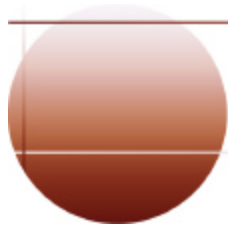


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# H03



**IMS**

technical conference

**Las Vegas, NV**

**September 15 - September 18, 2003**

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## **Note:**

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# Workshop Overview

This workshop features hands-on labs to configure the IMS Java Message Processing Region and to validate the configuration using the IMS Java Classes IVP.

You will also use the new DLI Model Utility to generate IMS Java Classes Metadata.

During the exercises, you will have the opportunity to:

- configure and work with your own IMS Java Dependent Region
- use the IMS Java IVP program to get first-hand experience on how it interacts with IMS
- and create IMS Java Classes Metadata using the DLI Model Utility.

The workshop provides step-by-step instructions and is designed to be self-paced. Instructors are available to assist in any problems encountered.

## Exercise 1. Review Environment

### What This Exercise is About

In this exercise you become familiar with how to access the mainframe.

### Exercise Steps

1. If your system is not already started, proceed through the following:
  - a. Start your system. When the logon panel appears, use the following  
**USERID ==> Administrator, PASSWORD ==> password**
2. Logon to TSO
  - a. Left mouse click the **IMSEDR13** icon. This will establish the connection to the z/OS system.
  - b. Logon information:    Userid=TEAMxx    Password=TEAMxx**

```
OPTION ===>                CUSTOMPAC MASTER APPLICATION MENU                SCROLL ===> PAGE

IS  ISMF      - Interactive Storage Management Facility
P   PDF       - ISPF/Program Development Facility
IP  IPCS      - Interactive Problem Control Facility
HC  HCD       - Hardware Configuration Definition
SM  SMP/E     - SMP/E Dialogs
R   RACF      - Resource Access Control Facility
SD  SDSF      - System Display and Search Facility
OS  Support   - OS/390 ISPF System Support Options
OU  User      - OS/390 ISPF User Options
DI  DITTO     - Data Interfile Transfer, Testing and Operations
S   SORT      - DF/SORT Dialogs
BMR BMR READ  - BOOKMANAGER READ (Read Online Documentation)
BMI BMR INDX  - BOOKMANAGER READ (Create Bookshelf Index)
BMB BMR BLD   - BOOKMANAGER BUILD (Create Online Documentation)
IC  ICSF      - Integrated Cryptographic Service Facility
```

Use **OPTION 'P'** to access the **PDF environment** and **OPTION 'SD'** to access the **Console**

---

## Exercise 2. Install the IMS Java IVP

The activities will involve copying the IMS Java samples.tar to your /teamxx directory then use untar to install the IMS Java IVP in your OMVS teamxx directory.

Use OPTION 'P' to get to ISPF and then use 6 to get command line.

Enter "omvs" on the command line to get to USS

1. Check your OMVS path

==> pwd

Response should be:

/u/cm650/teamxx

2. Copy the samples.tar file to your teamxx directory

==> cp /u/cm650/usr/lpp/ims/imsjava71/samples/samples.tar /u/cm650/teamxx/.

3. Untar the samples.tar file

==> tar -vxf samples.tar

Response should be:

USTAR Version

x samples/dealership/AutoDealership.java, 16342 bytes, 32 tape blocks

x samples/dealership/AUTPSB11DatabaseView.java, 17214 bytes, 34 tape blocks

x samples/dealership/cics/CICSAuto.java, 3369 bytes, 7 tape blocks

.

.

.

5. Display the contents of the teamxx directory to make sure the command worked

==> ls -l

Response should be:

total 1104

drwxrwxr-x 4 teamxx SYS1 8192 Aug 1 13:03 samples

-rw-r--r-- 1 teamxx SYS1 13270 Sep 12 2002 samples.jar

-rwxr-xr-x 1 teamxx SYS1 3993600 Aug 1 13:01 samples.tar

6. Create HFS files JVM.out and JVM.err in your /u/cm650/teamxx path

==> oedit /u/cm650/teamxx/JVM.out

Enter a blank then use PF3 to exit

==> oedit /u/cm650/teamxx/JVM.err

Enter a blank then use PF3 to exit

7. enter "exit" to return to ISPF



---

## Exercise 3. Configure IMS Java Dependent Region

The activities will involve configuration, set-up and starting an IMS Java Dependent Region address space and ensuring that it can run an IMS Java IVP. The IMS Java Dependent Region is a new Dependent Region type that support a Java Virtual Machine(JVM).

### Exercise Steps

- \_\_\_\_\_ 1. Logon to z/OS. Your USERID ==> TEAMxx, PASSWORD ==> TEAMxx. If not already logged on and use "P" to access ISPF and then enter 3.4
- \_\_\_\_\_ 2. Access "TEAMxx.PROCLIB" and edit member DFSJVMMS. Make sure the profile is "NUMS OFF". The TSO command is "unnum". Check that columns 72-80 are blank.
  - a. DFSJVMMS is shipped as a sample member in SDFSISRC and is used to define the OMVS path to your IMS Java Applications and the OMVS path to the IMS Java Classes jar file. It also defines the storage areas(called heaps) for the JVM. The application path needs to be set to your OMVS team path.

```
*****
* JVMOPMAS= DFSJVMMS member used for IMS Java Workshop          *
*****
* The following two JVM options are required. The pathname is:   *
* '/u/cm650/teamxx/samples/samples.jar                          *
*****
-Dibm.jvm.shareable.application.class.path= >
/u/cm650/teamxx/samples/samples.jar
*
-Dibm.jvm.trusted.middleware.class.path= >
/usr/lpp/ims/imsjava71/imsjava.jar
*****
* The following JVM options are a subset of the options allowed  *
* under JDK 1.3.1S                                             *
*****
-Xinitacsh128k
-Xinitsh128k
-Xmaxf0.6
-Xminf0.3
```

---

-Xmx64M  
-Xoss400k

---

\_\_\_\_ 1. Access "TEAMxx.PROCLIB" and edit member DFSJVMEV. Make sure the profile is "NUMS OFF". The TSO command is "unnum". Check that columns 72-80 are blank.

a. DFSJVMEV is shipped as a sample member in SDFSISRC and is used to define the OMVS path to your Java Virtual Machine and IMS Java Classes using the LIBPATH statement.

```
*****
* ENVIRON= DFSJVMEV member *
*****
*****
* LIBPATH environment variable *
* ----- *
* /usr/J1.3/bin/classic is path to libjvm.so *
* /usr/J1.3/bin is path to libatoc.so *
*****
LIBPATH=/usr/lpp/javas13/J1.3/bin/classic: >
/usr/lpp/javas13/J1.3/bin: >
/usr/lpp/java/IBM/J1.3/bin: >
/u/cm650/usr/lpp/ims/imsjava71
```



- 
- \_\_\_\_\_ 1. Access "TEAMxx.PROCLIB" and edit member DFSJVMAP. Make sure the profile is "NUMS OFF". The TSO command is "unnum". Check that columns 72-80 are blank
    - a. DFSJVMAP is shipped as a sample member in SDFSISRC and is used to map the 1-8 character IMS Application definition name to the OMVS path for your IMS Java Application Program

```

*****
*DFSJVMAP is optional and read during application scheduling      *
* The following JVM option is set for IMS Java Workshop          *
*                                                                *
* -Dibm.jvm.shareable.application.class.path=                  *
*   /u/cm650/teamxx/samples/samples.jar                        *
*                                                                *
*****
* Mapping example for an IMS APPLCTN sysgen:                    *
*                                                                *
*   APPLCTN  PSB=IMSJAVAP,PGMTYPE=TP                            *
*                                                                *
* and for an IMS PSB genned as:                                  *
*                                                                *
*   PSBGEN  PSBNAME=IMSJAVAP,LANG=JAVA                          *
*                                                                *
* With the java application package name                        *
*   samples.ivp.ims                                             *
* With the actual java application class file at pathname:     *
*                                                                *
*   /u/cm650/teamxx/samples/samples.jar                        *
*                                                                *
*****

```

IMSJAVAP=samples/ivp/ims/IMSIVP

Note IMSJAVP is the generated PSB used for the Workshop. For the IMS Java IVP DFSIVP37 is the PSB name.

1. Update your IMSJVM and add following DD statements to point to HFS files created in Exercise 2
  - Note PATH= is case sensitive

- 
- a. //JAVAOUT DD PATH='/u/cm650/teamxx/JVM.out'
  - b. //JAVAERR DD PATH='/u/cm650/teamxx/JVM.err'

## Exercise 4. Start Region and test IVP

- \_\_\_\_ 1. Submit your IMS Java Dependent Job to start your teamxx Java Dependent Region
  - To determine the status of your IMS Java Dependent Region. Enter '/**rr**/DIS ACTIVE' where '**rr**' is the outstanding prompt for IMS. Note also that there is a '/' after **rr** since this is an IMS command.

- \_\_\_\_ 2. Logon to IMS

Left mouse click the **ATLEDVM1** icon. This will establish the connection to the z/OS system.

D IMSEDR13

LOGON APPLID=IM7P

- a. Use TEAMxx name as your LOGON ID
- b. Use /FOR TEAMxxMO for your IVP input panel and Enter DISPLAY for PROCESS CODE and LAST1 for LAST NAME.

---

PROCESS CODE (\*1) :DISPLAY

LAST NAME :LAST1

FIRST NAME :

EXTENSION NUMBER :

INTERNAL ZIP CODE :

(\*1)PROCESS CODE

ADD

DELETE

UPDATE

DISPLAY

TADD

END

If IMS Java is properly installed, the output shown is

PROCESS CODE (\*1):DISPLAY

LAST NAME :LAST1

FIRST NAME :FIRST1

EXTENSION NUMBER :8-111-1111

INTERNAL ZIP CODE :D01/R01

(\*1)PROCESS CODE

ADD

DELETE

UPDATE

DISPLAY

TADD

END

---

## Exercise 5. DLI Model Utility

In this exercise you will use the DLI Model Utility to generate the IMS Java Classes Metadata.

1. Create the control statement file

A. ==> cd /u/cm650/teamxx/dlimodel

b. ==> oedit cntrstmt

c. Add the following lines to the file:

```
OPTIONS PSBds=IMS710.SDFSISRC   DBDds=IMS710.SDFSISRC
      GenJavaSource=YES
      GenXMI=YES
      GenTrace=YES
      Outpath=/u/cm650/teamxx/dlimodel
      PSB PSBName=IMSJAVAP
```

2. Set up the classpath. Note to enter a multiple line command under omvs each line must end with backslash(\) to indicate continuation of the command and the last line does not end with \.

```
==> export CLASSPATH=./u/cm650/teamxx/dlimodel/dlimodel.jar:\
      /u/cm650/teamxx/dlimodel/xerces.jar:\
      /u/cm650/teamxx/dlimodel/mofrt.jar:\
      /u/cm650/teamxx/dlimodel/ctccobol.jar:\
      /u/cm650/teamxx/dlimodel/tdlang.jar
```

2. Run the DLI Model Utility

```
==> java com.ibm.ims.metagen.DLIModel cntrstmt
```

3. Review Java Report and Java Source

Located in u/cm650/teamxx/samples/ivp directory

The End