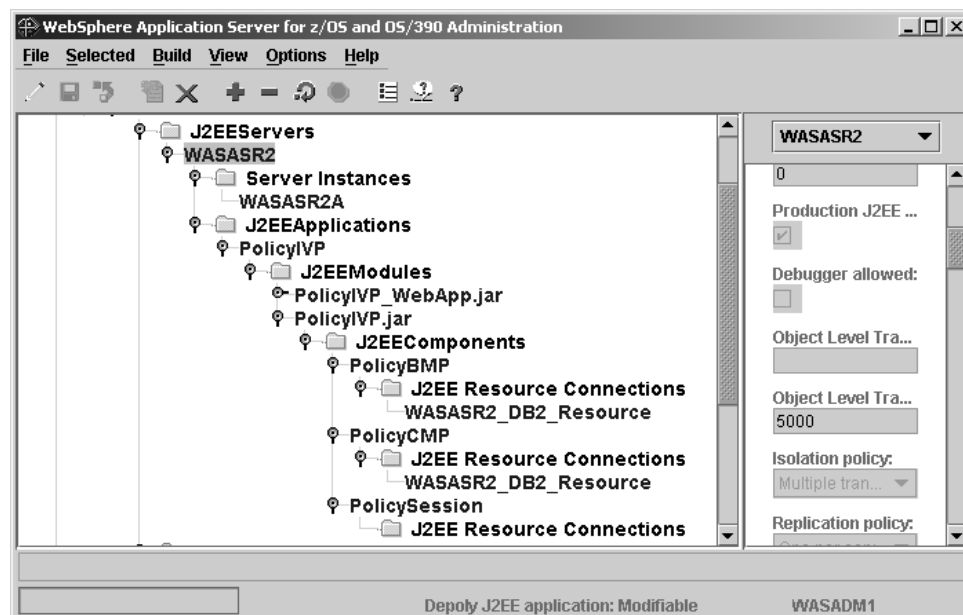
Eventually you should see a message at the bottom of the screen that says:

Ear file PolicyIVP\_resolved.ear has been successfully installed on server WASASR2.

## Installed Application



Expand all of the folders and you should see this.



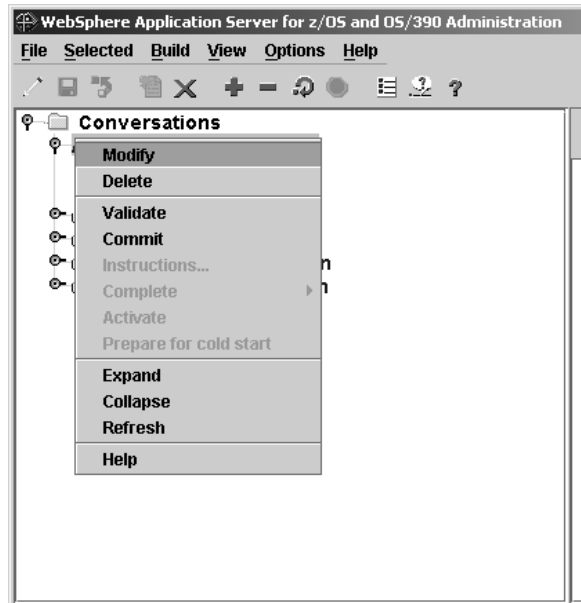
# Complete Conversation



To complete the installation

you must:

- Validate
- Commit
- Complete Instructions
- Activate the conversation.
- Select the conversation.
- Right mouse click
- Select Validate.
- Right mouse click
- Select Commit
- Right mouse click
- Select Instructions (there should not be any tasks required)
- Select Complete
  - All Tasks
- Right mouse click
- Activate
- Select Activate



# Start WASASR2



Once you get your conversation activated and it shows as the active conversation, you are ready to .....

Start the server:

Now, everything is ready to go... I hope. From SDSF issue the command:

```
'/S WASASR2C.WASASR2A '
```

At this point the server will start, there will be interaction with the systems management server causing the EJB homes in this application to be registered in the name space. Once this is complete you are ready to run the client. You will see many messages in syslog.

The key messages to look for are:

```
+BBOU0698I REGISTERING SERVER WASASR2
+BBOU0695I NAMING REGISTRATION COMPLETED FOR SERVER WASASR2
```

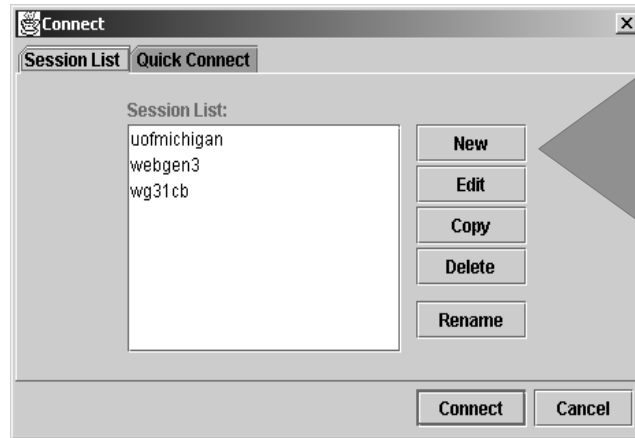
# Configuring Idap Browser



Start Idap browser (icon on your desktop).

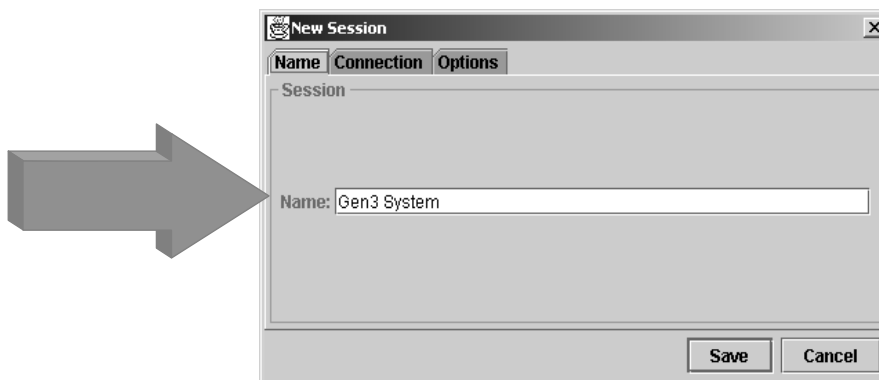


Shortcut to lbe.bat.lnk



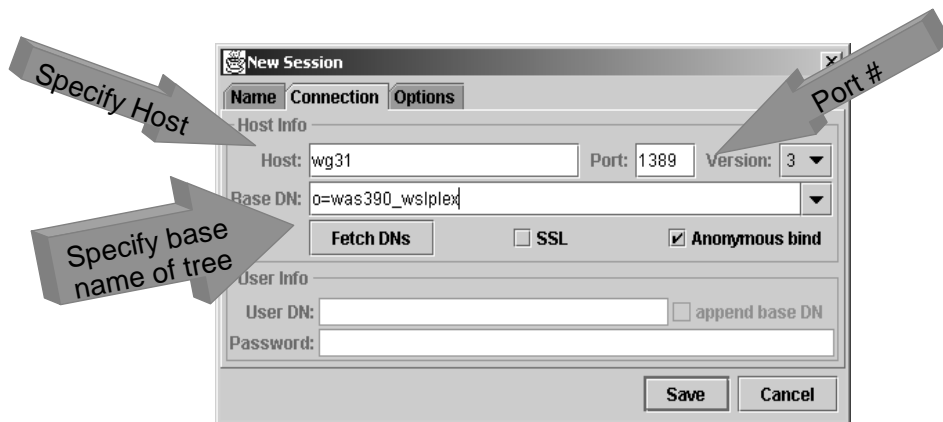
Click on New to create a new connection definition.

## Name Connection



Enter a name for your session.

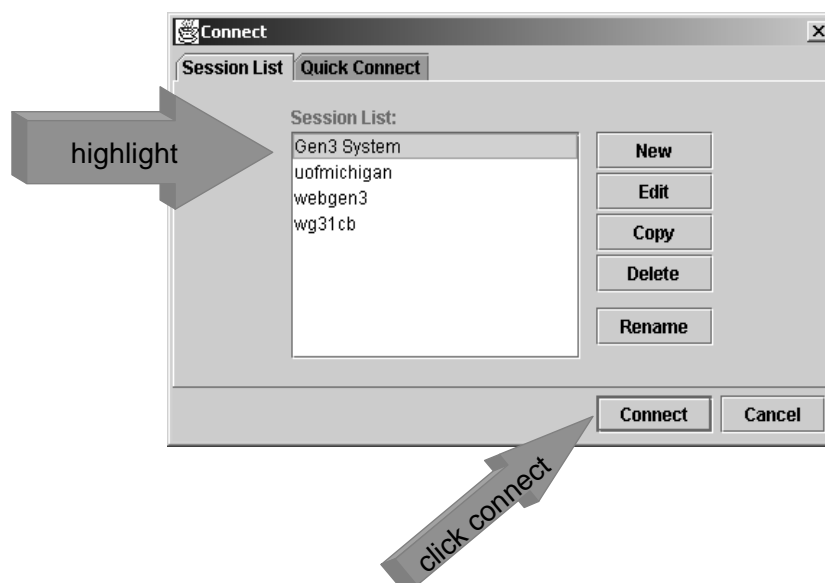
## Define Connection



Specify:

- host name
- port
- distinguished name

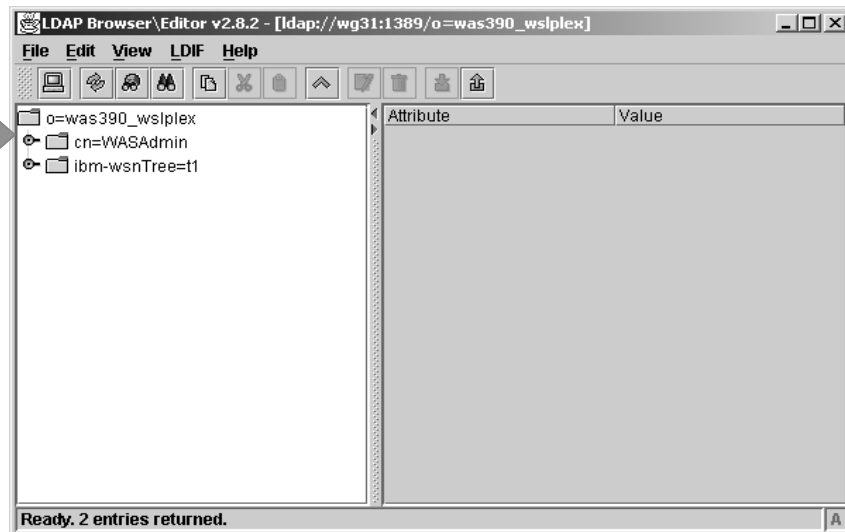
## Connect to Server



# Tree Top



Expand all levels

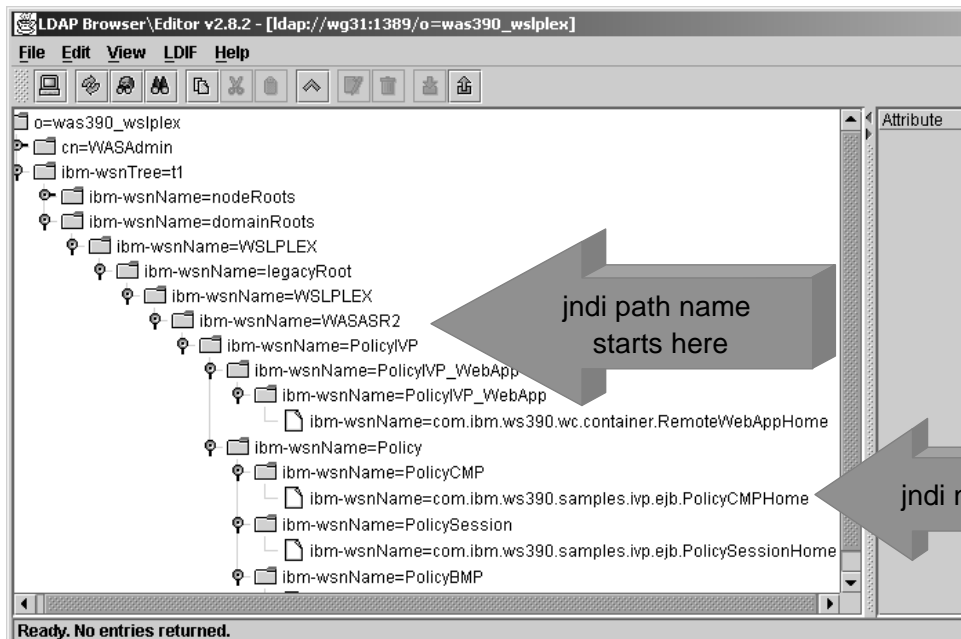


# Expanded Tree



jndi path name  
starts here

jndi name





# Set up Client



Switch to an OMVS session. In your home directory create a directory IVP

```
mkdir IVP
```

Change to the IVP directory

```
cd IVP
```

Copy the sample shell script from the WAS HFS directory to your working directory:

```
cp /usr/lpp/WebSphere401/samples/PolicyIVP/ejb/ejbivp.sh ./
```

Make certain the file is owned by user1 and has permission bit settings of 755.

Edit the file.

# Set up Client



Provide knowledge of ORB:

```
export RESOLVE_IPNAME=wg31.washington.ibm.com
export RESOLVE_PORT=900
```

Change occurrences of /usr/lpp/WebSphere to /usr/lpp/WebSphere401

Change occurrences of <install path> to WSLPLEX/WASASR2:

```
c '<install path>' WSLPLEX/WASASR2 all
```

In the command for invoking the ejb there is a parameter `-DSESSION_NAME` that contains the jndi name of the session bean to be invoked:

```
-DSESSION_NAME=/WSLPLEX/WASASR2/PolicyIVP/policysession_deploy/ivp.policysession/com.ibm.ws390.samples.ivp.ejb.PolicySessionHome
```

The name referenced in the variable above is used by the client to find the home interface of the PolicySession bean. This is the structure that the application server has registered in ldap. **The name provided in the sample shell script does not match the name that was generated in the SMS EUI when you deployed the ear file.**

The name referenced must match the structure registered in ldap. Using your ldap browser, find the fully qualified jndi path and name and edit the above variable to match.

# Run IVP



Run the shell script `ejbivp.sh`  
This is what you should see!!!!

ldap lookup

```
USER1:/u/user1/IVP: >ejbivp.sh
***** bmp bean will be run!
Look up policy session home
Obtaining policysession bean jndi name...
The policysession bean jndi name is: /WSLPLEX/WASASR2/PolicyIVP/Policy/PolicySession/com.ibm.ws390.samples.ivp.ejb.PolicySessionHome

Lookup policy session home
homeName: /WSLPLEX/WASASR2/PolicyIVP/Policy/PolicySession/com.ibm.ws390.samples.ivp.ejb.PolicySessionHome
Narrow policy session home
Driving policy session bean
bmp IVP has completed successfully
***** cmp bean will be run!
Look up policy session home
Obtaining policysession bean jndi name...
The policysession bean jndi name is: /WSLPLEX/WASASR2/PolicyIVP/Policy/PolicySession/com.ibm.ws390.samples.ivp.ejb.PolicySessionHome

Lookup policy session home
homeName: /WSLPLEX/WASASR2/PolicyIVP/Policy/PolicySession/com.ibm.ws390.samples.ivp.ejb.PolicySessionHome
Narrow policy session home
Driving policy session bean
cmp IVP has completed successfully
```

Success!!!!

Success!!!!

