

SHARE Technology · Connections · Results

## z/OS Management Facility (z/OSMF) 1.12 Overview

Anuja Deedwaniya <u>anujad@us.ibm.com</u> STSM, z/OS Systems Management and Simplification IBM Corp.

March 1, 2011 Session 8922



## Agenda



Technology · Connections · Results

- z/OSMF Overview
- z/OSMF Functions
  - Incident Log
  - Configuration Assistant for the z/OS Communications Server
  - WLM Policy Editor
  - Resource Monitoring
  - Proposed z/OSMF V1.13 functions
  - Administration

## Summary



## **IT Organizational Domains**



Connections · Result

in Anaheim

2011

✓ Need for simplification of tasks

✓Modernization and integration of tools



 $\checkmark$  Within each domain to enhance productivity

✓ Across domains to enhance collaboration

## Focus Areas for Simplification



### SHARE

### Problem Determination and Analysis

- Monitoring health; identifying real and potential problems
- Analyzing and resolving problems

### Configuration

 Adding or changing system components; enabling new features; defining and updating policies that affect system behavior.

### Simplify and modernize the System Programmer User Experience

Deliver solutions in a task-oriented browser-based user interface with integrated user assistance

### Information

Finding the information needed to use z/OS

### Installation

•Ordering and acquiring software

•Analyzing and identifying service needed for new hardware and software functions

•Migrating from on release to the next



## **IBM z/OS Management Facility**

- The IBM z/OS Management Facility is a new product for z/OS that provides support for a modern, Web-browser based management console for z/OS.
- First release is z/OSMF 1.11, introduced with z/OS 1.11
- 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.
- More than just a graphical user interface, the z/OS Management Facility is intelligent, addressing the needs of a diversified skilled workforce and maximizing their productivity.
  - Automated tasks can help reduce the learning curve and improve productivity.
  - Embedded active user assistance (such as wizards) guides you through tasks and helps provide simplified operations.



Technology · Connections · Results





## **Focus on System Programming**

- Address the needs for a mixed skilled workforce.
- Make System Programmers who are new to the mainframe productive more quickly by:
  - Providing a modern browser-based user interface that is more familiar to those new to the platform
  - Automating tasks, thus reducing the learning curve
  - Embedding active user assistance in the UI (e.g., wizards that guide users through tasks, interactive troubleshooting aids).
- Make experienced System Programmers more productive by:
  - Making functions easier
  - z/OS Management Facility is optional for those who prefer traditional interfaces



### **IBM z/OS Management Facility** *z/OS application, browser access*

SHARE Technology · Connections · Results



- z/OS Management Facility is a Web 2.0 application on z/OS
  - Manages z/OS from z/OS
  - Browser communicates with z/OS MF via secure connection, anywhere, anytime
  - z/OSMF V1R11 is supported on z/OS V1R10 w/maint, z/OSV1R11, and z/OS V1R12
  - z/OSMF V1R12 is supported on z/OS V1R12, and z/OS 1.13\*
  - z/OSMF V1R13 is to be supported on z/OS V1R13\*
  - \* Statements regarding IBM future direction and intent are subject to change or withdrawal, and represents goals and objectives only Session 8922



7

### **IBM z/OS Management Facility** *Industry standards*

SHARE Technology · Connections · Results



### z/OS Management Facility is based on industry standards

- Java and Dojo Dojo is an Open Source DHTML toolkit written in JavaScript. Dojo allows you to build dynamic capabilities into web pages and any other environment supporting JavaScript. Most of z/OSMF application is written in Java
- Parts of z/OS Management Facility, such as Incident Log (R11) and WLM Policy Editor (R12) use CIM
- 8 Session 8922

Java apps and Javabased CIM client eligible for zAAP z/OS CIM server eligible for zIIP (R11 and up only)



## Guest view Login



- To log in you will need a z/OS user ID that has been defined and enabled for z/OSMF (and the WebSphere<sup>®</sup> runtime environment)
  - Guidance is provided.







Technology · Connections · Results

JUAK

2011

in Anaheim

## IBM z/OS Management Facility – V1R12 Welcome page

### IBM z/OS Management Facility File Edit View History Bookmarks < >> - C × IBM z/OS Management Faci Welcome Configuration Configuration Assistant Links ShopzSeries Support for z/OS System z Redbooks WSC Flashes z/OS Basics Information Cente z/OS Home Page z/OS Internet Library Performance Sysplex Status Monitoring Desktops Workload Management Problem Determination Incident Log z/OSMF Administration Links Roles Users Refresh

### **Configuration** category

- .Configuration Assistant for z/OS Communication Server application
- Simplified configuration and setup of TCP/IP policy-based networking functions

### Links category

. Links to resources - provides common launch point for accessing resources beyond z/OSMF

### **Performance** category (R12)

### .Workload Manager Policy Editor application

- Facilitate the creation and editing of WLM service definitions, installation of WLM service definitions, and activation of WLM service policies
- .Resource Monitoring: Sysplex status and Monitoring desktops provides integrated performance monitoring of z/OS sysplexes in the customer's environment

### Problem Determination category

### **Incident Log** application

.The Incident Log provides a consolidated list of SVC Dump related problems, along with details and diagnostic data captured with each incident. It also facilitates sending the data for further diagnostics.

### z/OSMF Administration category

. z/OSMF authorization services for administrator: add users, define roles, dynamically add links to non-z/OSMF resources.

Done 10

## **Focus on Problem Determination**



Technology · Connections · Result

in Anaheim

### Pain Points

- Need to troubleshoot a live system, recover from the failure.
- Need to reduce risk to the business, reduce risk of re-occurrence.
- Complexity of performing the task (number of steps, jargon).
- Data collection very time-consuming
- Significant skill level needed to analyze problems, interact with IBM and ISVs to obtain additional diagnostic info (setting SLIP traps, traces, etc.)

## Focus on Problem Determination capability - Incident Log:

- Troubleshoot your system easier, faster
- The incident log and underlying z/OS diagnostic data gathering greatly improves the tasks related to:
  - Identifying system-detected problems (related to SVC dumps taken by the system)
  - Collecting diagnostic materials related to a problem and sending materials to IBM or another company's support area
  - Tell the system to take the next dump for a previously-recognized problem

## z/OSMF Problem Determination – Incident Log

### Details

### SHARE

- Auto-capture basic diagnostic materials, triggered when the dump is written to a data set, managed via PARMLIB member
  - Initial focus is on Abend and user initiated SVC dumps
  - Improved FFDC for system-detected problems
  - Diagnostic data "snapshots" for transient data: Snapshots of 30 min Operlog or Syslog, 1 hr Logrec detail, and 4-hour Logrec summary
    - Incident Log will also support the creation of diagnostic log snapshots based on the SYSLOG and LOGREC data sets, as well as the OPERLOG and LOGREC sysplex log streams
  - Allow doc to be tersed and FTP'd to IBM (or ISV) without having to keep track of where logs are archived via easy to use interface
  - Simplify informing DAE to take the next dump for the incident's symptom string

### • Functions include:

- Display list of incidents (Filter/ sort/ configure/ delete)
- Display properties view list of diagnostic data, logs
- Set properties: associate problem number and tracking id (R11), new fields and more customization capabilities (R12)
- Send diagnostic data via FTP: Manage FTP jobs status and define FTP Profiles (firewall) (R11), support for encrypted and parallel FTP (R12)
- Send additional user-defined diagnostic data (R12)
- Enhance scope of diagnostic log snapshots created (R12)
- Allow next dump





## **Incident Log – Summary Information**

### SHARE

Technology · Connections · Results

2011



## **Incident Log – Incident Details**

### SHARE

Technology • Connections • Results

IBM z/OS Management Facili	ty Welcome zosmfad Log out	IBM	^
Welcome	Welcome 🛽 Incident Log 🕲 Sysplex Status 🕙 Monitoring D 🕲 Workload Man 😒		
Configuration			
+ Links	Incident Log  View Diagnostic Details	Help	
Performance	View Diagnostic Details		
Monitoring Desktops	General Diagnostic Data		
Sysplex Status	(logrec and error log)		
Workload Management	Incident type: ABEND		
Problem Determination	Incident description: ZTT ZTTABND ABEND FOR INCIDENT LOG 2,CAT=3061C000,JOB#=00000007		
Incident Log	Date and time (GMT): Feb 24, 2011 3:54:51 PM		
z/OSMF Administration	Sysplex name: SHARPLEX		
Refresh	System name: S1		
	Problem number: Identify the problem number as an IBM PMR and verify the synta	α.	=
	Tracking ID:		=
Set Tracking ID	Component name:	≡	
Set Problem Number	z/OS release: V/1P12		
Delete Incident	Product:		
Delete Incident	Abend code: S00C1		
Send Diagnostic Data	Reason code: 0000001		
View Diagnostic Details	CSECT: UNKNOWN		
FTP Job Status	Load module: UNKNOWN		
Allow Next Dump	Symptom string: PIDS/5752SCZTT RIDS/ZTTVDUMP RIDS/ZTTABND##L PRCS/00000BBE RIDS/ZTTSDUMP#R		
	FLDS/RC VALU/H0000000 VALU/H0000000 FLDS/SYS VALU/C		
	Notes:		
		~	
	OK Apply Cancel		
			~





## Incident Log – Diagnostic Data

### SHARE



2011





## Incident Log – Send Diagnostic Data

Technology · Connections · Results

2011





HARE Technology · Connections · Results

S

## **Incident Log – Delete Incident**

IBM z/OS Management Facility - Mozilla Firefox File Edit View History Bookmarks Tools Help ☆ · G · Google < 🖂 🗸 🔂 🔁 🔀 https://dceimgne.pdl.pok.ibm.com: 32209/zosmf/ P 🖻 Most Visited 🏶 Getting Started 脑 Latest Headlines <u>C</u> BSO Info Page 뺐 PDL BSO Authenticati... 🎯 Rational 🔄 Rochester SiteNews u.. IBM IBM z/OS Management Facility Welcome S Incident Log S Welcome + Links Problem Determination Help Incident Log Incident Log Actions -Incident Type Date and Time Description Sysplex System Problem Number Tracking ID Relea Past 60 days Filter Filter Filter Filter Filter Set Tracking ID... ABEND=40D,RC User Initiated **Confirm Delete** 41336 180 000 VIR1 - UNRECOVERAB Set Problem Number. COMPON=COMP ABEND S0913 IZUP835W 41336,180,000 V1R1 TRACE,COMPID You are about to delete the selected incidents and all Delete Incident.. associated information. Do you want to continue? ABEND S0913 V1R1 TRACE, COMPIE Send Diagnostic Data... User Initiated Selected incidents 45678.057.649 VIR1 REA 3456789 ABEND S0913 Feb 23 2009 12:37:10 PM COMPON=COMPO View Diagnostic Details User Initiated 41336 180 000 0000 ar12345 V1R1 < > User Initiated 987 V1R1 FTP Job Status User Initiated 99 41336.180.000 VIR1 If DAE is suppressing this dump, no subsequent dump will be captured if the symptom recurs, nor will its occurrence be recorded in Allow Next Dump. User Initiated JKL V1R1 the incident log. To capture the next instance of the dump, select Allow COMPID=DF115 next dump ABEND S00C4 /09.MAINTID= NO 41336 180 000 ar12345 VIR1 ABND=0C4.RC= Allow next dump COMPID=DF115 ABEND S00C4 /09,MAINTID= NO OK Cancel V1R1 ABND=0C4.RC= User Initiated ABCD Feb 18 2009 7:16:38 AM CECIMONE DCEIMO V1R1 User Initiated NEW DMP Feb 17 2009 2:01:16 PM CFCIMGNE DCEIMGNE 41336,180,000 V1R1 > Total: 12 . Filtered: 12 . Selected: 1 Refresh Last Refresh: Feb 27 2009 11:15:10 AM dceimgne.pdl.pok.ibm.com:32209 🔒 🛷 Done



## z/OSMF Problem Determination – Incident log Benefits

	Without z/OSMF Incident Log **	With z/OSMF Incident Log **
Recognizing a system-detected (dumped)	Requires 5 to 7 manual steps, plus skill on effective use of IPCS to extract data from each of the dumps.	Display in 1 click. Greatly reduced skill required
problem occurred	Up to 5-6 minutes	As little as 5 seconds
Allow new dump to be taken for the same symptom	Requires 7 to 12 manual steps, plus skill on effective use of IPCS to locate the dump data set, obtain the symptom string, get into the IPCS DAE display, locate the matching symptom string (could be non-trivial) and indicate TakeNext on the IPCS display Up to 15 minutes	Make the update happen in 3 mouse clicks As little as 10 seconds
Collecting and sending diagnostic data	Requires 7 to 15 manual steps, plus skill to locate the right log files, build and run jobs, rename the output datasets, and use an FTP job to send the different data sets to the target destination. Up to 20 minutes Up to 30 minutes for sysplex components	Send the material in 8 clicks: •Select the incident materials •Specify the FTP destination information •Send the material •Check whether the information was FTP'd successfully As little as 30 seconds



## **Focus on Configuration**

- Pain Points
  - Configuration task is highly fragmented
    - Multiple tools, limited integration between tools
  - User interfaces not intuitive for new system programmers
  - Syntax is complicated and error-prone
  - Regression of dynamic changes not reflected in system control files
  - Difficult to assess impact of configuration changes

### Initial focus on Configuration Assistant for the z/OS Comm. Server

- A GUI for the z/OS Communications Server Policy Agent simplifies the configuration and setup of the following TCP/IP policy-based networking functions:
  - Application Transparent TLS (AT-TLS)
  - IP Security (IPSec) including filters and VPNs
  - Network Security Server(NSS)
  - Intrusion Detection Services (IDS)
  - Policy-based Routing (PBR)
  - Quality of Service (QoS)





Technology · Connections · Result

# Configuration Assistant for z/OS Comm. Server



- Available as a Microsoft<sup>®</sup> Windows<sup>®</sup> Web download (since z/OS V1.7)
  - Still available as a Windows download, but strategy is to provide it only with z/OSMF
  - All functions available with Windows are also provided with z/OSMF
- Available with z/OSMF (starting with z/OSMF V1R11 and z/OS V1R11)
  - Configuration files can now be saved to local disk storage that is accessible to your z/OS system where the Configuration Assistant is running so FTP (from Windows) is not required
  - Can also import configuration text files in cases where users have already defined policies and would like to begin using the Configuration Assistant
  - Planned for z/OSMF R12:
    - Support the configuration of IKE version 2.
    - Support the configuration of new crytographic algorithms for IPSec and IKE.
    - Support the configuration of FIPS 140 cryptographic mode for IKE.
    - Support the configuration of certificate trust chains and certificate revocation lists.





# Configuration Assistant for z/OS Comm. Server

**SHARE** Technology · Connections · Results

 Configuration Assistant for the z/OS Comm.
 Server is available on the z/OS Management Facility

> All the same function as in the Web-download tool, but now on z/OS
> No need to FTP network configuration files!
> Requires z/OS V1.11 and later





### **Configuration Assistant for z/OS Comm. Server** Support for IKEv2 (V1.12)



SHARE

100.0	I of the Manuscram and Frankling			Technology • Connections • Results
-	Welcome Configuration Configuration	Iutonais Hep	<ul> <li>Support for FIPS 140</li> <li>Support for IKEv2</li> </ul>	
R	IPSec Perspective Nawgation tree □ □ □IPSec B □ □ □Readle Objects □ □ □Readle Objects □ □ □Readle Objects □ □ □Readle Objects □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Butes         Default initiator mode           Local Identity	<ul> <li>Support for certificate</li> <li>revocation lists.</li> </ul>	
		C Disable all hiter logging	M z/OS Management Facility	Welcome user1
		C Log implicit deny events C Do NOT log implicit deny events	Advanced Stack Settings  FIPS 140 Automatically allow IPv6 link activation Bypass IP validation Send ICMP destination unreachable for implicit denies Filter the IPSec (AH or ESP) headers Certificate revocation checking preference: <a href="topse">topse</a> Certificate URL lookup preference: <a href="topse">topse</a> NAT keepalive messages: <a href="topse">o</a> None <a href="topse">None</a>	S IKEv2 only Interval: 20 *(seconds)
			OK Cancel	
	22	Session 8922		in Anaheim 2011

### z/OSMF Configuration Assistant for z/OS CS Benefits

	Without Configuration Assistant** With Policy Agent only	With Configuration Assistant** in z/OSMF GUI for Policy Agent
Filter unwanted network traffic from your z/OS system	<ul> <li>Learn how to set up IP filters</li> <li>Review the IP Configuration Guide <ul> <li>Configure the Policy Agent application</li> <li>Create configuration policy for IP Filter rules</li> <li>Configure default filter rules in the TCP/IP profile</li> <li>Configure the TRMD application</li> <li>Configure the Syslogd application</li> </ul> </li> <li>Hours (or even days for initial setup)</li> </ul>	<ul> <li>Configuration Assistant guidance <ul> <li>Go to IP Security Perspective</li> <li>Add a connectivity rule for an IP Filter</li> <li>Use Application Setup Tasks to assist with the configuration and setup of the required applications</li> <li>The Configuration Assistant will generate and help you deploy the configuration files to your z/OS system</li> </ul> </li> </ul>
Secure your TN3270 server connections with SSL	<ul> <li>Manual process</li> <li>Review the IP Configuration Guide <ul> <li>Configure the Policy Agent application</li> <li>Configure TTLS in the TCP/IP profile</li> <li>Configure the Syslogd application</li> <li>Create configuration policy for AT-TLS for your TN3270 Server</li> </ul> </li> <li>Hours (or even days for initial setup)</li> </ul>	<ul> <li>Configuration Assistant guidance <ul> <li>Go to AT-TLS Perspective</li> <li>Select the AT-TLS rule for the TN3270 server and enable</li> <li>Use Application Setup Tasks to assist with the configuration and setup of the required applications</li> <li>The Configuration Assistant will generate and help you deploy the configuration files to your z/OS system</li> </ul> </li> <li>As little as 30 minutes</li> </ul>

Get started faster! The Config. Assistant takes the rules and best practices found in various configuration publications and puts them under a single, simple user interface, saving you much time and effort.





## Focus on Configuration/ Performance

- Pain Points
  - · Work competes for resources, serialized by locks and latches
    - Low important work may hold a resource and high important work may have to wait for it
    - Incorrect WLM classification of system work can lead to serious system problems and even outages
  - WLM Administrative Application provides little support to review and optimize service definitions
    - It is difficult to see the relationship of policy elements and to compare them
    - Recommendations and best-practices for the specification and optimization of service definitions are scattered over several manuals and have to be applied without tool support
    - User has to walk through drill-down and interim panels to create/change policy elements

### • Initial focus on WLM Policy Editor

- Planned to be integrated into z/OSMF V1.12\*
- Application which enables you to manage WLM service definitions
  - Integrates repository to store service definitions
  - Import and export of service definitions in XML format
  - Printing of service definitions
  - Creation, editing, reviewing of service definitions in tabular format
  - Direct navigation between policy elements during editing/viewing of service definitions
  - Best-practice checking for service definitions
  - Supports the installation of service definitions and the activation of service policies
  - Displays WLM status of systems in sysplex





## z/OSMF Workload Management (V1.12)

SHARE Technology · Connections · Results

- WLM Policy Editor is available on the z/OS Management Facility
  - All the same function as in the Web-download tool and many new features
  - Direct access to the WLM Couple Data Set to install/extract service definitions. No need to FTP WLM policy files!
  - Activation of service policies and monitoring of the WLM status in the sysplex
- Requires z/OSMF V1.12 and z/OS V1.12

IBM z/OS Management Fac	ility - Mozilla Firefox: IBM Edition						LICI
Ele Bal Sev Hiltoria Soa	autous Toole Rob				0.1081		3
Galle C X ar	Hitps://iocalhost:9446/soem/				W - 1 (52.4) Long		2
Most visited P Getting Started	i 🐘 Latest Headlines 🔝 38M 🛄 18M						
IBM 205 Management	(Facility)		46'90				IBM
Wecome     Unks     Performance     Wodtrad Nanagement     z/CSMF Administration	Welcome Workload Man. 0 Workload Managemen Overview Service Definitions C	t Store all	service	e definitio	ons in one rep	ository	
Refresh	Service Definitions						
	Name Piler	Description Filter	And vity Sys	er Filer	Last Red Red (SMI) File	Modified By	
	R13R3RP3	D10 WLM ZOSUF POL CV R128 GR	P	Secol	Feb 25 2010 2:30:34 PM	lamai	
	П нтовта	Copy of RTDST3			Mar 21 2001 8 23 19 PM	invial	
	GTDST3	SDB1 depy 6		() Warning	Jan St 2015 10 49 38 PM	using	
	C SerrpdeP	Sample WLM Service Cellinition 62			5ep 24 2017 5:48 22 AM	thist	
	Servertet Installed & Addver	Sarriple WLM Service Certration 07	WL.	MMPLEX Theres	Her Feb 1 2010 8 62 66 PM	uttag	
	SPAUTA			1 Informa	I on Jan 26 2010 3:50 46 PM	winag	
	T13DEC07	addremove SAP C62s			Dec 13 2007 9 01:59 PM	H150551	
	TESTIS-			E teforna	ition Jan 12 2010 12 43 29 PM	utrag	
	Z TESTER!		111		UA 20 04 11 0000 0 00	agatt	
	TESTON	Nodity Service Definit		🕒 Eitar			
	WENCHOFT	Large View Messones		C Eror	Click to via	w odi	4
	WUN_BOF2	View History		Chor	CIICK LO VIC	sw, eur	ι,
	WLM_DESC	WL De Print Preview		Cinor	nrint inets	د ال	
	WLN081	service Install and Activate .		=	print, moto	iii a	
	C WUMBEE	Copy.			service de	finition	
	WLW700	Delete		in freiserte		million	
	utripole1	point Export		G. Warring	Jan 6 2010 11 56 56 AM	using	
	WUMPOLES:			(1) Warning	a Jan 13 2010 5.19 00 AM	what	1.1
	WLMPOLE4			(i) Warning	Feb 2 2010 12 00:54 AM	winag	
	WENGTY	AVT RID-RITRAS			Jul 8 2008 10 28 57 AM	amar	
	WSCHLMDE	MSC Sample MLMServiceCeStillion		C Ensr	Jan 27 2010 4:05 D1 AM	planu	-
	Total: 58, Belected: 1						1000
	Refresh Lastrefresh Mar 1, 1	2010 4:09:04 PM local time (Mar 1	2010 3:09:04	FN GMT)			
Baselineablet					112	Liceborribas	0.40
PACIFIC PLOT PLOT						Reconsideratives	- 14 · ·





Technology · Connections · Results

### z/OSMF Workload Management (V1.12) Editing service definitions

- Simplified creation, modification and review of service definitions
  - Policy elements are presented in tables
  - Tables can be edited, filtered, and sorted
  - Best-practice hints are displayed automatically
  - Several service definitions can be opened simultaneously
  - Cut, Copy, Paste of policy elements between service definitions





### z/OSMF Workload Management Can send basic data to the zEnterprise server

SHARE Technology · Connections · Results

- Integration with the new IBM zEnterprise server
  - Unified Resource Manager (Monitors Dashboard) can monitor heterogeneous workloads.
- New agent in z/OS R12 will feed data to Unified Resource Manager.
  - System resource utilization, system delays, paging delays
- Unified Resource Manager will link distributed workload with z/OS workload
  - Ex: AIX Application Serving Blade front end to DB2 z/OS backend
  - End to end monitoring





## z/OSMF Workload Management Summary



Technology · Connections · Result

### • Simplified creation and editing of WLM service definitions

- The elements of a service definition are displayed in tabular form
- Service definition elements are created or edited directly in tables
- The creation and editing of WLM service definitions is supported by best practice checks
- Direct navigation between policy elements during editing/viewing of service definitions
- · Serialization of the editing of the active service definition
- Simplified handling via integrated repository for WLM service definitions
  - WLM service definitions are stored in a repository integrated in the z/OSMF file system
  - WLM service definitions can be exported to the local workstation or a host data set as well as imported from a file on the local workstation or a host dataset
  - WLM service definitions can be printed using the print menu of the web browser
- Installation of WLM service definitions and activation of WLM service policies
- Monitoring of the WLM status of a sysplex and the systems in a sysplex
  - WLM status report is automatically updated if the WLM status on the systems changes
- Allow opening multiple tabs to enable users to perform tasks simultaneously
  - Simplified migration: Policy elements can be copied from one service definition to another
  - Simplified operation: A user can start to edit a service definition, interrupt the editing to activate a service policy, and then continue with the editing without loosing the context



### z/OSMF WLM Policy Editor (V1.12) Benefits



SHARE

		Technology Connections Results
	Without WLM Policy Editor**	With WLM Policy Editor** in z/OSMF
Optimization of a service definition based on best- practices	Read through WLM-related manuals and identify best-practices. Print out the service definition and investigate it with respect to proposed best- practices. If required, modify the policy elements correspondingly.	Check the best-practice hints the GUI displays for policy elements. If required, modify the policy elements correspondingly.
	Hours (or days when done initially)	Minutes (or hours when done initially)
Review of service definitions for daily changes, migration,	To get an overview of a service definition you have to print it to a data set, download the data set, and print it out or feed it into the Service Definition Formatter tool to filter and sort policy elements.	Open a service definition from the service definition repository. Navigate through it using links. Filter and sort policy elements in the tables.
consolidation	5-10 minutes until review can start	Seconds until review can start
Transfer policy elements from a test service	Print out the test service definition and update the production service definition by typing in the changes.	Open the test and production service definition simultaneously and copy over the changed policy elements via copy&paste operations.
definition to a production service definition	Up to several minutes per policy element	Seconds per policy element

\*\* Based on IBM laboratory results, your results may vary



## **Resource Monitoring features**



- The z/OSMF Resource Monitoring application provides integrated performance monitoring in the customer's environment
- Supports z/OS z/OS sysplexes and Linux® images (System z® and Intel®) in your installation
  - Requires the RMF z/OS Data server (DDS) on each sysplex being monitored and the Linux data gatherer (rmfpms) running on the Linux image that is being monitored.
- There are two z/OSMF tasks: *Monitoring Desktops and Sysplex Status* 
  - Monitoring Desktops task:

Monitor most of the metrics supported by the Resource Measurement Facility (RMF<sup>™</sup>) Monitor III, create and save custom views of the metrics, and display real-time performance data as bar charts.

• Sysplex Status task:

Assess the performance of the workloads running on the z/OS sysplexes in your environment. The Sysplex Status task also provides a single location where you can define the z/OS sysplexes and Linux images to be monitored in the Monitoring Desktops task.

 If you plan to use the tasks from the Resource Monitoring plug-in, it is recommended that you enable the optional priced feature, Resource Measurement Facility (RMF), on one of the systems in your enterprise. For information about enabling features, see z/OS Planning for Installation, GA22-7504.



### z/OSMF Resource Monitoring (V1.12) Benefits



	Without z/OSMF Resource Monitoring (using RMF ISPF Monitor III Reporter)	With z/OSMF Resource Monitoring
Checking the performance status for several sysplexes	You need a Monitor III Reporter session on each sysplex, and manually consolidate data from different reports. (Monitoring of Linux resources has to be done with other tools)	Cross-sysplex performance monitoring from a single point of control with a quick red-yellow- green health indicator for your systems on a single panel. (Linux monitoring features are fully integrated.)
	Up to 15 minutes to look up each sysplex and high degree of skill needed to interpret reports	Just seconds to see the health of all your sysplexes (and Linux images)
Explore & compare the processor usage of specifics jobs	Tabular reports are a fixed layout and can be viewed only one at a time with limited ability to customize and filter the data presentation. You have to manually consolidate data from different reports	The monitoring desktops are fully customizable. Specific metrics of selected resources can be added to a desktop and are presented as charts. Multiple desktops can be started in parallel in different tabs. Advanced filtering features allow you to conduct more sophisticated performance analysis.
	A long time, depending on data required and correlations needed. In some cases, generating reports is not possible.	About 5 minutes to set up a custom monitoring desktop, 3 key clicks to view real- time statistics



## Resource Monitoring application - benefits, HA

- Integrated monitoring from a single point of control
- Support for z/OS and Linux
- Quick assessment of the health (Sysplex Status task)
- Drill-down into resource attributes and metrics (Monitoring Desktop task)
- Predefined set of desktops for a quick start
- Flexibility through customizable user defined desktops
- Advanced filtering features for focused monitoring

Convenient, easy-to-use, flexible and customizable !





### **Resource Monitoring : Sysplex Status**

### SHARE

Technology • Connections • Results

	y - Mozilla Firefox					_ 🗆 🔀
Datei Bearbeiten Ansicht Ch	ronik. Lesezeichen Eg	tras Hilfe				
🚱 🖸 - C 🗙 🏡 🦻	≽ 🏧 https://boermf4	. boeblingen, de ibm, com	::8443/zosmf/	😭 • 🔚• Gi	oogle	۶
IBM z/OS Management F	a 🔯 🏼 🏘 RMF Deta Pi	ortel 🗔	4			
IBM 2/0S Management Fac	ellitiy				Log out	IBM
- Welcome	Welcome 😂 Mon	itoring D 🛇 🛛 Sysplex St	atus 🛇			
Links     Performance     Sysplex Status     Monitoring Desktops	Sysplex Statu Use this panel to gu sysplexes and Linu	S nickly assess the performan k Images that you want to me	ce of the workloads running on the sysplexe onitor in the Monitoring Desktops task.	es in your installation. You can	also use this panel to	Help define the
Vorkload Management     z/OSME Administration	Resources					
Refresh	Actions - Resource	Connectivity	Performance Index Status	Related Service Definition	Active WLM Policy	
		Connected	PI ← 1 for all periods	RTDST3	RTDST	
	O SCLM	Connected	PI > 1 for unimportant periods	Default	STANDARD	
	O SYSF	Connected	PI > 1 for important periods	systest	POLICY01	
apshot of the performan our sysplexes. The Sysp	ce of workloads i ilex Status task a iere you can defi	running also ne	Why i the de Deskt	s this status red? etails with the Mor ops task.	Drill down int hitoring	:0
lexes and Linux images toring Desktops task.	to be monitored					
lexes and Linux images toring Desktops task.	to be monitored	insh: Feb 17, 2010 3:08:55 h	PM local fime (Feb 17, 2010 2:06:55 PM GM	י ה		
lexes and Linux images toring Desktops task.	Total: 3 Refresh Last refresh	iii (110 iesh: Feb 17, 2010 3:08:55 h	PM local time (Feb 17, 2010 2:06:55 PM GM	'n		• •
lexes and Linux images toring Desktops task.	Total: 3 Refresh Last ref	in (IIC iresh: Feb 17, 2010 3:08:55 h	PM local time (Feb 17, 2010 2:06:55 PM GM	η η	SHÅ	

### **Resource Monitoring: Monitoring Desktops** SH

IBM z/OS Management Facil	lity		Welco	me weadmin	Log eut TBM
IBM 2/05 Management Facilit • Welcome • Links • Performance • Sysplex Status • Monitoring Desktops • Workload Management • z/OSMF Administration Refresh	Welcome Control Ing	Monitoring D S	Sysplex Status 3	Click to open the monitoring desktop.	Help
	Using & Delay	nuex s		Monitor most of the metr Resource Measurement create and save custom display real-time perform	rics supported by the Facility (RMF™) Monitor III, views of the metrics, and nance data as bar charts.
Fertin	Pre-load metrics can add	ded with stan . Can be cus l your own.	dard tomized,	me (Feb 17, 2010 1:54:49 PM GMT)	



RE

Α Technology · Connections · Results



S

### **Monitoring Desktops – example**







## **Monitoring Desktops – add a metric**

SHARE Technology · Connections · Results

BM 2/06 Management Facility	y .			Log out IIII
Mi 2005 Management Facility Velcome Links Performance Syspicx Status Monitoring Desktops Workload Management 205MF Administration Refresh	Velcome Monitoring D Monitoring Desktops Desktops New Desktop New Desktop Add Metric Add Metric Add metric Selected resource Belected metric Resource Metric Available resources: XSCLM,8YSPLEX X	Sysplex Status         Select or enter a metric group         X, soLM, sysPLEX         Make selection on Metric tab         Vind: Scepa         FACILITY         Resource         Resource names:         SCLMALDER*         SCLMALOCAS         SCLMALOCAS         SCLMALOCAS         SCLMANTASU00         SCLMANTASU01         Sotting         Sotting         Sotting	Add your ov create custo information,	Lepout TIME Help vn metrics and filters to om views with more details or correlation of events.
	Add to Desktop Cancel	Filters Lower threshold: Upper threshold to		






#### Integrated z/OS and Linux Monitoring

SHARE

🔇 🕥 - C 🗙 🏠	🍾 📧 ibm.c	om https://boermf4.boeb	ingen.de.ibm.com:9443/zosmf/		😭 🔹 😽 Google			
IBMI z/OS Management F	acility		Welcome wsadmin		Log out	TET		
= Welcome	Welcome 🛛 🛛 Sy	splex Status 🛛 🗌 Monitoring	3 D 🛛	Proce	ssor Utilization of Linux Proces	sses		
Monitoring Desktops	Monitoring Desktons							
<ul> <li>Sysplex Status</li> <li>Workload Management</li> </ul>	Desktops z/OS and Linux le S							
z/OSMF Administration	z/OS and Lir	z/OS and Linux (Running)						
Refresh	Start Pause	Save Actions -			$\checkmark$			
Œ	▼ z/OS: Processor Utilization by Job							
-	LNZSCLN [0054]		6.8	java.5436	0.0333333	^		
	RMFGAT [0078]	1.2		nscd.1094	0.0333333	=		
nitor z/OS and Lin		1		kulagent.5270	0.0333333			
System z and Linu	Х /LM [000С]	0.5		events/0.8	0.0166667			
Intel platforms with	JES2	0.5	Processor Utilization	events/1.9	0.0166667			
help of a separate	[002C]	0.5	of z/OS Jobs	crond.5785	0.0166667			
melp of a separate	F FRS [0007]	0.5	01 2/00 0003	avahi- daemon.5851	0.0166667			
	[0006]	0.4		kizagent.1692	0.0166667			
	SMSVSAM [000A]	0.2	~	kjournald.204	0.0166667	~		
SCLM.", PROCESSOR % appl (TCB + SRB) by job			Inxrmf,",LINUX_CPU % cpu time total by process					
05/12/2010 11:23:30 - 05/12/2010 11:24:00 (54/54)		2/2010 11:24:00 (54/54)	05	/12/2010 11:23:00 - 05/12/2010 11:24:00 (27/27)				



## Focus on z/OSMF Administration



- z/OSMF Authorization defining users and roles
  - The z/OSMF administrator must authorize the user to z/OSMF and assign a role in order for the user to start working with z/OSMF tasks
    - The user must have a valid userid on the z/OS system
    - The security administrator must authorize the user to the required z/OS stack for the z/OSMF tasks
      - Scripts are provided to perform the end-end authorization
  - Plan to Introduce SAF mode in z/OSMF1.13\* to have tighter integration with z/OS security management
    - Resource names associated with all z/OSMF tasks and links.
    - Resource class profiles control authorization to z/OSMF managed resources.
    - Use of SAF groups to represent z/OSMF roles
    - Users connected to SAF groups to be authorized
  - Option to stay with existing Repository mode or switch to SAF mode at any time

\* Statements regarding IBM future direction and intent are subject to change or withdrawal, and represents goals and objectives only

#### z/OSMF Administration: Authorizing a user



2011

S

ΔRF





#### z/OSMF Administration: Defining a role

#### s h a r e

Technology · Connections · Results



#### **Focus on Links**



Technology · Connections · Results

#### IBM z/OS Management Facility

- Welcome
- Configuration
  - Configuration Assistant
- Links
  - Shopz Series
  - Support for z/OS
  - System z Redbooks
  - WSC Flashes
  - z/OS Basics Information Center
  - z/OS Home Page
  - z/OS Internet Library
- Performance
- Problem Determination
  - Incident Log
- z/OSMF Administration
  - Links
  - Roles
  - Users
- Refresh

- The Links category contains the pre-defined links provided by IBM as well as any new links added by the z/OSMF administrator
- Administrator can define which roles have access to each of the defined links.
  - The Links task in Administration category allows the administrator to dynamically add links to non-z/OSMF resources, e.g. ISV products, commonly used installation Web sites
  - The IBM pre-defined links are accessible to all users, including guests, by default.
- Also, a new interface enables you to add non-z/OSMF launch points and links to any category on the left hand side navigation tree. (V1.12)





### z/OSMF Administration: Adding a link

#### SHARE

Technology · Connections · Results





#### Software Deployment (planned for z/OSMF V1.13)\*

- Software Deployment will make deployment of installed software simpler and safer
  - Replaces manual and error prone procedures with a user friendly application, and
  - Codifies IBM recommended best practices for software deployment.

#### Software deployment key functions

- Verify cross system and cross product software requisites are satisfied.
- Verify software fixes are not regressed.
- Clone ALL parts of the software
- Clone the inventory (SMP/E CSI) along with the software

#### Scope of software managed

- All SMP/E installed software
- IBM and ISV software
- z/OS operating system and related products
- Subsystems and related products
- Individual products
- Service upgrades for all of the above (via complete replacement)

\* Statements regarding IBM future direction and intent are subject to change or withdrawal, and represents goals and objectives only



in Anaheim

# DASD Management (planned for z/OSMF V1.13)\*

- The first phase in simplifying SMS storage management focuses on the task of adding storage capacity to an SMS Pool storage group through a single user interface.
- Today, the storage administrator must determine when a storage group is near its capacity, identify how much storage to add, and what volumes to add. Once determined, multiple steps across various user interfaces are required to make the added capacity available to SMS:
  - ISMF to add volume entries to the storage group definition (update SCDS)
  - ICKDSF to initialize volumes
  - Operator command to vary volumes online
  - ISMF to activate the updated SCDS
- The z/OSMF DASD Management task is designed to help the storage administrator by streamlining the process of adding volumes to SMS pool storage groups, and is intended to allow you to perform storage group management tasks from within the application, reducing several manually intensive steps involving multiple applications to a single GUI.

\* Statements regarding IBM future direction and intent are subject to change or withdrawal, and represents goals and objectives only



#### **DASD Management** (planned for z/OSMF V1.13)\*

**SHARE** Technology · Connections · Results

2011





# Capacity Provisioning (planned V1.13 for z/OSMF)\*

- The Capacity Provisioning Control Center (CPCC) is the user front end to administer Capacity Provisioning policies
- Capacity Provisioning Control Center is available as a separate Windowsbased stand-alone client.
- Part of the functionality is planned to be integrated into z/OSMF V1.13 which will ease the monitoring of CP status for different domains.
- The z/OSMF Capacity Provisioning task will simplify the work of a z/OS CP administrator and provides functionality to
  - manage connections to CPMs
  - view reports for domain status, active configuration and active policy.
- Capacity Provisioning is designed to simplify the management of temporary capacity. The scope of z/OS Capacity Provisioning is to address capacity requirements for relatively short term workload fluctuations for which On/Off Capacity on Demand is applicable. It is not a replacement for the Capacity Management process.



Technology · Connections · Resu

# Application Linking (planned V1.13 for z/OSMF)\*

- Objective
- Provide a more seamless experience for system programmers as they work with different tools and tasks on the z/OS system.
- This is accomplished by enabling Cross application linkage and • context sensitive launching between z/OSMF applications and also between z/OSMF applications and external applications
  - Context sensitive launching or linking with z/OSMF applications may be within z/OSMF, for example, one task may want to launch to the other in context.
  - It can also be from external consoles or applications into z/OSMF, for example, from an ISV app to z/OSMF or vice versa.

\* Statements regarding IBM future direction and intent are subject to change or withdrawal, and represents goals and objectives only Session 8922

### Additional details on usage



Technology · Connections

- z/OSMF V1R11 and R12 operating environment
  - One instance of z/OSMF can manage only one local system or sysplex
  - Multiple users may log into the same instance of z/OSMF from different workstations/browsers
    - Expectation is to support up to 15 concurrent users
  - From one client system, user can manage additional sysplexes by opening new browser windows (or tabs) and logging into the z/OSMF instance installed on those sysplexes (one browser per system/sysplex).
  - Only one active instance of z/OSMF is supported within a sysplex at any point in time.
    - Additional instance may be created e.g for test or service update or backup, but it should not be actively managing the systems at the same time (e.g. working on the same incident concurrently from 2 separate instances of z/OSMF) or using the same data repository.



## **Migration & Coexistence Considerations**

- For z/OSMF V1.11 customers In a mixed sysplex with some systems below z/OS V1R10:
  - z/OSMF V1R11 must be installed and run on z/OS V1R10 or above
  - Incident Log: z/OS V1R9 system's SVC dumps will be reflected, but with some property values missing
- Configuration Assistant is only supported on z/OSMF V1R11 and above, running on a z/OS V1R11 or later system.
- z/OSMF can coexist with other ISV products
  - For example, all setup instructions are provided for RACF, but z/OSMF will operate with other security products with equivalent instructions



# **Migration & Coexistence Considerations**



- z/OSMF 1.12 requires z/OS 1.12
- Migration:
  - If you have a z/OSMF 1.11 system and want to migrate to z/OSMF 1.12 on a z/OS 1.12 system, there is script support for doing that.
    - Requires that z/OSMF 1.11 be at the PTF UK52956/APAR PK97274 level prior to migration
    - Use izumigrate.sh, to migrate the R11 configuration file to the R12 format, see the z/OSMF Configuration Guide
    - Run the setup steps via **izusetup.sh** to enable the R12 level of applications
    - After that you can use the –add option to add the new applications added in z/OSMF 1.12
- Coexistence applies to lower-level systems which coexist (share resources) with latest z/OS systems.
  - If you require the capability to fall back from z/OS Management Facility V1.12.0 to a lower level system (z/OS Management Facility V1.11.0 on a z/OS 1.10 or later system), and retain the use of the data repository from z/OS Management Facility V1.12.0, you require APAR PM09519 on the system with z/OS Management Facility V1.11.0
  - Also require CEA APAR on the lower level z/OS systems V1R10 and V1R11)
     OA32285
    - If this is \*not\* installed, under certain circumstances, some datasets will not be deleted when the rest of the incident is deleted.



### Prerequisites



Technology · Connections · Result

z/OSMF V1R11

#### Requires z/OS z/OS V1R10 w/maint., or z/OS V1.11

- z/OSMF V1.11 also supported on z/OS V1R12 (but upgrade to z/OSMF V1R12 recommended)
- The Configuration Assistant for z/OS Communications Server portion of z/OS Management Facility requires z/OS V1.11 or later.

#### Browser

- Windows XP<sup>®</sup> operating system
- Mozilla Firefox 3.0.6 (recommend
- Mozilla Firefox 2
- Internet Explorer<sup>®</sup> 7
- Internet Explorer 6

#### z/OSMF V1R12

- Requires z/OS R12
- Browser
  - Windows XP, Windows Vista, and Windows 7
  - Mozilla Firefox 3.0
  - Mozilla Firefox 3.5 (recommended)
  - Internet Explorer<sup>®</sup> 7
  - Internet Explorer 8



#### Session 8922

# Summary

- The IBM z/OS Management Facility is a new product for z/OSH A R E customers that provides support for a modern, Web-browser based management console for z/OS.
- z/OSMF delivers solutions in a task oriented user interface. The initial functions in z/OSMF 1.11 include:
  - Configuration Assistant for z/OS Communication Server
    - Simplified configuration and setup of TCP/IP policy-based networking functions
  - Incident Log
    - The Incident Log provides a consolidated list of SVC Dump related problems, along with details and diagnostic data captured with each incident. It also facilitates sending the data for further diagnostics

#### • Links

 Links to resources - provides common launch point for accessing resources beyond z/OSMF

#### z/OSMF Administration

 z/OSMF authorization services for administrator: add users, define roles, dynamically add links to non-z/OSMF resources



# Summary – z/OSMF V1.12 Enhancements (1 of 2)

- z/OSMF Incident Log:
  - Encrypt incident files
  - Break dumps into multiple data sets that can be sent via FTP in parallel
  - Specify additional data sets to send to a vendor
  - Add free-form comments to incidents and FTP destinations in new sortable fields
  - Create of diagnostic log snapshots based on SYSLOG and LOGREC data sets
    - In addition to OPERLOG and LOGREC log streams
  - All intended to help you manage problem data more easily
- z/OSMF Configuration Assistant for z/OS Communications Server planned to support configuration for
  - IKEv2
  - Certificate trust chains and certificate revocation lists
  - New cryptographic algorithms for IPSec and IKE.
  - FIPS 140 cryptographic mode for IPSec and IKE
  - ...and Enforce RFC4301 compliance for IPSec filter rules



Technology · Connections · Result

# Summary – z/OSMF V1.12 Enhancements (2 of 2)

- New z/OSMF interface:
  - Designed to allow you to add links programmatically to the z/OSMF Navigation tree
- New WLM policy editor:
  - Create, edit, and install WLM service definitions
  - Activate WLM service policies
  - Monitor of the WLM status of a sysplex and the systems in a sysplex

#### • New Resource Monitoring:

- provides integrated performance monitoring in the customer's environment
- Supports z/OS z/OS sysplexes and Linux® images (System z® and Intel®) in your installation
- Integrated monitoring from a single point of control
- Drill-down into resource attributes and metrics



Technology · Connections · Result

## Summary – z/OSMF V1.13 highlights



Technology · Connections · Resul

- A new software deployment capability to simplify cloning and software deployment tasks
- Storage management support to define new storage volumes
- A new Capacity Provisioning Manager application is designed to support easier monitoring of z/OS Capacity Provisioning Manager (CPM) status



# **Additional information**



Technology · Connections · Result

- z/OS Management Facility website
  - <u>http://ibm.com/systems/z/os/zos/zosmf/</u>
- IBM z/OS Management Facility education modules in IBM Education Assistant
  - <u>http://publib.boulder.ibm.com/infocenter/ieduasst/stgv1r0/</u> index.jsp
    - Scroll down to z/OS Management Facility
- z/OS Hot Topics, Issue 21 and 23:
  - <u>http://ibm.com/systems/z/os/zos/bkserv/hot\_topics.html</u>
- Program Directory for z/OS Management Facility GI11-2886
- IBM z/OS Management Facility User's Guide SA38-0652
- IBM WebSphere Application Server OEM Edition
- for z/OS Configuration Guide, Version 7.0 GA32-0631
- IBM z/OS Management Facility License Information GC52-1263



SHARE

Technology · Connections · Results

#### z/OSMF Sessions in Anaheim

Session Number	Day	Time	Room	Session Title
8696	Tues Mar 1	11:00 am	201B	z/OS Problem Determination Update: z/OSMF Incident Log, Runtime Diagnostics, PFA,
9061	Tues Mar 1	1:30 pm	201B	Understanding WebSphere App Server OEM Edition for z/OSMF Sysprogs
8922	Tue, Mar 1	3:00 pm	201D	z/OSMF 1.12 Overview
8658	Tues Mar 1	4:30 pm	201D	z/OSMF Implementation and Configuration
9071	Tues Mar 1	6:00 pm	201B	Roundtable: Shaping the Future of Mainframe Professionals Discussion
8699	Wed, Mar 2	6:00 pm	207	z/OSMF Roundtable
9070	Wed, Mar 2	6:00 pm	201B	You Talk We Listen: How Today's User Experience is Improving on Tomorrow
9039	Thurs Mar 3	8:00 am	201B	z/OS Software Deployment
8757	Thurs Mar 3	11:00 am	201D	z/OSMF User Experience
9075	Thurs Mar 3	4:30 pm	208B	z/OSMF Hands on Lab
8859 57	Fri Mar4 Se	11:00 am ssion 8922	202A	Managing your workload with z/OSMF

#### **Trademarks**

#### The following are trademarks of the International Business Machines Corporation in the United States and/or other count Sest A R E Registered trademarks of IBM Corporation

ServerPac\* IBM\* WebSphere\* IBM (logo) z/0S\* RACF\*

#### The following are trademarks or registered trademarks of other companies.

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Firefox is a trademark of Mozilla Foundation

Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license there from. Java and all Java-based trademarks are trademarks of Sun Microsystems. Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Internet Explorer is a trademark of Microsoft Corp

InfiniBand is a trademark and service mark of the InfiniBand Trade Association.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

ITIL is a registered trademark, and a registered community trademark of the Office of Government Commerce, and is registered in the U.S. Patent and Trademark Office.

IT Infrastructure Library is a registered trademark of the Central Computer and Telecommunications Agency, which is now part of the Office of Government Commerce.

\* All other products may be trademarks or registered trademarks of their respective companies.

#### Notes:

Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ratios stated here.

IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply.

All customer examples cited or described in this presentation are presented as illustrations of the manner in which some customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics will vary depending on individual customer configurations and conditions.

This publication was produced in the United States. IBM may not offer the products, services or features discussed in this document in other countries, and the information may be subject to change without notice. Consult your local IBM business contact for information on the product or services available in your area.

All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

Information about non-IBM products is obtained from the manufacturers of those products or their published announcements. IBM has not tested those products and cannot confirm the performance, compatibility, or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Prices subject to change without notice. Contact your IBM representative or Business Partner for the most current pricing in your geography. See url http://www.ibm.com/legal/copytrade.shtml for a list of IBM trademarks.



Technology · Connections · Results



SHARE Technology · Connections · Results

# BACKUP



Session 8922

59

#### Focus Areas for Simplification



#### SHARE



# Smart technologies from IBM can deliver simplification across organizational domains



# z/OSMF packaging



Technology • Connections • Results

#### z/OSMF V1R11 is comprised of:

- PID# 5655-S28
- S/S PID# 5655-S29
- FMID# HSMA110
- FMID# HBBN700 (IBM WebSphere Application Server OEM Edition for z/OS v7.0)
  - COMPID 5655I3512 WEBS APP SVR OEM
- HSMA110 FMID Description: IBM z/OS Management Facility
  - COMPID 5655S28SM z/OSMF Core
  - COMPID 5655S2805 z/OSMF Incident Log
  - COMPID 5655S28CA Config Assist



## z/OSMF V1.12 product



The IBM z/OS Management Facility is a separate licensed program product

- z/OS Management Facility (5655-S28)
- . z/OS Management Facility Subscription and Support (5655-S29)

FMID	COMPID	Component Name	RETAIN Release
HSMA120	5655S28SM	z/OSMF Core	120
HSMA122	5655S2802	z/OSMF RMF	122
HSMA123	5655S2803	z/OSMF WLM	123
HSMA125	5655S2805	z/OSMF Incident Log	125
HSMA12A	5655S28CA	CONFIG ASSIST	12A
HBBN700	565513512	WEBS APP SRV OEM	700





### **Incident log - Destinations**

#### SH RE

Technology · Connections · Results

IBM z/OS Management Facility File Edit View History Redemark	y - Mozilla Firefox					_ 7
	https://9.12.41.62:32208/zosmf/			Ę	→ Google	\$
IBM z/OS Management Fac	eility		Welcome debug13		Log out	IBM
<ul> <li>Welcome</li> <li>Configuration</li> <li>Configuration Assistant</li> <li>Links</li> <li>Shopz Series</li> </ul>	Welcome Links Incident Log + FTP Destination FTP Destinations	dent Log 🕲 Workload Man 🕲 s	Configuratio S			Help
Support for z/OS	System	Path Name	Description	Transfer Method	Associated Profile	Anony
System z Redbooks	testcase.boulder.ibm.com	/toibm/mvs	Files	FTP	rite:	Yes
WSC Hashes	testcase.boulder.ibm.com	/toibm/tivoli		FTP		Yes
end Diagnostic Data	ftp.ecurep.ibm.com	/toibm/mvs		FTP		Yes
	ftp.ecurep.ibm.com	/toibm/tivoli		FTP		Yes
Welcome	9.12.41.63	/tmp		FTP		No
Define Job Settings Review FTP Information	Pre-loaded w or add your o Total: 5, Selected: 0	vith IBM destinati	ons,			
Done	Last refresn: Jan 20,	2010 11:56:57 AM local time (Jan 2	20, 2010 4:56:57 PM GMT)		9,1	2.41.62:32208
	Sessi	on 8922			2	in Ana 011

#### **Configuration Assistant for z/OS Comm. Server** Simplified AT-TLS Dialog (z/OS V1.11)

Technology • Connections • Results

- Simplified AT-TLS dialog
  - Define AT-TLS from the application level
  - Added a list of well- known applications with predefined rules
  - Simple "click" to enable
  - Rules can be modified or copied and modified
  - AT-TLS supports
     new SSL and
     TLS (TLS V1.1)
     settings. (R11)



# Configuration Assistant for the z/OS Comm. Server

New Predefined Default AT-TLS Rules (R12)

- NEW! Predefined, default AT-TLS rules for key IBM middleware and function, such as:
  - JES
  - DB2
  - IMS
  - NSS
- Helpful when TLS security is required!
- Can be modified if needed, as easy as open, cut, copy, paste!





Technology · Connections · Results

#### Configuration Assistant for z/OS Comm. Server \_ Simplified IPSec

Technology · Connections · Results

- Simplified IPSec Requirement Map (V1R11)
  - Simplified panel to show more clearly that a requirement map was a Traffic Descriptor and a Security Level
  - New "advanced wizard" to allow for easier panel navigation
- Support for more cryptographic algorithms (for V1.12)



#### Configuration Assistant for z/OS Comm. Server Application setup tasks (V1.11) S

Technology · Connections · Results

RE

- "Application Setup" task guides users in the creation of configuration files and started procedures
- Provides step-bystep for each policy perspective to deploy the applications required for that function
- There are both image-level and stack-level setup tasks.

IBM z/OS	Manager	nent Facility		Welcome	user1
Welcom	Welcome 🔇	Configuratio 8			
Configu	Applicatio	on Setup Tasks for Image MVS1			
	This pan	el contains tasks to enable Application Tra	nsparent - Transport Layer (	Security for z/OS ima	age MVS1.
Refresh	Steps: - - - List of se	Select the task and click <b>Task Details</b> from Follow the instructions on the panel. As you finish each task, change its status t tup tasks	the Actions menu. o <b>Complete</b> .		
	S	elect Action 🔻			
	Select	Task name	Last completion date 🔺	Status ^	Comment
	0	Installation Location Setup		Incomplete 💌	
1	0	Policy Agent - RACF Directives		Incomplete 💌	
	0	Policy Agent - RACF Directives for Policy		Incomplete 💌	
	0	Syslogd - RACF Directives		Incomplete 💌	
	0	Policy Agent Configuration - Image MVS1		Incomplete 💌	
	0	Syslogd - Configuration		Incomplete 💌	
	0	Syslogd - Start Procedure		Incomplete 💌	
	C	Policy Agent - TCPIP Sample Profile		Incomplete 💌	
	0	AT-TLS - TCPIP Sample Profile		Incomplete 💌	



# Configuration Assistant for z/OS Comm. Server

Application setup tasks – setting the base location for definition files (V1.11

Technology • Connections • Results

- Base locations specify a z/OS UNIX<sup>®</sup> file directory or a PDS(E) library for storing the policyrelated definitions that are created by the Configuration Assistant.
- There are both image-level and stack-level base locations.
- This example uses a PDS library.

<ul> <li>Welcome S Configuratio S</li> <li>Configuration Assistant</li> <li>Links</li> <li>z/OSMF Administration</li> <li>Refresh</li> <li>Welcome C Configuratio S</li> <li>Installation Location Setup</li> <li>Base location: //etc/cfgasst/v1r13/MVS1/</li> <li>Stack names will be appended as needed. See help for details.</li> <li>Host code page IBM-1047 ▼</li> <li>Select installation method</li> </ul>	IBM z/OS Management	Facility
Save to disk C FTP   FTP login information   Host name:   Port number: 21   User ID:   Password:   Use SSL   Data transfer mode   © Default   Passive   Active	<ul> <li>Welcome</li> <li>Configuration</li> <li>Configuration Assistant</li> <li>Links</li> <li>z/O SMF Administration</li> <li>Refresh</li> </ul>	Welcome Configuratio   Installation Location Setup   Base location:   /etc/cfgasstv1r13/MVS1/   Stack names will be appended as needed. See help for details.   Host code page   IBM-1047   Select installation method     © Save to disk   Port number:   21   User ID:   Password:   Ise SSL   Data transfer mode     © Default   Passive   Active





#### z/OSMF Workload Management (V1R12) Service Definition History

SHARE Technology · Connections · Results

- A history is provided for each service definition
  - Lists the activities performed on the service definition
  - Contains edit, install, activate, import, export activities
  - Displays timestamp and user
  - The user can customize how long the history is kept

Edit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookma	arks <u>T</u> ools <u>H</u> elp					
🗩 C 🗙 🏠	IBM https://boermf	f4.boeblingen.de.ibm.com:9443/zosmf/		· Google		
Most Visited A Catting Started	Latest Headlines					
		Us	e filtering and sorti	ng to find		
M 2/OS Management F	acility	the	data you are inter	octod in	IBJ	
Velcome	Welcome 😂 🛝	Norkload Man 🛛	uala you are intere	esteu m		
Links     Performance     Monitoring Desktops	Workload	Management			He	
- Sysplex Status	Overview S	ervice Definitions 🛞 History WLMS	TT 🛛			
<ul> <li>Workload Management</li> </ul>						
2/OSMF Administration	History for	WLMSTT	•			
Refresh	Data from past	2 months				
	Actions -	1			Search	
	Sysplex	Filter	Date and Time (GMT) Filter	User ID Filter		
	RMF4PLEX	Activate service policy WLMSTTAV	Apr 23, 2010 10:57:36 AM	bwir		
	RMF4PLEX	Install in WLM couple data set	Apr 23, 2010 1:17:48 PM	bwir		
	RMF4PLEX	Activate service policy WASRT	Apr 23, 2010 1:17:49 PM	bwir		
	RMF4PLEX	Install in WLM couple data set	Apr 26, 2010 4:26:01 PM	wsadmin		
	RMF4PLEX	Activate service policy WASRT	Apr 26, 2010 4:26:01 PM	wsadmin		
	RMF4PLEX	Install in WLM couple data set	May 4, 2010 8:04:28 AM	bwir		
	RMF4PLEX	Activate service policy WASRT	May 4, 2010 8:04:29 AM	bwir		
		Modify	May 10, 2010 5:18:27 PM	wsadmin		
	RMF4PLEX	Install in WLM couple data set	May 10, 2010 5:18:27 PM	wsadmin		
		Modify	May 10, 2010 5:38:49 PM	wsadmin		
	RMF4PLEX	Install in WLM couple data set	May 10, 2010 5:38:49 PM	wsadmin		
		Modify	May 10, 2010 5:42:44 PM	wsadmin		
	RMF4PLEX	Install in WLM couple data set	May 10, 2010 5:42:44 PM	wsadmin		
		Modify	May 10, 2010 5:54:11 PM	wsadmin		
	RMF4PLEX	Install in WLM couple data set	May 10, 2010 5:54:11 PM	wsadmin		
	Tatal: 20	Modify	May 10, 2010 6:19:01 PM	wsadmin	~	
	THE REPORT OF A DECISION OF A DECISIONO OF A					





Technology · Connections · Results

#### z/OSMF Workload Management (V1R12) Printing Service Definitions

- **Print Preview** function provides
  - An clearly formatted overview of the service definition
  - filter service definition elements
  - apply service policies
- Hints, warnings can also be printed







#### z/OSMF Workload Management (V1R12) Manage Service Policies

**SHARE** Technology · Connections · Results

- The Manage Service Policies panel displays the state of the service policies in the installed service definition
  - View or print the service policies of the installed service definition
  - Activate a service policy of the installed service definition






## z/OSMF Workload Management (V1R12) View Sysplex Status

**Technology** · Connections · Results

## The View Sysplex Status task displays

- The active service policy
- The WLM status on the systems in the sysplex
- The installed service definition
- The Sysplex Status panel comprises the information provided by the MVS console command D WLM SYSTE Check checkbox to automatically refresh data



