

Provisioning IMS with z/OSMF

Poonam Chitale

pchitale@us.ibm.com

IBM

Session # 17763

Agenda

- Brief overview of z/OS Management Facility
- Exploring the possibilities for IMS
 - Workflows
 - Comparison of traditional vs z/OSMF methods
- Summary & demo
- Q&A

Brief Overview of z/OS Management Facility

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

8/13/2015

Overview of z/OSMF

- IBM z/OS Management facility (z/OSMF) delivers on IBM's strategy for mainframe simplification and modernization
- z/OSMF provides a modern browser based interface to managing the z/OS system
- z/OSMF has a zero price for z/OS customers
- z/OSMF has it's own product number and must be ordered
 - It can be ordered with z/OS in the same serverpac
 - Can be ordered as its own serverpac
 - Can also be ordered as a separate CBPDO
 - Product ID is 5655-S28
 - S&S PID is 5655-S29

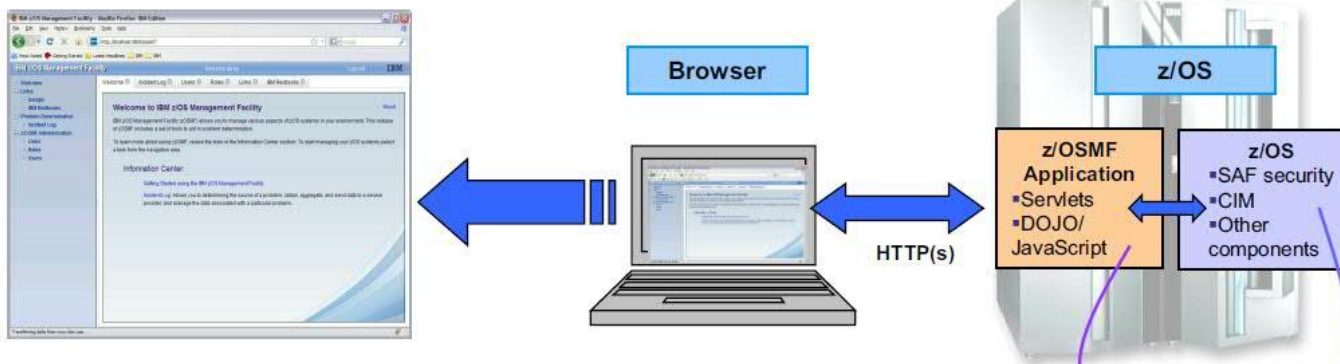
Note: With z/OS 2.2, it is not necessary to order separately

Overview of z/OSMF continued

- z/OSMF helps system programmers to more easily manage and administer a mainframe system by simplifying day to day operations and administration of a z/OS system.
- Not just a graphical user interface,
 - the z/OS Management Facility is intelligent, addressing the needs of a diversified skilled workforce and maximizing their productivity.



z/OS Management Facility architecture



- z/OS Management Facility is a Web 2.0 application on z/OS
- z/OSMF manages z/OS from z/OS, no client install required
- Browser communicates with z/OSMF via secure connection,
 - Connect from anywhere, anytime, no 3270 emulator required!
 - z/OSMF V1R12 is supported on z/OS V1R12
 - z/OSMF V1R13 is supported on z/OS V1R13
 - z/OSMF V2R1 is supported on z/OS V2R1
- z/OSMF uses industry standard technology like DOJO, JavaScript, JAVA
 - JAVA eligible for offload to specialty engine
- z/OSMF communicates with security server on z/OS and other components as needed

Exploring Possibilities for IMS & z/OS Management Facility

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

8/13/2015

Exploring the possibilities for IMS

- Two-way Parallel Sysplex running z/OS 2.1.
- z/OSMF version 2.1 SPE3
- “Workflows” plugin

z/OSMF for IMS Infrastructure



Workflows in z/OS Management Facility


Complete your session evaluations online at www.SHARE.org/Orlando-Eval

8/13/2015

What are Workflows in z/OSMF

- Workflows provide a guided flow through end-end steps required to accomplish a task
- User provides XML metadata file that contains steps and details.
 - Steps may be manual or invoke wizards
 - Within the steps, user can update and submit jobs, execute shell scripts
- User can provide variable input manually or via an input file
- Steps may define dependency on other steps
- Steps may be performed manually or automatically, can be assigned, accepted, not ready, ready, in progress, complete, complete (override), skipped
- History is maintained of all activities in the workflow task
- Steps in the workflow can be assigned to specific roles, such as "system programmer", "security administrator," or an individual to complete setup tasks.
- z/OSMF user can be notified of assigned steps via email notification

Workflows in z/OSMF

IBM z/OS Management Facility Welcome zosmfad [Log out](#) 

Welcome [Workflows](#)

Workflows ▶ This workflow provides the steps for z/OS setup necessary for each plug-in that is to be - Workflow_0 [Help](#)

This workflow provides the steps for z/OS setup necessary for each plug-in that is to be - Workflow_0

Description: This workflow provides the steps for z/OS setup necessary for each plug-in that is to be configured. [Notes](#) | [History](#)

Owner: zosmfad System: SY1_003

Steps complete: 0 of 44

Percent complete:

Workflow Steps [Assigned](#) [Notes, history](#)

State Filter	No. Filter	Title Filter	Owner Filter	Skill Category Filter	Assignees Filter
Ready	1	z/OS configuration for z/OSMF plug-ins	zosmfad	varies	zosmfad
In Progress	2	z/OS configuration for ISPF Classic Interface			
In Progress	3	System prerequisite setup for z/OSMF Configuration Assistant			
Ready	3.1	Move existing backing store files to z/OSMF	zosmfad	Security Administrator	zosmfad
In Progress	4	System prerequisite setup for Common Information Model (CIM) setup			
In Progress	6	System prerequisite setup for z/OSMF Workload Management Plug-in			
Not Ready	6.1	Configure Common Information Model (CIM)	zosmfad		zosmfad
Ready	6.2	Setup Workload Management Security for CIM	zosmfad		zosmfad
In Progress	6	System prerequisite setup for z/OSMF Capacity Provisioning Plug-in			
In Progress	7	System prerequisite setup for z/OSMF Resource Monitoring Plug-in			
In Progress	8	Setup for z/OSMF Incident Log Plug-in			

Total: 50. Selected: 0

[Return to Workflows](#) [Refresh](#)

IMS Workflow example

- Workflow created to install IMS has three components, the xml definition file, the variable input file and the properties file.
(Normal SMP/E process used to get IMS libraries)
- XML Definition file
 - XML file that defines the steps(and jobs) needed to install and start an IMS DB/DC system with IMS Catalog, IMS Connect, ODBM & SCI
 - IVP panels were used as a guide and options that will deploy a system able to handle the vast majority of the typical test environment workloads were chosen
- Variable input file
 - Contains all the resource names related to the parallel sysplex (The log datasets, pools sizes, DBRC RECON, dataset sizes etc)
- Properties file
 - Contains the z/OS and IMS environment information as directed by the Sys Admin, for example: SMPE Info
GIM_IMS_GLOBALzone_CSI=IMSGBL

Completed IMS Workflow

IBM z/OS Management Facility Welcome poonam

Welcome x Workflows x

Workflows ▶ Install IMS TM-DB System - PoonamWorkflow_2

Install IMS TM-DB System - PoonamWorkflow_2

Description: Procedure to provision an IMS TM-DB System

Owner: poonam

System: PLXE0E1.STLABE0

Is Callable: Cannot be called

Percent complete: 100%

Steps complete: 40 of 40

Status: ✔ Complete

Workflow Steps

State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Owner Filter
<input type="checkbox"/> ✔ Complete	1	■ Specify IMS Criteria		Yes	poonam
<input type="checkbox"/> ✔ Complete	2	+ IMS Installation preparation			
<input type="checkbox"/> ✔ Complete	3	+ Build			
<input type="checkbox"/> ✔ Complete	4	+ Start IMS Concomitant Address Spaces			
<input type="checkbox"/> ✔ Complete	5	+ Start the IMS Control Region			
<input type="checkbox"/> ✔ Complete	6	+ Perform IMS Restart			
<input checked="" type="checkbox"/> ✔ Complete	7	■ Start IMS Connect		Yes	poonam

XML definition file for the workflow

Step 2: IMS Installation Preparation

```
<step name="Step2">
  <description>This step presents, in execution sequence, the JOBS and TASKs which comprise the Installation Process. <br><br>
  The process provides examples for many of the tasks that will be necessary in order to complete the installation of your own system under this IMS
</description>
  <title>IMS Installation preparation</title>
  <step name="allocateWorkDs">
    <description>Allocate work Dataset for IMS</description>
    <instructions substitution="true"> This step allocates a work data set needed for the workflow.
    </instructions>
    <weight>10</weight>
    <skills>System Admin</skills>
    <autoEnable>true</autoEnable>
    <template>
      <fileTemplate substitution="true">jcl/DFSALWRK.jcl</fileTemplate>
      <submitAs>JCL</submitAs>
      <maxLrecl>80</maxLrecl>
    </template>
  </step>
```

Invoke JCL

JCL stored in same directory

Creation and execution of a workflow

- Variable Gathering
 - Specify user id, dataset name for example
- Execution
 - Edit the JCL to be pertinent to your own environment if necessary
 - Execute the jobs manually or automatically skipping or overriding steps as necessary
- Validation
 - ISPF interface is available to validate the IMS that was installed this way

Variable gathering

IBM z/OS Management Facility Welcome poonam

Welcome x Workflows x

Workflows ▶ Install IMS TM-DB System - PoonamWorkflow_2 ▶ 1. Specify IMS Criteria

Properties for Workflow Step 1. Specify IMS Criteria

General Details Dependencies Notes **Perform** Status Input Variables

✓ Input Variables

- ➔ **IMS**
 - z/OS Subsystems-IMS
 - z/OS Environment-IMS
 - IMS DataSet
 - z/OS Environment
 - z/OS Subsystems-VTAM
 - z/OS Subsystems-IRLM
 - z/OS Environment-TCPIP
 - z/OS Environment-SMPE
 - z/OS Environment-L.E.
 - z/OS System
 - Jobs
- Review Instructions

Input Variables - IMS

Enter the variable values for this input category.

*ENVIRONMENT - *Environment for which the IMS system is to be pro*
TEST

*IMS_USERID - *TSO user ID for IMS:* ⓘ
POONAM

< Back Next > Save Finish Cancel

Performing steps: Execution

Welcome x Workflows x

Workflows > Install IMS TM-DB System - PoonamWorkflow_2 > 3.5. Dynamic Allocation of IMS system Datasets

Properties for Workflow Step 3.5. Dynamic Allocation of IMS system Datasets

General Details Dependencies Notes **Perform** Status Input Variables

Review Instructions

- Create JOB statement
- Review JCL
- Submit and Save JCL

Review Instructions

To proceed with a wizard for creating and submitting the JCL on **PLXE0E1.STLABE0**, click **Next**. Or, you can choose to bypass this step. If so, first review and confirm that the instructions below have been done. Then, click **Finish** to mark the step complete.

Instructions:

This JOB assembles and binds the dynamic allocation definitions into IMSV13.SDFSRESL for zCloud IMS DB Recovery Control (DBRC RECON) and sample Databases.

< Back Next > Save Finish

Review JCL

Edit and Submit

Workflows > Install IMS TM-DB System - PoonamWorkflow_2 > 3.5. Dynamic Allocation of IMS system Datasets

Properties for Workflow Step 3.5. Dynamic Allocation of IMS system Datasets

General Details Dependencies Notes **Perform** Status Input Variables

- ✓ Review Instructions
- ✓ Create JOB statement
- ➔ **Review JCL**
- Submit and Save JCL

Review JCL

Review the generated JCL, then click **Next** to proceed. Optionally, you can edit the JCL. To do so, click the **Edit JCL** button.

```
//IZUWFJB JOB (ACCTINFO),CLASS=H,MSGCLASS=1,  
//          MSGLEVEL=(1,1),REGION=0M,NOTIFY=POONAM  
/*JOBPARM SYSAFF=SYE0  
/* SKELETON: DFSIXSE6  
//ZCLUDPRC JCLLIB ORDER=(SHARE1.IMSV13.PROCLIB)  
//STEP01 EXEC PROC=IMSDALOC,SOUT=' '*  
//ASSEM.SYSIN DD *  
*  
* START  
*  
DFSMDA TYPE=INITIAL
```

Edit JCL Maximum record length: 80

< Back Next > Save Finish Cancel

Validation

- Once IMS is installed, it can be verified with IMS commands, IMS explorer etc.

- ISPF interface is available in z/OSMF
So you don't have to
Leave the browser

```

SDSF SYSLOG 5174.101 SYE0 SYE0 08/05/2015 4W          COMMAND ISSUED
COMMAND INPUT ==>                                     SCROLL ==> PAGE
RESPONSE=STLABE0 IEE600I REPLY TO 18 IS; DISPLAY
N 0000000 STLABE0 15217 16:35:46.92 00000210 IEA989I SLIP TRAP ID=X13
N 0000000 STLABE0 15217 16:35:46.92 00000210 IEA989I SLIP TRAP ID=X13
M 0020000 STLABE0 15217 16:35:46.97 TSU05472 00000210 BPXP018I THREAD 22B17E00
D 341 00000210 WITHOUT BEING UNDUBBED W
E 341 00000210 , AND REASON CODE 000000
N 4000000 STLABE0 15217 16:35:46.98 TSU05472 00000010 IEF450I DEEPAK TPROC02 T
N FFFF000 STLABE0 15217 16:35:47.34 TSU05472 00000010 SMF000I DEEPAK TPR
N 0000000 STLABE0 15217 16:35:47.35 TSU05472 00000210 IEF170I 3 DEEPAK SMF00
N 4000000 STLABE0 15217 16:35:47.35 TSU05472 00000010 $HASP395 DEEPAK ENDED
N 0000000 STLABE0 15217 16:35:47.35 00000210 IEA989I SLIP TRAP ID=X13
N 0000000 STLABE0 15217 16:35:47.35 00000210 IEA989I SLIP TRAP ID=X33
NC0000000 STLABE0 15217 16:36:02.70 INSTREAM 00000210 LOGON
4200000 STLABE0 16.20.50 STC05506 *18 DFS996I *IMS READY* IMSP
8000000 STLABE0 16.02.00 JOB05511 *16 HWSC0000I *IMS CONNECT READY* IMSPHWS
8000000 STLABE1 16.28.43 JOB05418 *12 HWSC0000I *IMS CONNECT READY* I1DDHWS
4200000 STLABE1 16.27.52 STC05412 *10 DFS996I *IMS READY* IMEC
***** BOTTOM OF DATA *****

```

Comparison of installation methods

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

8/13/2015

Installing IMS Workflow comparison

- Traditional(IVP) vs z/OSMF installation

Parameters	Traditional	z/OSMF
Interface	ISPF	Web Browser
z/OS Skill level	Experienced skills	Entry level skills
Speed	Slower, time consuming	Minutes, if all variables are available
Flexibility	Pick & choose	Simplified
Customization	Yes	Yes
Automation	Not as easy to automate	Can be easily automated

Summary

- Web interface
- Easy to understand
- Automation



Are you ready to try z/OSMF for installing IMS?

Next up: DEMO

DEMO

- Creating Workflow
- Completed Workflow
- XML definition file

Questions? Comments?

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

8/13/2015

Thank You!

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

8/13/2015