

# z/OSMF



© Copyright IBM Corp. 2010. All rights reserved.

## **Trademarks**



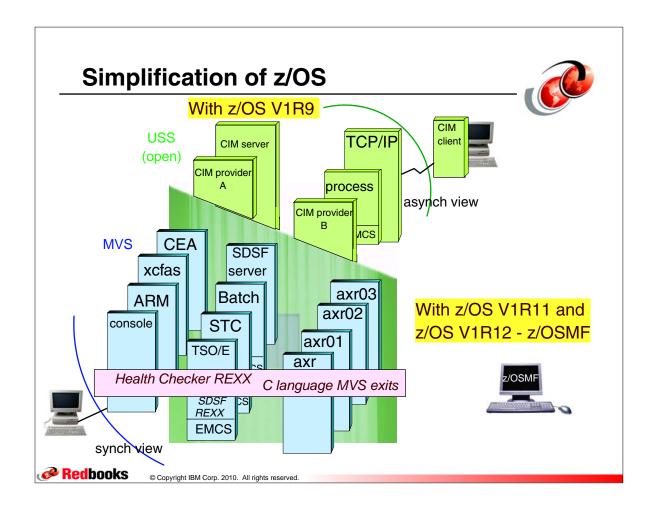
eNetwork	DFSMS/MVS	IMS	RMF
geoManager	DFSMSdfp	IMS/ESA	RS/6000
AD/Cycle	DFSMSdss	IP PrintWay	S/390
ADSTAR	DFSMShsm	IPDS	S/390 Parallel Enterprise Server
AFP	DFSMSrmm	Language Environment	SecureWay
APL2	DFSORT	Multiprise	StorWatch
APPN	Enterprise System 3090	MQSeries	Sysplex Timer
BookManger	Enterprise System 4381	MVS/ESA	System/390
BookMaster	Enterprise System 9000	Network Station	System REXX
C/370	ES/3090	NetSpool	SystemView
CallPath	ES/4381	OfficeVision/MVS	SOM
CICS	ES/9000	Open Class	SOMobjects
CICS/ESA	ESA/390	OpenEdition	SP
CICS/MVS	ESCON	OS/2	VisualAge
CICSPlex	First Failure Support Technology	OS/390	VisualGen
COBOL/370	FLowMark	Parallel Sysplex	VisualLift
DataPropagator	FFST	Print Services Facility	VTAM
DisplayWrite	GDDM	PrintWay	WebSphere
DB2	ImagePlus	ProductPac	3090
DB2 Universal Database	Intelligent Miner	PR/SM	3890/XP
DFSMS	IBM	QMFr	z/OS
	IBM System z	RACF	z/OS.e

Domino (Lotus Development Corporation) Tivoli (Tivoli Systems Inc.) DFS (Transarc Corporation) Java (Sun Microsystems, Inc.)
Lotus (Lotus Development Corporation)

Tivoli Management Framework (Tivoli Systems Inc.) Tivoli Manger (Tivoli Systems Inc.)

**UNIX (X/Open Company Limited)** Windows (Microsoft Corporation)
Windows NT (Microsoft Corporation)





#### z/OSMF Introduction



- □ Provides support for a modern, Web-browser based management console for z/OS
  - First release introduced is z/OSMF V1R11
- Manages z/OS from z/OS
  - Browser communicates with z/OSMF 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 to be supported on z/OS V1R12

Redbooks

#### **z/OSMF V1R12**



- □ IBM z/OS Management Facility (z/OSMF)
  - A zero priced product to help simplify, optimize and modernize the z/OS system programmer experience
- □ z/OSMF provides solutions in the following ways
  - > Task oriented design
  - > Web browser based user interface
  - > Integrated user assistance
- □ Designed to make the operations and administration of the mainframe z/OS systems easier to manage
- ☐ Help improve system programmer productivity, and make the functions easier to understand and use



© Copyright IBM Corp. 2010. All rights reserved.

## **IT Organizational Domains**



- □ The focus for z/OSMF is for both new and experienced system programmers
  - > Within each domain to enhance productivity



Redbooks



## **Workstation Supported Browsers**



☐ To access z/OSMF on the z/OS system, your workstation requires one of the following Web browsers:

Browser	Windows XP 32-bit	Windows Vista Business Edition 32-bit	Windows 7 Professional 32-bit
Firefox 3.0.15	Yes	Yes	No
Firefox 3.5	Yes	Yes	Yes
Internet Explorer 7	Yes	Yes	No
Internet Explorer 8	Yes	Yes	Yes

**Redbooks** 

### z/OSMF z/OS V1R12 Considerations



- ☐ If you are migrating to a new release of z/OSMF, you can re-use much of the customization from your current configuration
- Most functions in z/OSMF are now provided through optional plug-ins
  - > Enable when you configure the product
    - In general, you should configure all of the available plug-ins during the z/OSMF configuration process

**Redbooks** 

© Copyright IBM Corp. 2010. All rights reserved

### **Software Requirements**



- Software dependencies
  - > z/OSMF V1R12 requires z/OS V1R12
  - WAS OEM should be at a minimum level 7.0.0.9 APAR PM10520
- Once WebSphere Application Server OEM Edition has been set up and installed
  - z/OSMF itself is deployed into this runtime and this is where the application servlets and GUIs reside
  - z/OSMF uses the Dojo technology for GUIs, which uses JavaScript and that helps improve performance overall because the GUI can perform all the graphics rendering in the browser on the workstation

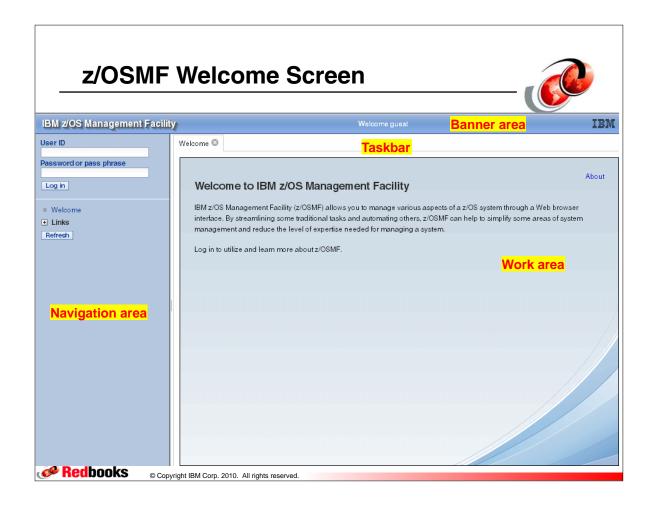
**Redbooks** 

#### z/OSMF Component Interaction z/OSMF Web Interface z/OS V1R11 Logical Partition (LPAR) Incident Log **SYSREXX** Other z/OS Servlets CIM CEA Components HTTP(S Configuration Dojo / Assistant **JavaScript IBM Securiy** Server (RACF) z/OSMF **WebSphere Application Server** z/OSMF **OEM Edition for z/OS** Administration **Redbooks** © Copyright IBM Corp. 2010. All rights reserved.

### z/OSMF Functions



- □ Configuration Assistant for the z/OS Communications
   Server
- ☐ Incident Log
- WLM Policy Editor (z/OSMF V1R12)
- □ Resource Monitoring ( z/OSMF V1R12)
- □ z/OSMF administration



#### **Customize the Welcome Panel**



- □ Your installation can customize the z/OSMF Welcome panel
  - > Installation's own information for guest users
  - To provide users with tailored information or instructions specific to your company
  - You can even customize the Welcome panel with a small image or graphic, such as your company logo
  - After the user authenticates, the Welcome panel is replaced with the standard z/OSMF Welcome panel



#### **Customize the Welcome Panel**



- □ 1. Copy from /usr/lpp/zosmf/V1R12/samples/customWelcome.properties to /var/zosmf/data/customWelcome.properties
  - We used the default target location /var/zosmf/data when building z/OSMF
- 2. Edit /var/zosmf/data/customWelcome.properties
  - > We updated the last two lines:
    - header=Welcome to z/OSMF on WTSC80
    - footer=Brought to you by the ITSO
- □ 3. We copied the ITSO logo .gif file to
  - /var/zosmf/data/customLogo.gif



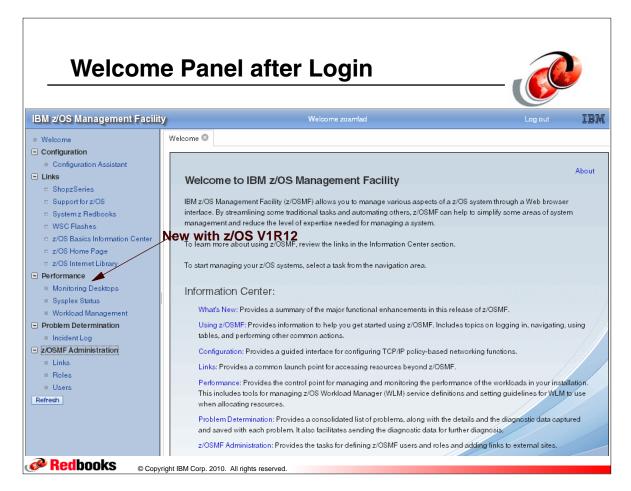
© Copyright IBM Corp. 2010. All rights reserved

#### **Customize the Welcome Panel**



- As for the size of the image, consider the following:
  - You technically do not need to know the size of the area for the image to fit
  - If the image is smaller than the area, then it will remain its original dimensions
  - If the image is larger than the area, it will be scaled down to fit in the area. Due to this scaling, the image will always "fit", although there may be distortion from this scaling
- ☐ Since no one wants image distortion, we will clearly state that this area is 120x40 pixels





## z/OSMF Plug-ins with z/OS V1R12



- □ In z/OSMF, a plug-in is a collection of one or more system management tasks (Configuring is optional)
  - Most z/OSMF functions in the navigation area are provided through plug-ins: enable them during configuration
- □ z/OSMF V1R12 includes the following plug-ins:
  - Configuration Assistant plug-in: adds the task to the Configuration category
  - Incident Log plug-in: adds the Incident Log task to the Problem Determination category
  - Resource Monitoring plug-in: adds the Monitoring Desktops, Sysplex Status tasks to Performance category
  - Workload Management plug-in: adds the Workload Management task to the Performance category

**Redbooks** 

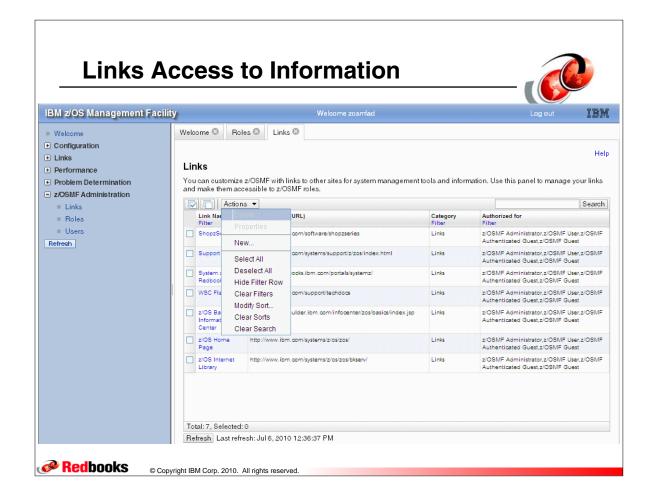
© Copyright IBM Corp. 2010. All rights reserved.

### z/OSMF Plug-ins with z/OS V1R12



- Install all plug-in FMIDs (ServerPac installs them)
  - With CBPDO (recommend you install all)
- ☐ In general, you should configure all of the available plug-ins during the z/OSMF configuration process
- In terms of system resources, the cost of a plug-in is negligible
- ☐ If you add a plug-in after completing the configuration process, you are required to repeat most of the steps in configuring z/OSMF
- ☐ If you add a plug-in later, you can use the izusetup.sh script to add the plug-ins
  - Here, you will configure plug-ins individually, repeating most of the steps you followed earlier to configure z/OSMF

Redbooks



### **Problem Determination - Incident Log**



- □ z/OS V1R12 improvements for the Incident Log
  - Encryption of all incident files (including dumps)
    - Send to IBM in parallel through FTP that breaks dumps into multiple data sets to save time
    - Requires host and destination must have the z/OS
       Problem Documentation Upload Utility installed
  - Send additional data sets, free-form comments for problem descriptions, and encrypted and parallel FTP destinations support
    - z/OSMF uses your system's SYSLOG or LOGREC data set, or both, as the source for creating diagnostic log snapshots

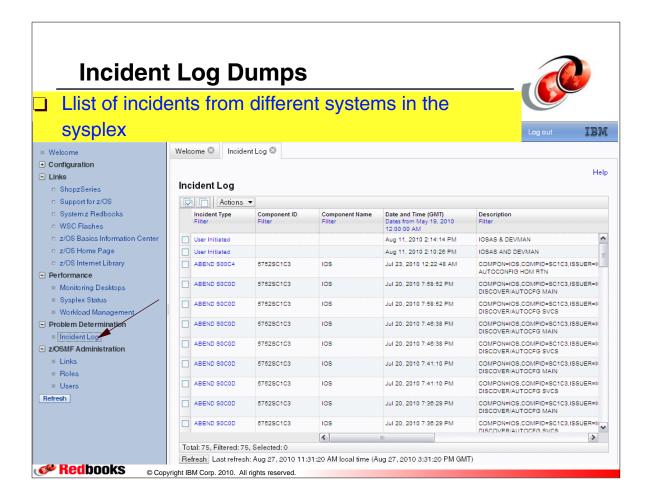
**Redbooks** 

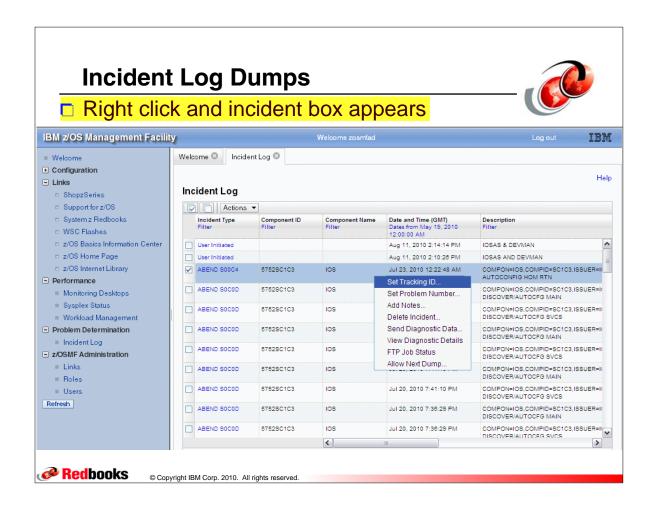
## **Problem Documentation Upload Utility**

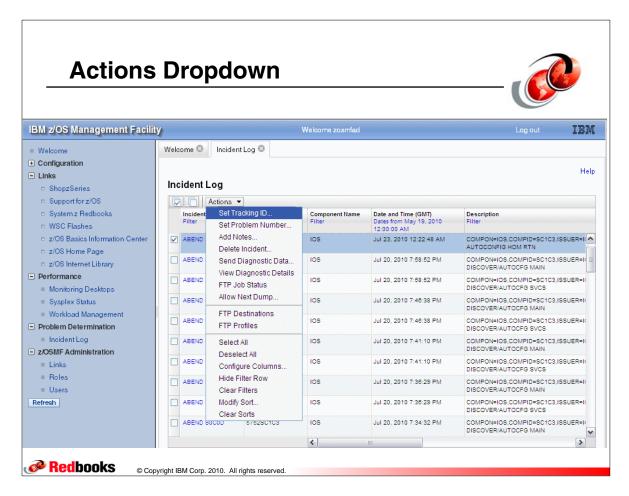


- ☐ The utility is an optional tool that you can download and install in your installation
  - > The tool is provided as-is at no additional charge and not supported by IBM, and it is not shipped with z/OSMF, see:
    - ftp://ftp.software.ibm.com/s390/mvs/tools/mtftp/
- ☐ If the tool is installed and is properly configured, z/OSMF makes use of its parallel FTP and encryption capabilities
  - The tool must be installed on both the z/OSMF host system and the FTP destination system
    - Otherwise, the send will fail or the destination might not be able to decrypt, reassemble, or read the files

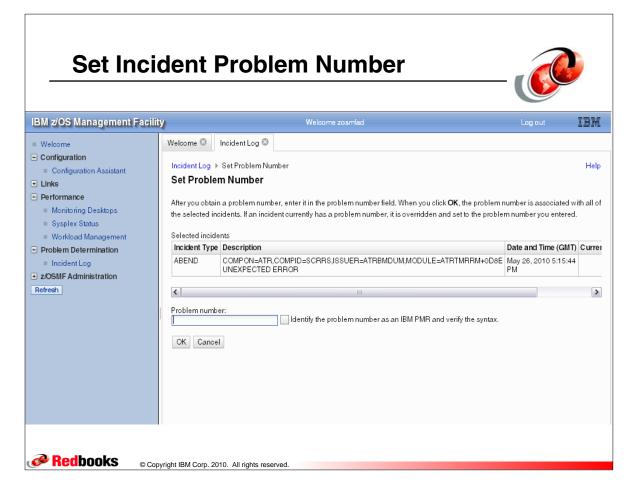










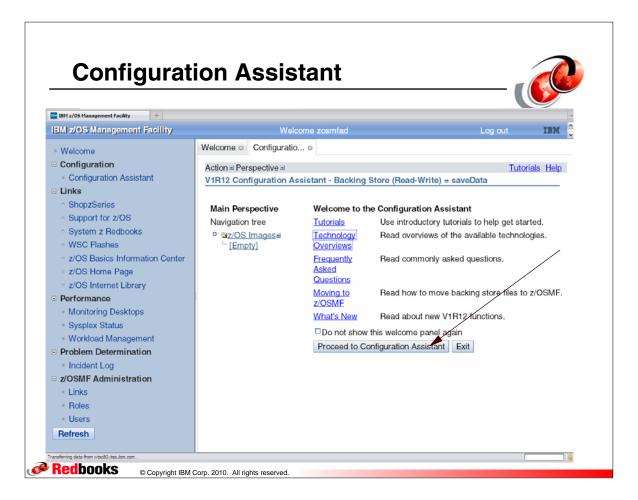


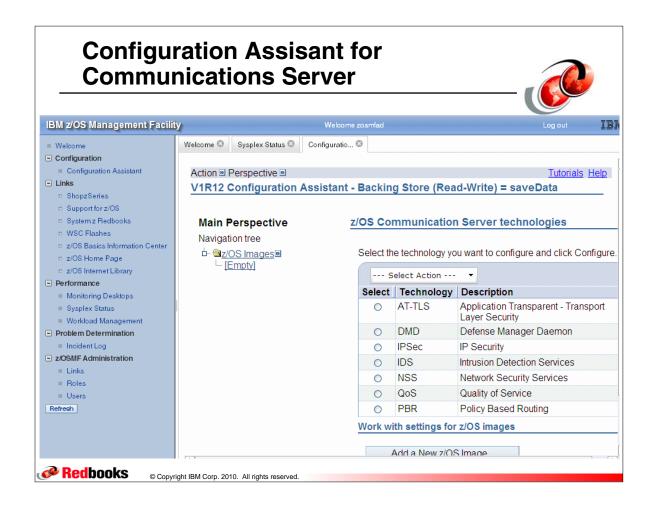
### **Configuration Assistant**

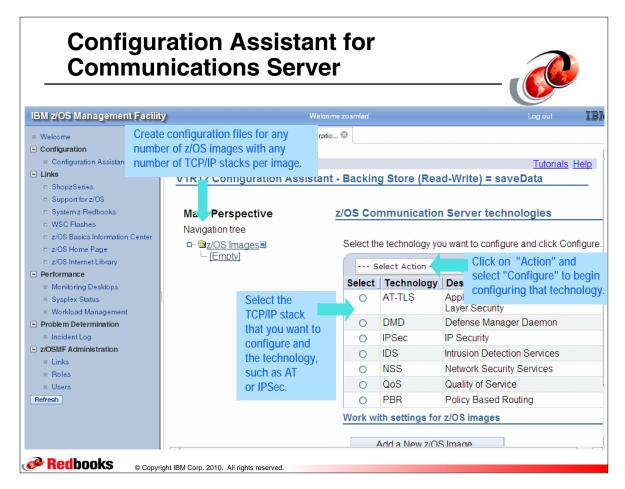


- □ z/OS V1R12 enhancements
  - IKE Version 2
  - New crytographic algorithms for IPSec and IKE
  - > FIPS 140 cryptographic mode for IPSec
  - Certificate trust chains and certificate revocation lists
  - Enforcement of RFC4301 compliance for IPSec filter rules
- On the Web, you can find information about the
  - Configuration Assistant at the z/OS Communications Server Web site:
    - http://www.ibm.com/software/network/commserver/zos/support/









## Performance Category with z/OS V1R12

- Workload Management task: Manage WLM service definitions, and provide guidelines for WLM to use when allocating resources
- Monitoring Desktops task: Monitor the performance of the z/OS sysplexes and Linux images in your installation -Specifically, monitor most of the metrics supported by the RMF 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 - Provides a single location where you can define the z/OS sysplexes and Linux images to be monitored in the Monitoring Desktops task



© Copyright IBM Corp. 2010. All rights reserved

### z/OSMF and Workload Management



- ☐ Enables you to manage WLM service definitions and provide guidelines to use when allocating resources
- □ Actions that need the Workload Management task to interact with the sysplex are limited to the sysplex in which the z/OSMF host system is a member
- ☐ Such actions include the following:
  - Installing a service definition
  - Activating a service policy
  - Viewing the sysplex status

### **WLM Primary Screen Functions**

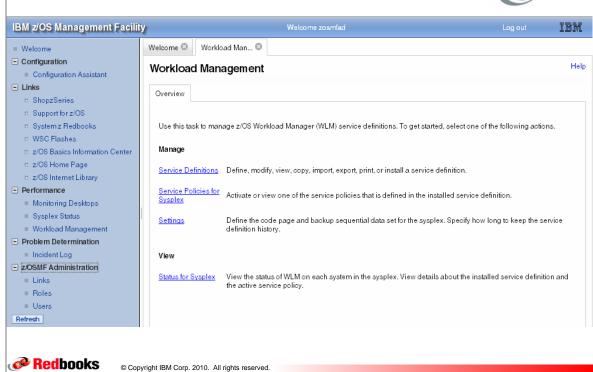


- Manage service definitions Define, modify, view, copy, import, export, print, and install WLM service definitions
- Manage service policies For the sysplex, you are able to activate or print one of the service policies that is defined in the installed service definition
- Manage settings You can define the code page and backup sequential data set for the sysplex
  - Specify how long to keep the service definition history
  - Enable or disable the service definition and service policy consistency checking feature
- View status of sysplex You can view the status of WLM on each system in the sysplex and view details about the installed service definition and the active service policy



## **Workload Manager Primary Screen**





## z/OSMF Workload Management Task



- This task provides a browser-based user interface
  - Used to manage WLM service definitions
  - > Provide guidelines for WLM use when allocating resources
  - Provides a browser-based user interface that you can use to manage WLM service definitions
- Can also install a service definition into the WLM couple data set for the sysplex
  - Activate a service policy
  - > View the status of WLM on each system in the sysplex
- □ Specifically, you can define, modify, view, copy, import, export, and print WLM service definitions



© Copyright IBM Corp. 2010. All rights reserved.

#### **D WLM, SYSTEMS Command**



```
D WLM, SYSTEMS
IWM025I 10.54.54 WLM DISPLAY 934
  ACTIVE WORKLOAD MANAGEMENT SERVICE POLICY NAME: TEST1
  ACTIVATED: 2009/04/23 AT: 12:06:19 BY: VAINI
                                                  FROM: SC75
  DESCRIPTION:
  RELATED SERVICE DEFINITION NAME: TEST1
  INSTALLED: 2009/04/23 AT: 12:05:47 BY: VAINI FROM: SC75
  WLM VERSION LEVEL:
                        LEVEL025
  WLM FUNCTIONALITY LEVEL: LEVEL004
  WLM CDS FORMAT LEVEL: FORMAT 3
  STRUCTURE SYSZWLM_WORKUNIT STATUS: CONNECTED
  STRUCTURE SYSZWLM_3BD52817 STATUS: CONNECTED
  STATE OF GUEST PLATFORM MANAGEMENT PROVIDER (GPMP): UNAVAILABLE
  *SYSNAME* *MODE* *POLICY* *WORKLOAD MANAGEMENT STATUS*
  SC74
           GOAL TEST1 ACTIVE
  SC75 GOAL TEST1 ACTIVE
```



## **Sysplex Status Task Panel Display**



- ☐ The View Sysplex Status task displays
  - > The active service policy
  - > The WLM status on the systems in the sysplex
  - > The currently installed service definition
  - Provides the option to automatically refresh the panel content
- ☐ The Sysplex Status panel comprises the information provided by the MVS console command
  - > D WLM, SYSTEMS



