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Manage your Workloads and Performance with z/OSMF

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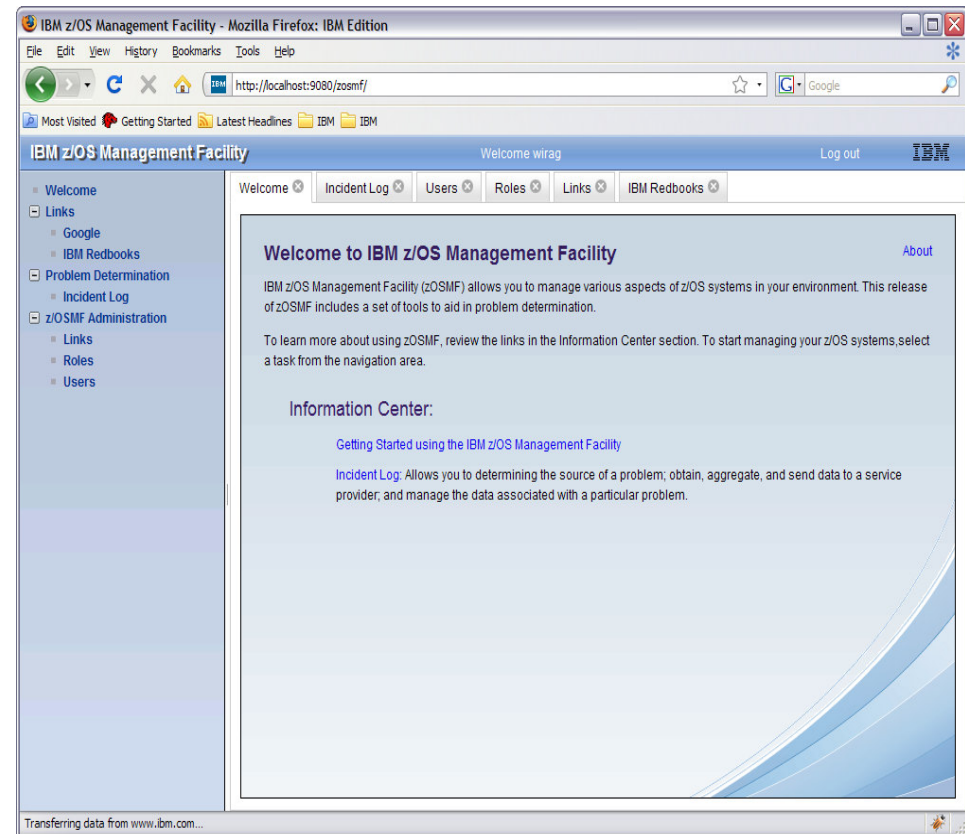
Friday, March 4, 2011
Session 8859



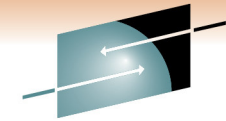
z/OS Management Facility



- The IBM z/OS Management Facility provides a Web-browser based management console for z/OS.
- Helps system programmers to more easily manage and administer z/OS by simplifying day to day operations and administration.
- More than just a graphical user interface, the z/OS Management Facility provides real value
 - 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

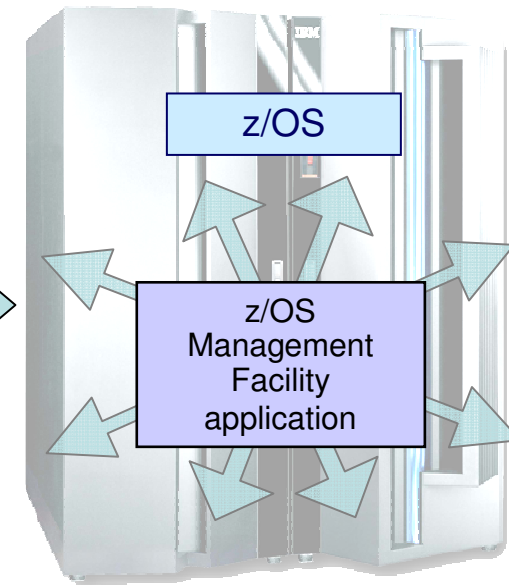
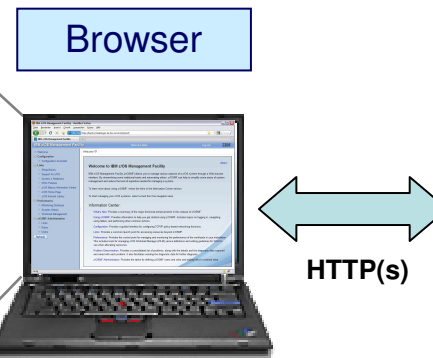


IBM z/OSMF Management Facility



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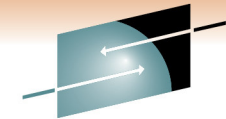
z/OS application, browser access



- *z/OS Management Facility is a Web 2.0 application on z/OS*
 - Manages z/OS from z/OS
 - Browser communicates with z/OSMF via secure connection, anywhere, anytime

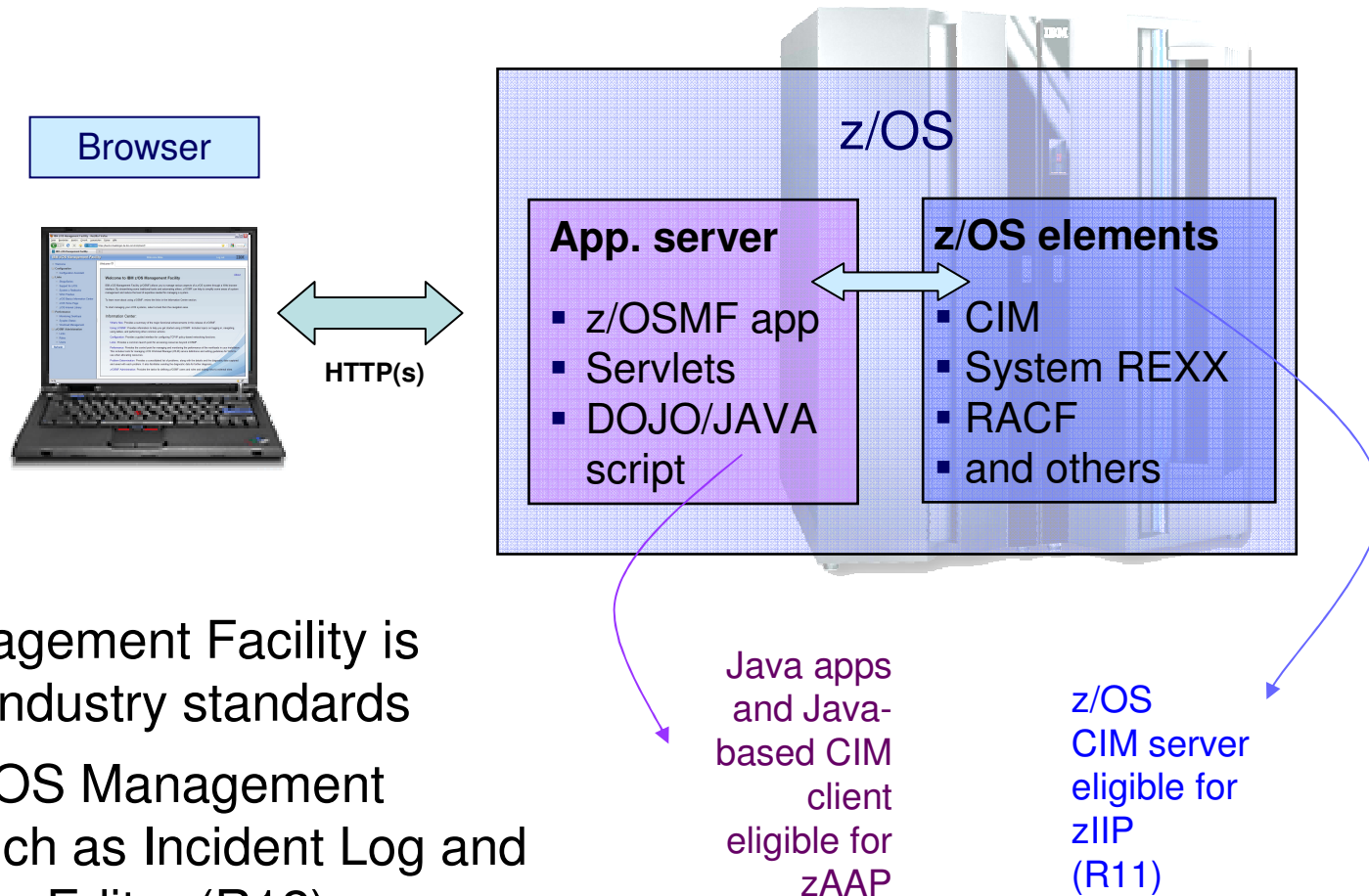
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Industry standards



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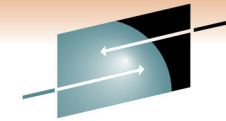
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- z/OS Management Facility is based on industry standards
- Parts of z/OS Management Facility, such as Incident Log and WLM Policy Editor (R12) use JAVA and CIM

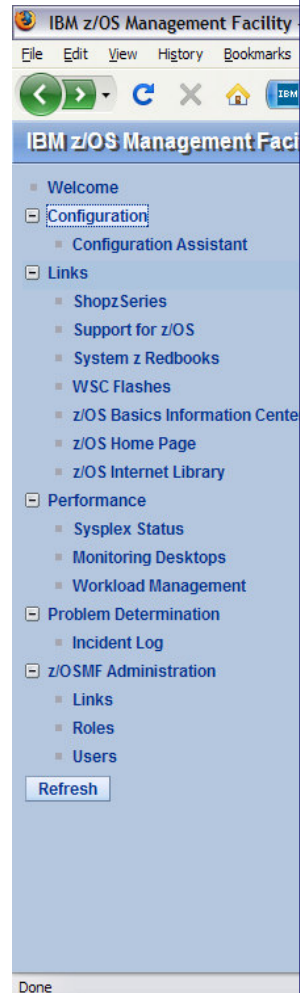
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Applications / R12 plugins



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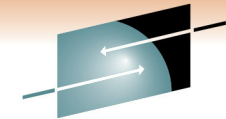
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- **Configuration category**
 - **Configuration Assistant for z/OS Communication Server** – Simplified configuration and setup of TCP/IP policy-based networking functions (with z/OS V1.11)
- **Links** Links to resources - provides common launch point for non-z/OSMF resources
- **Performance category (with z/OS V1.12)**
 - **Sysplex status** – single view of sysplex performance
 - **Monitor desktops** – dynamic real time metrics for system performance, customizable for correlations
 - **Workload Manager Policy Editor** -- Simplified creation, editing, installation, and activation of WLM service definitions and policies
- **Problem Determination category**
 - **Incident Log** -- Simplified capture, packaging, and sending of SVC dump diagnostic data. (Available with z/OS V1.10)
- **z/OSMF Administration** Authorization services, add users, define roles, add links.

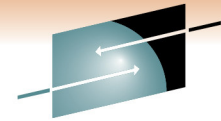
IBM z/OSMF Management Facility

Integrated Help Facility



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A screenshot of a Mozilla Firefox browser window displaying the IBM z/OSMF Management Facility help page. The browser title is "Help - IBM z/OS Management Facility - Mozilla Firefox". The address bar shows the URL: "https://boermf7.boeblingen.de.ibm.com:9443/zosmf/helps/index.jsp?topic=/com.ibm.zosmfmondesktops.help.doc/izuR00hpDe". The search bar contains "Search scope: All topics". The left sidebar shows a "Contents" menu with categories like "Welcome", "Using z/OSMF", "Configuration", "Links", "Performance", "Problem determination", "z/OSMF administration", "Tools and techniques for troubleshooting", "z/OSMF messages", "Glossary of terms and abbreviations", and "Viewing information in the help system". The "Performance" category is expanded, showing "Monitoring Desktops task" with "Desktops tab" selected. The main content area displays the "Desktops tab" page, which includes a breadcrumb "Performance > Monitoring Desktops task" and a heading "Desktops tab". The text explains that a monitoring desktop is a set of metric groups or custom views used to monitor the performance of z/OS or Linux images. It states that a desktop does not contain performance data but is a template that can be saved and reused. The text also notes that the Desktops tab is displayed by default and cannot be closed, and it contains a table listing defined and predefined desktops. The bottom status bar shows the full URL: "https://boermf7.boeblingen.de.ibm.com:9443/zosmf/helps/topic/com.ibm.zosmfmondesktops.help.doc/izuR00hpDesktopsTab.html".



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The z/OSMF Workload Management Task



Functions



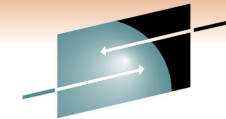
- Policy editor
 - Simplified creation and editing of WLM policies
 - The elements of a service definition are displayed in tabular form
 - Service definition elements are created or edited directly in tables
 - The creation and editing of WLM service definitions is supported by best practice checks
 - Support for review and investigation of WLM policies
 - Direct navigation between policy elements
 - Filtering, sorting, and search functions
 - Serialization of the editing of the active service definition
- Policy repository
 - WLM policies are stored in a repository integrated in the z/OSMF file system
 - Policies can be exported to the local workstation or a host data set as well as imported from a file or a host data set
 - Policies or best-practice recommendations can be printed for further study
 - Integrated operation history makes manual tracking superfluous

Functions (cont.)



- Installation and activation of WLM policies
- Monitoring of the WLM status in the sysplex
 - WLM status report is automatically updated if the WLM status on the systems changes
- Administration and operation tasks can be performed simultaneously
 - Simplified migration: Policy elements can be copied from one service definition to another
 - Simplified operation: User can start to edit a policy, interrupt the editing to activate a policy, and then continue with the editing without losing the context
- z/OSMF Workload Management synchronizes automatically with z/OS WLM

Some Benefits



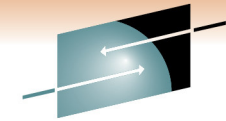
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	Without WLM Policy Editor** using WLM Administrative Application	With WLM Policy Editor** in z/OSMF
Optimization of a service definition based on best-practices	<p>Read through WLM-related manuals and identify best-practices. Print out the service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

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

Workload Management Task Integration in z/OSMF



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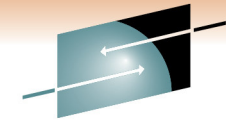
- The Workload Management task is displayed in the Performance category of the Navigation tree
- The Workload Management task is displayed on the Roles Properties panel and can be assigned to the roles z/OSMF Administrator, z/OSMF User, z/OSMF Authenticated Guest
 - By default the Workload Management task is assigned to the role z/OSMF Administrator
 - The Workload Management plugin shows up on the About page with version information

The screenshot displays the IBM z/OS Management Facility web interface in Mozilla Firefox. The main window shows the 'Roles' configuration page for the 'z/OSMF Administrator' role. The 'Workload Management' task is checked under the 'Performance' category. A secondary window shows the 'About' page for the z/OS Management Facility Version 1, listing various plugins and their versions.

Plugin Name	Version
IncidentLog	hsmat125;driver07;2010-05-03T16:28:20
WorkloadManagement	hsmat123;driver29;2010-05-11T08:00:37
ConfigurationAssistant	HSMAT12A;V1R12;2010-04-29T08:56:35
ResourceMonitoring	hsmat122;driver28;2010-05-10T04:46:08

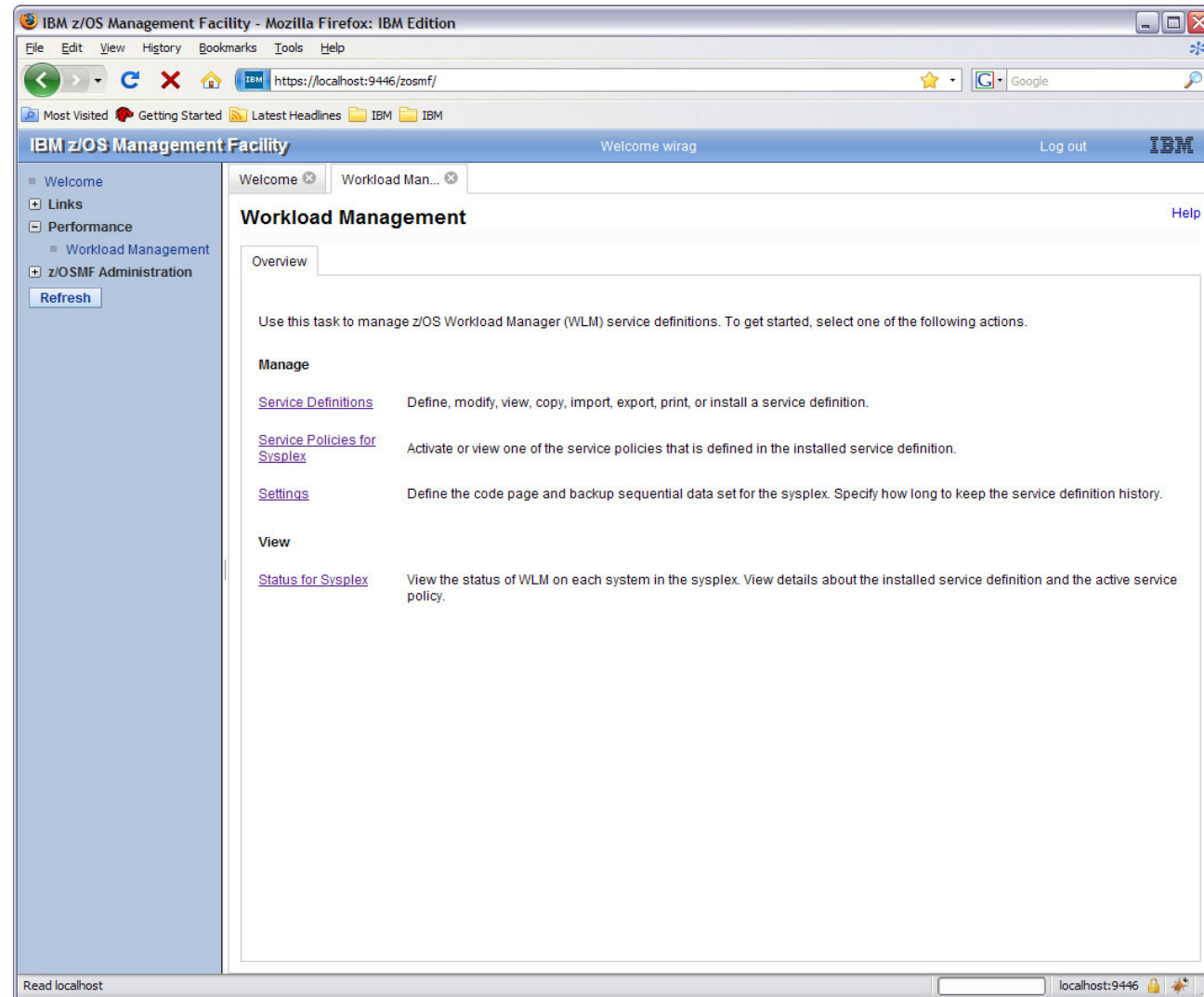
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Workload Management Task Overview

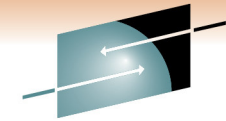


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- **Manage Service Definitions:** Create, modify, import, export, print, install service definitions
- **Manage Service Policies for Sysplex:** Activate or view the service policies in the service definition that is currently installed in the WLM couple data set
- **Manage Settings:** Specify history length, codepage, user preferences
- **View Status for Sysplex:** Displays information about the service definition installed in the WLM couple data set and the service policy active in the sysplex.



Service Definition Repository



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- Integrated repository for service definitions
- Service definitions can be
 - Imported
 - Exported
 - Printed
 - Viewed or edited
 - Created or Copied
 - Installed on the sysplex
- Indications
 - If service definition is installed and active
 - If service definitions are being viewed or edited
 - If messages exist for a service definition

Store all service definitions in one repository

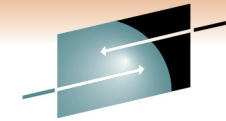
Name	Description	Activity	Sysplex	Messages	Last Modified (GMT)	Modified By
R12RGRP2	D10.WLM.ZOSMF.POLICY.R12RGRF			Error	Feb 23 2010 2:30:24 PM	bmor
RTDST3	Copy of RTDST3				Mar 21 2001 8:23:19 PM	bmai
RTDST3	SDS1 copy 5			Warning	Jan 31 2010 10:49:38 PM	wirag
SampdeF	Sample WLM Service Definition 62				Sep 24 2007 8:48:22 AM	tblatt
SampdeF (Installed & Active)	Sample WLM Service Definition 57		WLMMPLEX	Information	Feb 1 2010 8:52:56 PM	wirag
SPMinTst				Information	Jan 26 2010 3:50:46 PM	wirag
T13DEC07	add/remove SAP DB2s				Dec 13 2007 9:01:59 PM	ks56551
TEST15				Information	Jan 12 2010 12:43:29 PM	wirag
TESTFIX1					Oct 3 2006 11:40:35 AM	sig011
TESTSD1				Error	Dec 30 2009 6:42:37 PM	wirag
WLM_BOF1	Large			Error	Feb 18 2010 5:12:08 PM	debug22
WLM_BOF2						
WLM_DESC	WL De					
WLM001	Service					
WLM600						
WLM700						
wlmpol01	policy			Warning	Jan 6 2010 11:35:36 AM	wirag
WLMPOL03				Warning	Jan 13 2010 9:19:00 AM	wirag
WLMPOL04				Warning	Feb 2 2010 12:09:54 AM	wirag
WLMSTT	AVT R10+R11RAS				Jul 8 2008 10:38:57 AM	bmor
WSCWLMDE	WSC Sample WLMServiceDefinition			Error	Jan 27 2010 4:05:01 AM	p3asru

Total: 58, Selected: 1

Refresh Last refresh: Mar 1, 2010 4:09:04 PM local time (Mar 1, 2010 3:09:04 PM GMT)

Click to view, edit, print, install a service definition

Editing Service Definitions



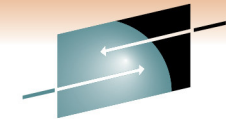
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- Simplified creation, modification and review of service definitions
 - Policy elements are presented in tables
 - Tables can be filtered and sorted
 - Direct editing of policy elements within tables
 - Best-practice hints are displayed automatically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

The screenshot shows the IBM z/OS Management Facility interface in a Mozilla Firefox browser. The main window displays the 'Workload Management' section, specifically the 'Service Definitions' tab. A table titled 'Service Classes' is visible, with columns for Name, Period, Importance, Duration, Goal Type, Response Time, Percentile, Velocity, CPU Critical Filter, and Resource Group. The table contains several rows of service class definitions, including STTCL3 through STTCL8. A context menu is open over the 'STTCL7' row, showing options like 'New Period', 'Expand', 'Collapse', 'Cut to Clipboard', 'Copy to Clipboard', 'Paste Periods', 'Move Periods', 'Delete...', and 'View Cross References'. Three callout boxes provide instructions: one points to a warning icon in the Velocity column with the text 'Best-practice hints help to optimize service definitions'; another points to the 'Copy to Clipboard' option with the text 'Click to copy element on clipboard for insertion into another service definition'; and a third points to the 'View Cross References' option with the text 'Click to check where the element is used'.

Service Definition History



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

IBM z/OS Management Facility - Mozilla Firefox: IBM Edition

https://localhost:9446/zosmf/

IBM z/OS Management Facility

Workload Management

History for Sampdef

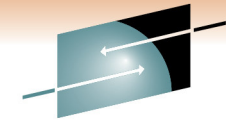
Data from past 3 months

Actions	Sysplex	Action	Date and Time (GMT)	User ID
	Filter	Filter	Filter	Filter
	WLMMPLEX	Install in WLM couple data set	Feb 14 2010 1:52:01 AM	wirag
	WLMMPLEX	Activate service policy COPY	Feb 14 2010 1:52:03 AM	wirag
	WLMMPLEX	Install in WLM couple data set	Feb 14 2010 1:53:51 AM	wirag
	WLMMPLEX	Activate service policy COPY	Feb 14 2010 1:53:53 AM	wirag
	WLMMPLEX	Install in WLM couple data set	Feb 14 2010 1:56:27 AM	wirag
	WLMMPLEX	Activate service policy COPY	Feb 14 2010 1:56:28 AM	wirag
	WLMMPLEX	Install in WLM couple data set	Feb 14 2010 2:03:11 AM	wirag
	WLMMPLEX	Activate service policy WLMPOL	Feb 14 2010 2:03:12 AM	wirag
	WLMMPLEX	Install in WLM couple data set	Feb 15 2010 12:03:12 PM	swirag
	WLMMPLEX	Activate service policy COPY	Feb 15 2010 12:03:13 PM	swirag
	WLMMPLEX	Install in WLM couple data set	Feb 16 2010 1:21:28 PM	wirag
	WLMMPLEX	Install in WLM couple data set	Feb 17 2010 11:21:44 AM	wirag
	WLMMPLEX	Activate service policy COPY	Feb 17 2010 11:21:44 AM	wirag
	WLMMPLEX	Install in WLM couple data set	Feb 22 2010 2:28:31 PM	wirag
	WLMMPLEX	Install in WLM couple data set	Feb 24 2010 12:43:10 PM	wirag
	WLMMPLEX	Activate service policy COPY	Feb 24 2010 12:43:10 PM	wirag
	WLMMPLEX	Install in WLM couple data set	Feb 28 2010 11:05:19 PM	wirag
	WLMMPLEX	Activate service policy COPY	Feb 28 2010 11:05:20 PM	wirag
	WLMMPLEX	Install in WLM couple data set	Feb 28 2010 11:44:30 PM	wirag
	WLMMPLEX	Activate service policy WLMPOL	Feb 28 2010 11:44:30 PM	wirag
		Modify	Mar 1 2010 3:23:31 PM	wirag

Total: 62

Refresh Last refresh: Mar 1, 2010 4:23:53 PM local time (Mar 1, 2010 3:23:53 PM GMT)

Printing Service Definitions



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- Before printing, a Print Preview function enables to
 - filter service definition elements
 - apply service policies
- Hints, warnings can also be printed
- Besides printing, the Print Preview panel is well suited to get a general idea of a service definition

The screenshot shows the IBM z/OS Management Facility interface in Mozilla Firefox. The main content area displays the 'z/OS Workload Manager Service Definition: basepol'. The interface includes a navigation menu on the left, a breadcrumb trail at the top, and a 'Print Preview | Filter' button. Two callout boxes with arrows point to the 'Print Preview | Filter' button and the 'Print Preview basepol' tab, indicating the steps to filter and print the service definition.

z/OS Workload Manager Service Definition: basepol

Service definition name: basepol
Description: D10.WLM.ZOSMF.POLICY.D080708.XML
Functionality level: 019

Guest Platform Management Provider (GPMP) Settings

Enable dynamic GPMP management on each system in the host sysplex: No
Excluded systems:

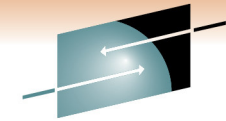
Service Parameters

Service coefficients: CPU: 1, IOC: 0.5, MSO: 5, SRB: 1
Enable I/O priority management: Yes
Enable dynamic alias management: Yes

Resource Groups

Name	Details
CPMAV	Description: Used for Cap.Provisioning Last Modified (GMT): Jun 22 2007 11:07:44 AM Modified By: the1 Type: NumberCPsTimes100 Capacity Minimum: 30 Capacity Maximum: 90
ECP	Description: AVT RG CPbased min 200% max 300% Last Modified (GMT): Feb 6 2007 10:53:07 AM Modified By: bmor

Installing Service Definitions



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- A wizard enables to install and activate a service definition
 1. Review properties of currently installed service definition and the one that is going to be installed
 2. Select service policy to be activated
 3. Review summary of install and activate that will be done and trigger it
- If a backup data set has been specified in the Settings, a copy of the installed service definition is stored in that data set

The screenshot shows the IBM z/OS Management Facility web interface in Mozilla Firefox. The browser address bar shows `https://localhost:9446/zosmf/`. The page title is "IBM z/OS Management Facility" and the user is logged in as "wirag". The main content area is titled "Workload Management" and has tabs for "Overview", "Service Definitions", and "Install and Activate". The "Install and Activate" tab is active, showing a progress indicator for "Welcome", "Select a Service Policy", and "Install and Activate".

Install and Activate

To install the selected service definition and activate the selected policy, click Finish. Doing so will replace the current definition and policy with the selected definition and policy. Service policy activation may take several minutes to complete.

Current installed service definition and active policy:

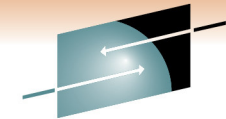
Splex	Service Definition	Description	Modified (GMT)	Modified By	Service Policy
WLMMPLEX	SampdeF	Sample WLM Service Definition 59	May 12, 2010 8:51:02 AM	frank2	WLMPPOL

Replace with:

Splex	Service Definition	Description	Modified (GMT)	Modified By	Service Policy
WLMMPLEX	WLMTVT	TVT Test policy	Apr 6, 2010 1:09:52 PM	wirag	Use current active policy

< Back Next > Finish Cancel

Manage Service Policies



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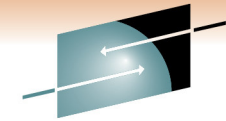
- The Manage Service Policies task enables to
 - View or print the service policies of the installed service definition
 - Activate a service policy of the installed service definition
- The Manage Service Policies panel displays the state of the service policies in the installed service definition

The screenshot shows the IBM z/OS Management Facility interface in Mozilla Firefox. The main content area is titled "Workload Management" and "Service Policies for Sysplex WLMMPLEX". It displays the installed service definition "SampdeF" and a table of service policies defined within it.

Name	Activation Status	Last Modified (GMT)	Modified By	Description
<input type="radio"/> COPY	Filter	Aug 2 2007 10:18:02 AM	dav	Sample WLM Service Policy
<input type="radio"/> WLMPOL	Active	Aug 13 2001 11:19:03 AM	ibmuser	Sample WLM Service Policy

A blue arrow points from the table to a callout box that says "Click to view, modify, or activate service policy".

View Sysplex Status



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- 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, SYSTEMS
- Information may be automatically refreshed

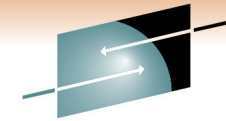
The screenshot shows the IBM z/OS Management Facility interface in Mozilla Firefox. The main content area is titled "Workload Management" and "Status for Sysplex WLMMPLEX from System WLMML". It displays details for the active service policy (WLMPOL) and a table of systems. A callout box with a blue background and white text says "Check checkbox to automatically refresh data" with a green arrow pointing to the "Automatic refresh" checkbox at the bottom of the page.

Name	Used Service Policy	Activated (GMT)	WLM Status	GPMP Status	WLM Version Level	CDS Format Level	Connected CF S
WLMML	WLMPOL	Mar 1 2010 11:09:09 AM	Active	Inactive	25	3	

Automatic refresh Last refresh: Mar 1, 2010 5:01:29 PM local time (Mar 1, 2010 4:01:29 PM GMT)

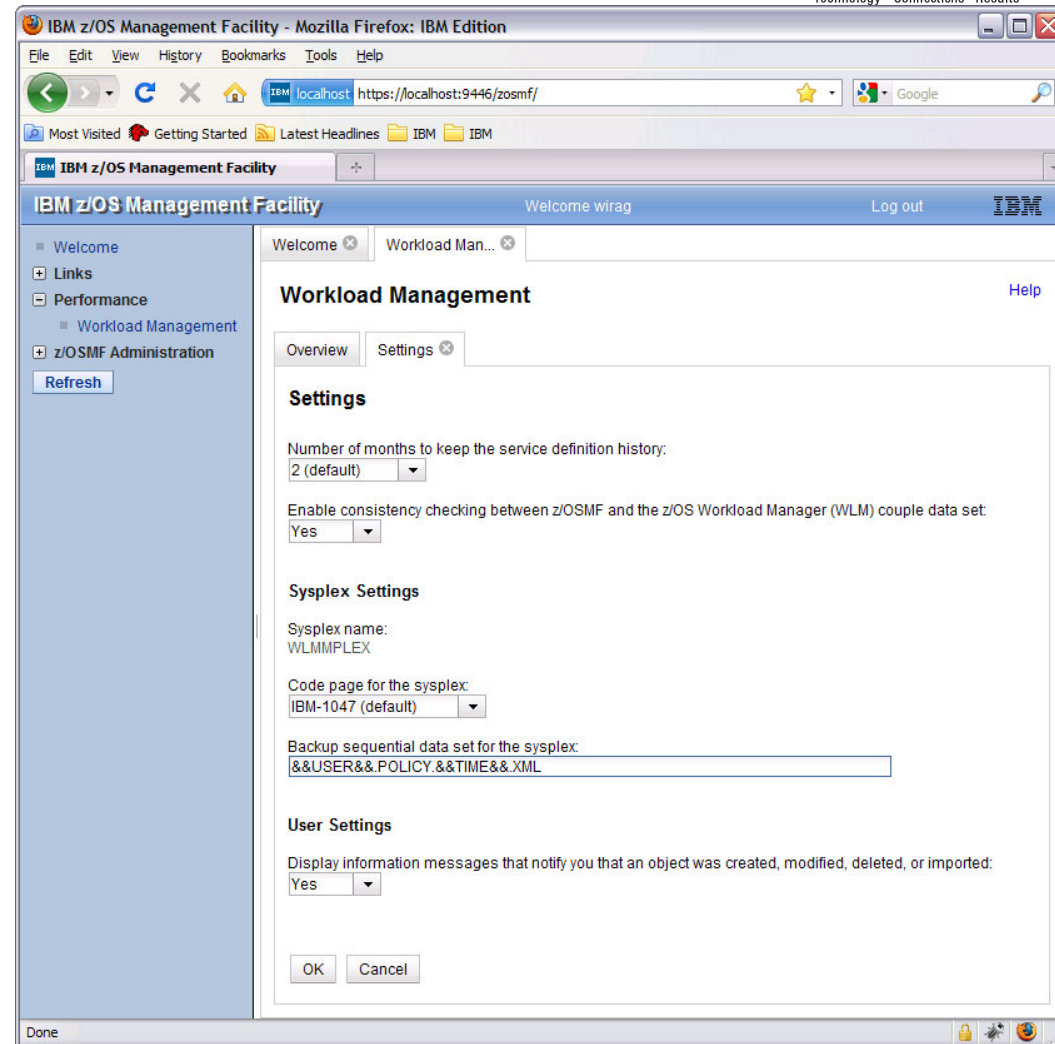
Settings

- Specify how long to keep the service definition history
- Specify if consistency checking with the WLM couple data set should be performed
- Specify the code page for the sysplex
- Specify a backup sequential data set name for the sysplex
 - Name may contain variables &&TIME&&, &&USER&& which are replaced with the current time and logon userid
- Specify if confirmation messages should be displayed (user-specific setting)

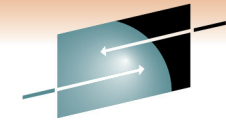


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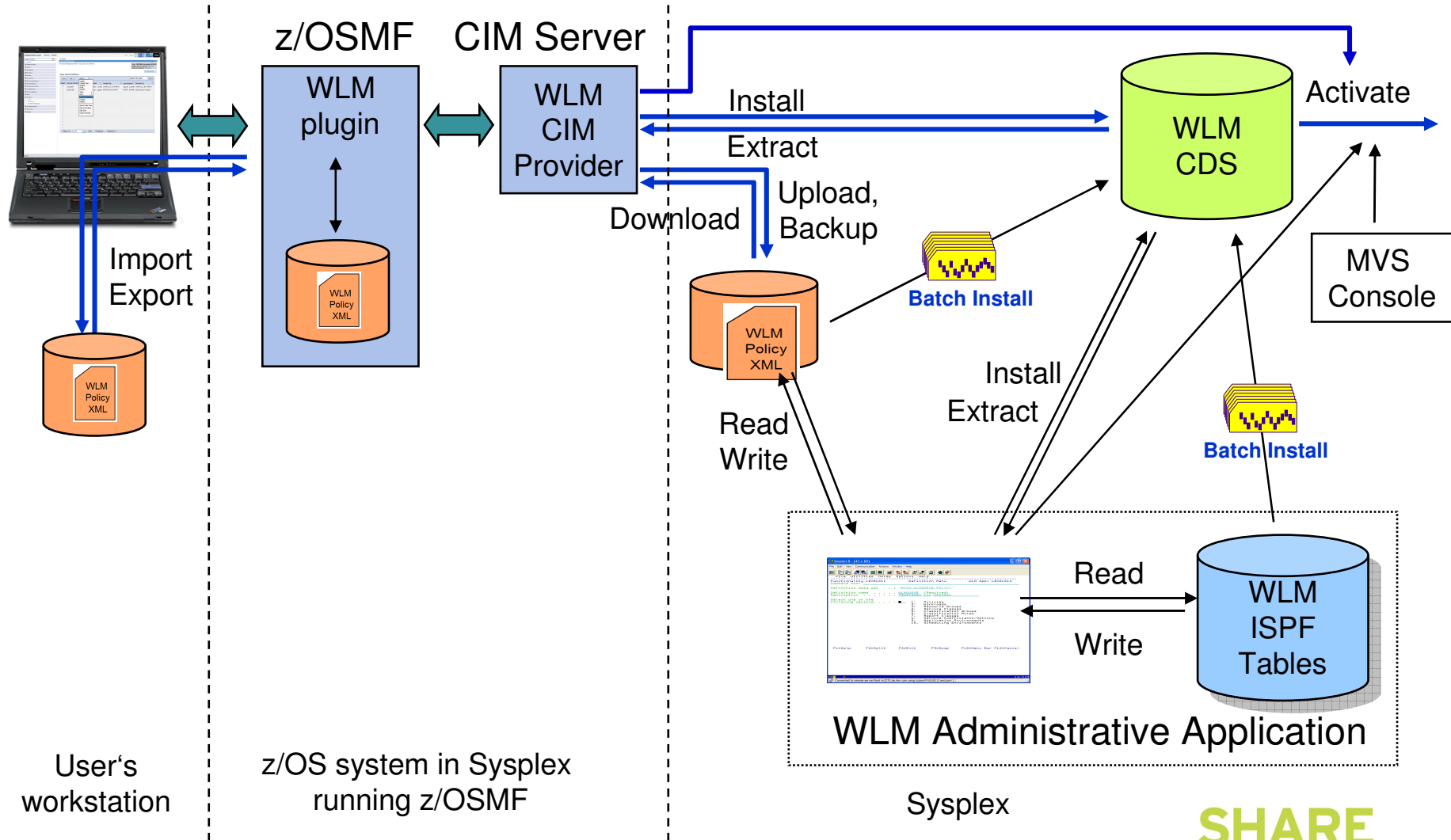
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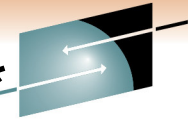
WLM Component Environment Overview



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Preview V1.13 – Fine-grained Authorization*

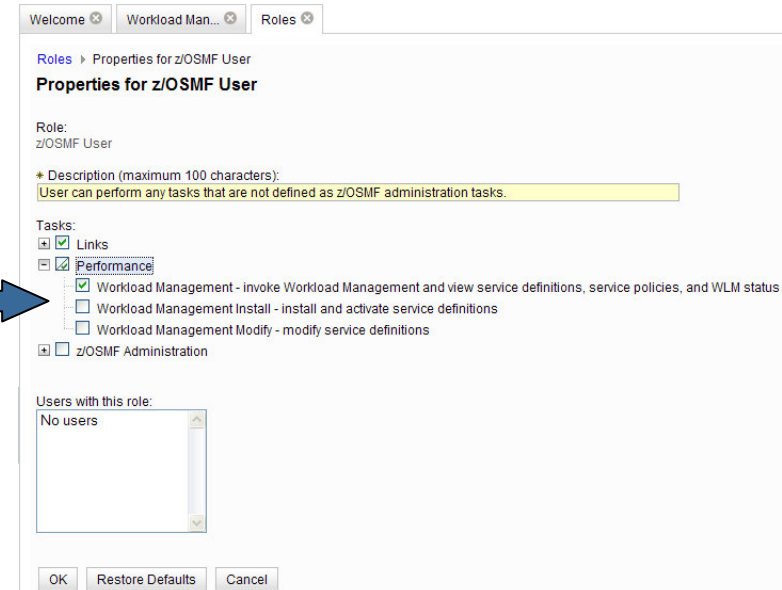


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- Separate authorization levels for
 - Viewing of service definitions, service policies, and WLM status
 - Installation and activation of service policies
 - Modification of service definitions

- In repository authorization mode the WLM authorization of roles is controlled by three tasks on the Roles panel:

- Workload Management
- Workload Management Install
- Workload Management Modify



- In SAF authorization mode the WLM authorization of roles is controlled via the SAF resource names:

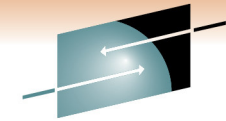
- ZOSMF.WORKLOAD_MANAGEMENT.WORKLOAD_MANAGEMENT.VIEW
- ZOSMF.WORKLOAD_MANAGEMENT.WORKLOAD_MANAGEMENT.INSTALL
- ZOSMF.WORKLOAD_MANAGEMENT.WORKLOAD_MANAGEMENT.MODIFY

- To enable a role to launch the Workload Management task it is not sufficient to provide authorization for 'installation' or 'modification'; in addition the role has to be authorized for 'viewing'.

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

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in Anaheim
2011

Preview V1.13 – Persisting of Settings*



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- Settings of a user are persisted between sessions
 - Sorting/filtering/configuration of (tree)-table columns
 - Recently used data set names during import/export of service definitions
 - Selections in Print Preview Filter dialog
 - Selections in Export to Local Workstation dialog

Import Service Definition from Host Data Set

To import a service definition from system BR87Z6MK, for the sequential host data set in which the service definition is in XML format.

* Host data set name:

- BWIR.WLMSVD.POLICY1.XML
- BWIR.WLMSVD.POLICY12.XML
- BWIR.WLMSVD.POLICY13.XML

* Name: _____

Description: _____

OK Cancel Help

Export Service Definition to Local Workstation

Export:

- Entire service definition as an XML file
- Entire service definition as separate CSV files
- Selected service definition elements as separate CSV files

- Service definition details
- Service policies
- Workloads
- Service classes
- Resource groups
- Report classes
- Classifications
- Classification groups
- Application environments
- Scheduling environments
- Resources

OK Cancel Help

Filter Formatted Service Definition

Display:

- All
- Selection

- Service parameters
- Resource groups
- Workloads
- Service policies
- Report classes
- Classification groups
- Classifications
- Application environments
- Resources
- Scheduling environments
- Notes
- Messages

Do you want to include the description and modification details for the service definition elements?

- Yes
- No

OK Cancel Help

Workload Management [Help](#)

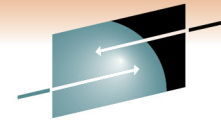
Overview Service Definitions View 20100608

Notes Switch To

Workloads

Name	Description	Messages	Last Modified (GMT)	Modified By
ASAHIWL	wlm asahi queue test		Mar 4, 2002 10:44:22 AM	ibmuser
SODA	Temporal Affinity tests HBB7705		Mar 4, 2002 11:35:18 AM	ibmuser
STTWL	wlm ctt queue test JBB7713		Mar 4, 2002 11:35:56 AM	ibmuser

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



S H A R E

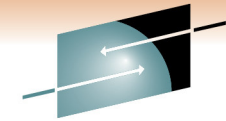
Technology • Connections • Results

z/OSMF Resource Monitoring

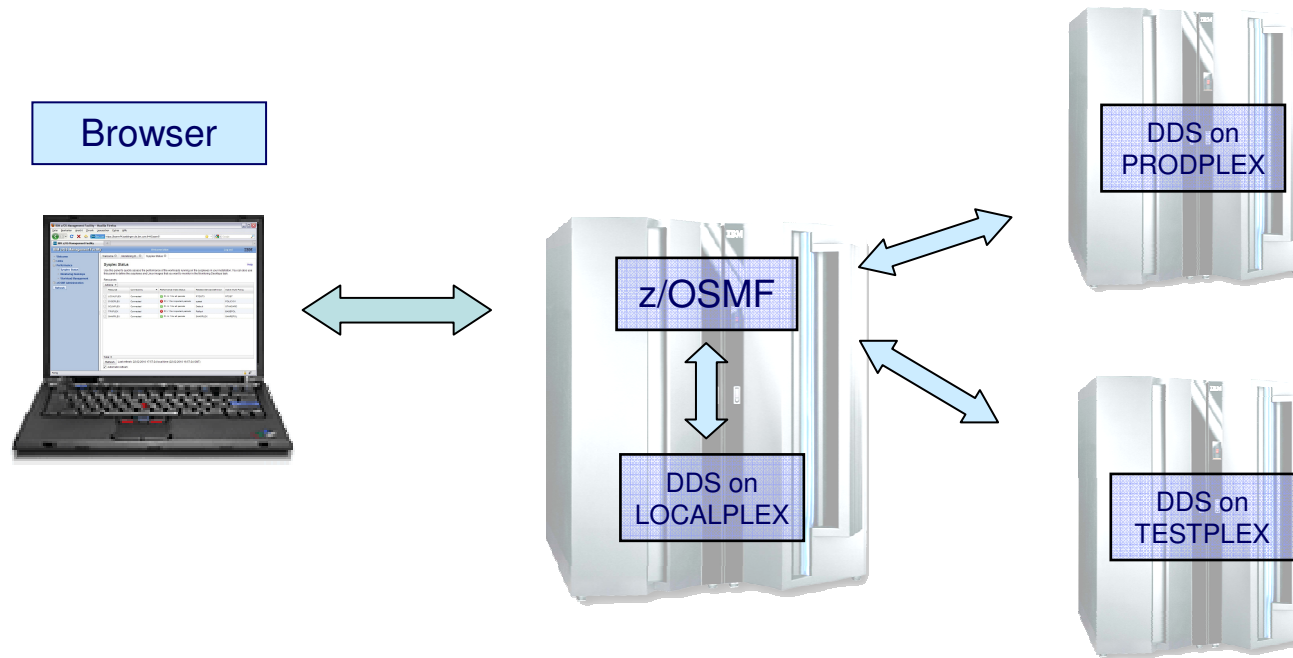


IBM z/OSMF Resource Monitoring

Infrastructure



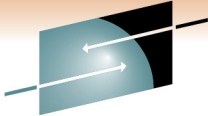
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Technology • Connections • Results



- Browser connects to z/OSMF
- z/OSMF Resource Monitoring can connect to all systems where the RMF Distributed Data Server (DDS) is running

IBM z/OSMF Management Facility

Resource Monitoring – Sysplex Status Task



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The screenshot shows the IBM z/OSMF Management Facility interface in a Mozilla Firefox browser. The page title is "Sysplex Status" and it includes a "Refresh" button and a "Help" link. A table lists resources with their connectivity and performance index status. A blue callout bubble points to the "Refresh" button with the text "Automatic refresh". Another blue callout bubble points to the table with the text "Enterprise-wide Health check".

Resource	Connectivity	Performance Index Status	Related Service Definition	Active WLM Policy
LOCALPLEX	Connected	PI <= 1 for all periods	RTDST3	RTDST
SYSDPLEX	Connected	PI > 1 for important periods	systest	POLICY01
SCLMPLEX	Connected	PI <= 1 for all periods	Default	STANDARD
TRXPLEX	Connected	PI > 1 for important periods	Ralfpol	BASEPOL
SHARPLEX	Connected	PI <= 1 for all periods	SHARPLEX	SHAREPOL

Resource Monitoring – Sysplex Definitions

Enterprise-wide Connections to RMF Distributed Data Server (DDS)



Welcome × Sysplex Status ×

Sysplex Status Help

Use this panel to quickly assess the performance of the workloads running on the sysplexes in your installation. You can also use this panel to define the sysplexes and Linux images that you want to monitor in the Monitoring Desktops task.

Resources

Actions ▾

Resource	Connectivity	Performance Index Status	Related Service Definition	Active WLM Policy
<input type="radio"/> LOCALPLEX	Connected	✓ PI <= 1 for all periods	SD2047XA	WLMPOL
<input type="radio"/> SCLMPLEX	Connected	✓ PI <= 1 for all periods	Default	STANDARD
<input type="radio"/> SYSDPLEX	Connected	✓ PI <= 1 for all periods	SD2047XA	WLMPOL

LOCALPLEX is preconfigured

One DDS connection per line

Resource Monitoring – Sysplex Definitions

Add a new Entry



Welcome [x] Sysplex Status [x]

Sysplex Status [Help](#)

Use this panel to quickly assess the performance of the workloads running on the sysplexes in your installation. You can also use this panel to define the sysplexes and Linux images that you want to monitor in the Monitoring Desktops task.

Resources

Actions ▾

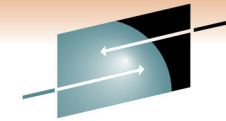
Resource	Connectivity	Performance Index Status	Related Service Definition	Active WLM Policy
<input type="radio"/> LOCALPLEX	Connected	✓ PI <= 1 for all periods	SD2047XA	WLMPOL
<input type="radio"/> SCLMPLEX	Connected	✓ PI <= 1 for all periods	Default	STANDARD
<input type="radio"/> SYSDPLEX	Connected	✓ PI <= 1 for all periods	SD2047XA	WLMPOL

LOCALPLEX is preconfigured

One DDS connection per line

Resource Monitoring – Sysplex Definitions

Add a new Entry



SHARE
Technology • Connections • Results

Welcome [X] Sysplex Status [X]

Sysplex Status ▸ Add Entry

Add Entry

* Resource name:

* Host name or IP address:

* Port:

* Operating system:

OK Cancel

z/OS,
zLinux or
xLinux

Resource Monitoring – Sysplex Definitions

Add a new Entry



Welcome [x] Sysplex Status [x]

Sysplex Status [Help](#)

Use this panel to quickly assess the performance of the workloads running on the sysplexes in your installation. You can also use this panel to define the sysplexes and Linux images that you want to monitor in the Monitoring Desktops task.

Resources

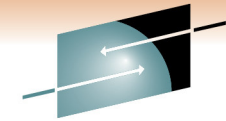
Actions ▾

Resource	Connectivity	Performance Index Status	Related Service Definition	Active WLM Policy
<input type="radio"/> LOCALPLEX	Connected	✓ PI <= 1 for all periods	SD2047XA	WLMPOL
<input type="radio"/> SCLMPLEX	Connected	⚠ PI > 1 for unimportant periods	Default	STANDARD
<input type="radio"/> SYSDPLEX	Connected	✓ PI <= 1 for all periods	SD2047XA	WLMPOL
<input checked="" type="radio"/> PRODPLEX	Connected	✓ PI <= 1 for all periods	SD2047XA	WLMPOL

New Sysplex is displayed instantly

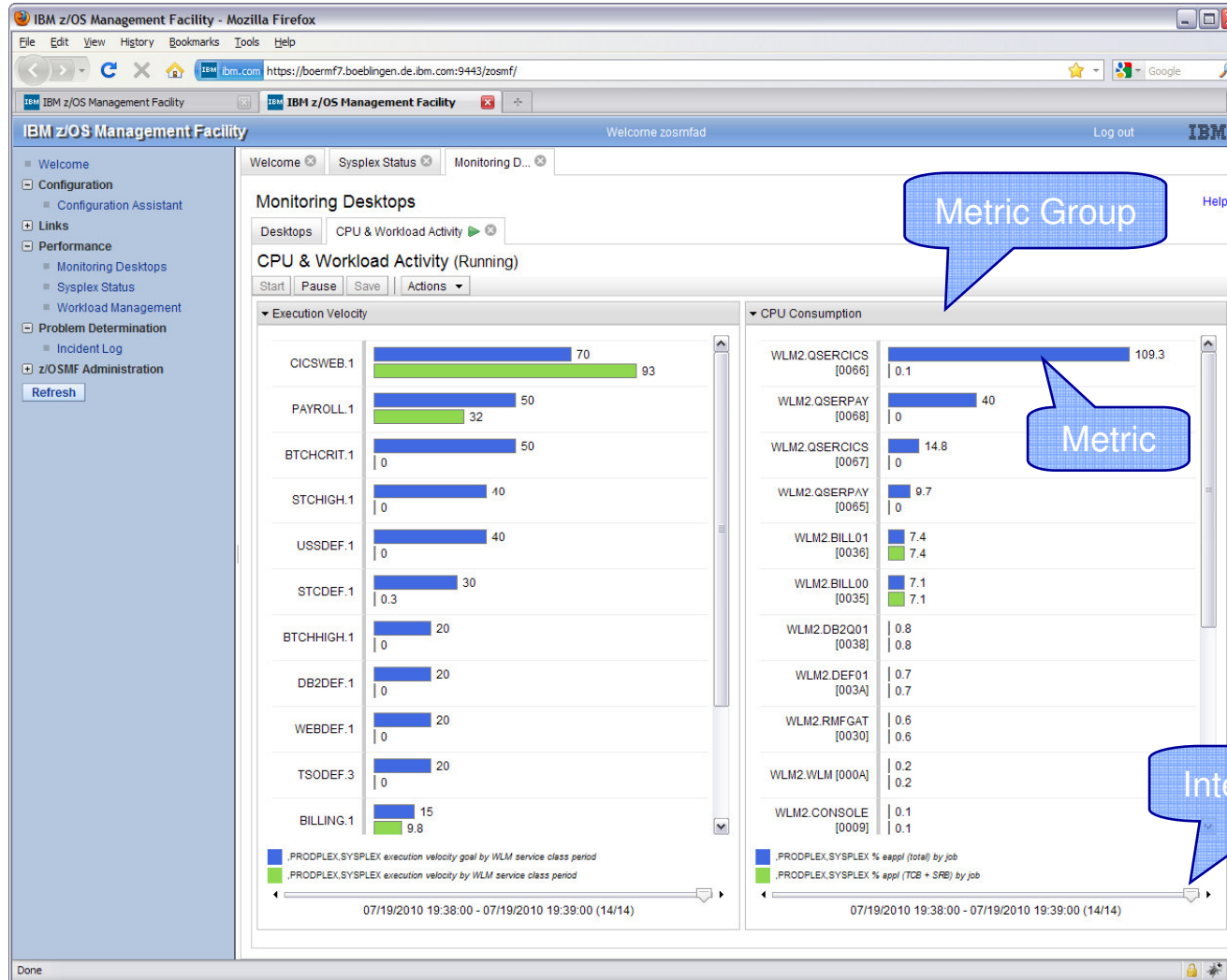
Resource Monitoring – Monitoring Desktops

At a Glance



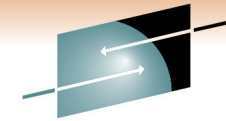
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Technology • Connections • Results



Resource Monitoring – Monitoring Desktops

Predefined Desktops

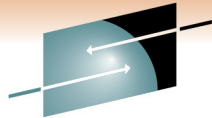


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Technology • Connections • Results

A screenshot of the IBM z/OS Management Facility web interface. The browser window title is "IBM z/OS Management Facility". The page header includes "Welcome bhbe" and "Log out" with the IBM logo. The left sidebar contains a navigation menu with categories: Welcome, Configuration (with sub-item Configuration Assistant), Links, Performance (with sub-items Monitoring Desktops, Sysplex Status, and Workload Management), Problem Determination (with sub-item Incident Log), and z/OSMF Administration (with sub-items Links, Roles, and Users). A "Refresh" button is located at the bottom of the sidebar. The main content area has a tabbed interface with "Welcome" and "Monitoring D...". The "Welcome" tab is active, displaying a "Welcome to IBM z/OS Management Facility" message. The text explains that z/OSMF allows management via a web browser, streamlining tasks and reducing expertise needs. It provides instructions on how to learn more and start managing systems. An "Information Center" section lists several links: "What's New" (summary of enhancements), "Using z/OSMF" (getting started guide), "Configuration" (guided interface for networking), "Links" (launch point for external resources), "Performance" (control point for workload management), "Problem Determination" (consolidated list of problems), and "z/OSMF Administration" (tasks for user and role management). An "About" link is visible in the top right of the main content area.

Resource Monitoring – Monitoring Desktops

Predefined Desktops



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

Welcome x Monitoring D... x

Monitoring Desktops [Help](#)

Desktops

Desktops

Actions ▾

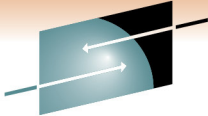
Name
<input type="radio"/> Common Storage Activity
<input type="radio"/> Coupling Facility Overview
<input type="radio"/> Execution Velocity
<input type="radio"/> General Activity
<input type="radio"/> Overall Image Activity
<input type="radio"/> Performance Index
<input type="radio"/> Response Time
<input type="radio"/> Storage Bhbe
<input type="radio"/> Using & Delays
<input type="radio"/> XCF Activity

Total: 10

[Refresh](#) Last refresh: Jul 27, 2010 12:02:19 PM local time (Jul 27, 2010 10:02:19 AM GMT)

Resource Monitoring – Monitoring Desktops

Predefined Desktops



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Technology • Connections • Results

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

Welcome x Monitoring D... x

Monitoring Desktops [Help](#)

Desktops

Desktops

Actions ▾

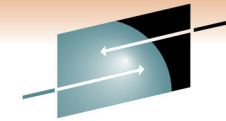
Name
<input checked="" type="radio"/> Common Storage Activity
<input type="radio"/> Coupling Facility Overview
<input type="radio"/> Execution Velocity
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<input type="radio"/> Performance Index
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<input type="radio"/> Using & Delays
<input type="radio"/> XCF Activity

Total: 10

[Refresh](#) Last refresh: Jul 27, 2010 12:02:19 PM local time (Jul 27, 2010 10:02:19 AM GMT)

Resource Monitoring – Monitoring Desktops

Predefined Desktops



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Technology • Connections • Results

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

Welcome x Monitoring D... x

Monitoring Desktops [Help](#)

Desktops

Desktops

Actions ▾

- Open
- Open in New Tab or Window
- Delete...
- New...

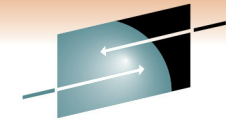
- General Activity
- Overall Image Activity
- Performance Index
- Response Time
- Storage Bhbe
- Using & Delays
- XCF Activity

Total: 10

[Refresh](#) Last refresh: Jul 27, 2010 12:02:19 PM local time (Jul 27, 2010 10:02:19 AM GMT)

Resource Monitoring – Monitoring Desktops

Predefined Desktops



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

Welcome Monitoring D... [Help](#)

Monitoring Desktops

Desktops: Common Storage Activity ▶

Common Storage Activity (Running)

Start Pause Save Actions

CSA & ECSA (Systems)

System	CSA Utilization	ECSA Utilization
SYSD	7	14
SYSF	6	14

Legend: Blue = .SYSDPLEX,SYSPLEX % CSA utilization by MVS image; Green = .SYSDPLEX,SYSPLEX % ECSA utilization by MVS image

07/27/2010 15:52:00 - 07/27/2010 15:53:00 (7/7)

SQA & ESQA (Systems)

System	SQA Utilization	ESQA Utilization
SYSD	17	28
SYSF	15	25

Legend: Blue = .SYSDPLEX,SYSPLEX % SQA utilization by MVS image; Green = .SYSDPLEX,SYSPLEX % ESQA utilization by MVS image

07/27/2010 15:52:00 - 07/27/2010 15:53:00 (7/7)

CSA (Jobs)

Job	CSA Utilization
SYSD.*MASTER* [0001]	2
SYSE.*MASTER* [0001]	2
SYSF.*MASTER* [0001]	2

Legend: Blue = .SYSDPLEX,SYSPLEX % CSA utilization by job

07/27/2010 15:52:00 - 07/27/2010 15:53:00 (7/7)

SQA (Jobs)

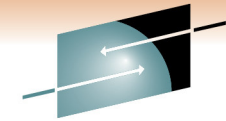
Job	SQA Utilization
SYSD.*MASTER* [0001]	4
SYSE.*MASTER* [0001]	4
SYSF.*MASTER* [0001]	4

Legend: Blue = .SYSDPLEX,SYSPLEX % SQA utilization by job

07/27/2010 15:52:00 - 07/27/2010 15:53:00 (7/7)

Resource Monitoring – Monitoring Desktops

Predefined Desktops



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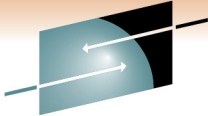
The screenshot displays the IBM z/OS Management Facility interface for monitoring desktops. The main window is titled "Monitoring Desktops" and shows a "Common Storage Activity (Running)" dashboard. The dashboard is divided into two main sections: "CSA & ECSA (Systems)" and "SQA & ESQA (Systems)". Each section contains bar charts showing utilization for logical partitions (SYSF) and MVS images. A pop-up window titled "Resource Attributes: ,SYSF,MVS_IMAGE" is overlaid on the charts, displaying the following attributes:

Attribute	Value
Name of logical partition:	SYSF
WLM Vary CPU management enabled:	YES
WLM LPAR Weight management enabled:	NO
AAP honor priority:	YES
IIP honor priority:	YES
MVS System Name:	SYSF
SMF ID:	SYSF
OS Type:	z/OS 1.12.0
OS Version:	SP7.1.2

The interface also includes a left-hand navigation menu with categories like Configuration, Performance, Problem Determination, and z/OSMF Administration. The top of the interface shows the user name "bhbe" and a "Log out" button.

Resource Monitoring – Monitoring Desktops

New Desktop



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Technology • Connections • Results

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

Welcome x Monitoring D... x

Monitoring Desktops [Help](#)

Desktops

Desktops

Actions ▾

- Open
- Open in New Tab or Window
- Delete...
- New...**

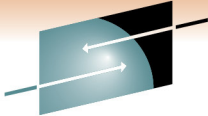
- General Activity
- Overall Image Activity
- Performance Index
- Response Time
- Storage Bhbe
- Using & Delays
- XCF Activity

Total: 10

[Refresh](#) Last refresh: Jul 27, 2010 12:02:19 PM local time (Jul 27, 2010 10:02:19 AM GMT)

Resource Monitoring – Monitoring Desktops

New Desktop

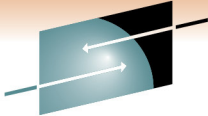


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The screenshot shows the IBM z/OS Management Facility interface. The top navigation bar includes the title "IBM z/OS Management Facility", the user "Welcome bhbe", and a "Log out" link. The left sidebar contains a menu with categories: Welcome, Configuration (with sub-item Configuration Assistant), Links, Performance (with sub-items Monitoring Desktops, Sysplex Status, and Workload Management), Problem Determination (with sub-item Incident Log), and z/OSMF Administration (with sub-items Links, Roles, and Users). A "Refresh" button is located at the bottom of the sidebar. The main content area has a breadcrumb trail: "Welcome" > "Monitoring D...". The page title is "Monitoring Desktops" with a "Help" link. Below the title is a tabbed interface with "Desktops" and "New Desktop" (active). The "New Desktop" tab shows a "New Desktop (Paused)" section with instructions: "To start monitoring the resources in your installation, add a metric to the desktop. To do so, select **Add Metric** from the *Actions* menu." Below the instructions are buttons for "Start", "Pause", "Save", and an "Actions" dropdown menu.

Resource Monitoring – Monitoring Desktops

New Desktop

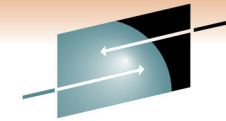


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The screenshot shows the IBM z/OS Management Facility interface. The top navigation bar includes the title "IBM z/OS Management Facility", a user greeting "Welcome bhbe", a "Log out" link, and the IBM logo. A left-hand navigation menu lists various categories: Welcome, Configuration (with Configuration Assistant), Links, Performance (with Monitoring Desktops, Sysplex Status, and Workload Management), Problem Determination (with Incident Log), and z/OSMF Administration (with Links, Roles, and Users). A "Refresh" button is located at the bottom of this menu. The main content area is titled "Monitoring Desktops" and includes a "Help" link. Below this, there are tabs for "Desktops" and "New Desktop". The "New Desktop" tab is active, showing a "New Desktop (Paused)" section. A text instruction reads: "To start monitoring the resources in your installation, add a metric to the desktop. To do so, select **Add Metric** from the *Actions* menu." Below the text are buttons for "Start", "Pause", "Save", and an "Actions" dropdown menu. The "Actions" menu is open, displaying a list of options: "Start Desktop", "Pause Desktop", "Save Desktop", "Rename Desktop...", "Modify Settings...", "Add Metric..." (highlighted in blue), "Modify Metric...", "Delete Metric or Group...", "Arrange Metrics or Groups...", and "Rename Metric Group...".

Resource Monitoring – Monitoring Desktops

New Desktop

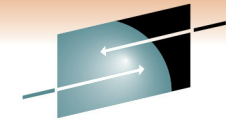


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The screenshot shows the IBM z/OS Management Facility web interface. The top navigation bar includes 'Welcome bhbe' and 'Log out'. The left sidebar contains a tree view with categories like 'Configuration', 'Performance', and 'z/OSMF Administration'. The main content area is titled 'Monitoring Desktops' and has a 'New Desktop' tab selected. Below the tab is an 'Add Metric' section with a dropdown menu for 'Add to metric group' and fields for 'Selected resource' (currently showing ',SYSDPLEX,SYSPLEX') and 'Selected metric'. A table below lists 'Available resources' with expandable rows for ',SYSDPLEX,SYSPLEX', ',LOCALPLEX,SYSPLEX', ',SCLPLEX,SYSPLEX', and ',[?],SYSPLEX'. The interface also includes a 'Refresh' button in the sidebar and a 'Help' link in the top right of the main content area.

Resource Monitoring – Monitoring Desktops

New Desktop

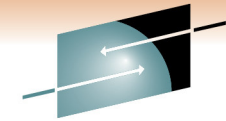


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The screenshot displays the IBM z/OS Management Facility web interface. The top navigation bar includes the title 'IBM z/OS Management Facility', a user welcome message 'Welcome bhbe', a 'Log out' link, and the IBM logo. A left-hand navigation menu lists various system management categories such as Configuration, Performance, and Problem Determination. The main content area is titled 'Monitoring Desktops' and shows a 'New Desktop' configuration window. Within this window, the 'Add Metric' section is active, providing instructions to select a metric group, resource, and metric. The 'Add to metric group' dropdown is set to 'Select or type a metric group.'. The 'Selected resource' is 'SYSF,*STORAGE' and the 'Selected metric' is 'Make selection on Metric tab'. Below these fields, a tree view of 'Available resources' is shown, with 'SYSF,*STORAGE' selected. The tree view includes nodes for SYSDPLEX, SYSF (with sub-nodes for MVS_IMAGE, I/O_SUBSYSTEM, PROCESSOR, STORAGE, ENQUEUE, OPERATOR, and SW_SUBSYSTEMS), SYSE, and SCLPLEX.

Resource Monitoring – Monitoring Desktops

New Desktop

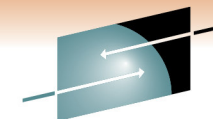


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Technology • Connections • Results

The screenshot shows the IBM z/OS Management Facility web interface. The top navigation bar includes the title 'IBM z/OS Management Facility', a user welcome message 'Welcome bhbe', a 'Log out' link, and the IBM logo. A left-hand navigation menu lists various system management categories such as 'Configuration', 'Performance', and 'z/OSMF Administration'. The main content area is titled 'Monitoring Desktops' and contains a 'New Desktop' tab. Below this, there is an 'Add Metric' section with instructions: 'Select or type the name of the metric group, the container for the metric. Then, select the resource and metric to be monitored.' The configuration shows: 'Add to metric group:' set to a dropdown menu with the text 'Select or type a metric group.'; 'Selected resource:' set to 'SYSF,*STORAGE'; and 'Selected metric:' set to '# frames active by job'. Below these fields are tabs for 'Resource', 'Metric', 'Filter', and 'Work Scope'. A 'Quick filter' input field is present. A list of 'Available metrics' is shown, including categories like 'single valued', 'by enclave', and 'by job', with specific metrics like '% delay by job' and '# frames active by job' listed under the 'by job' category.

Resource Monitoring – Monitoring Desktops

New Desktop



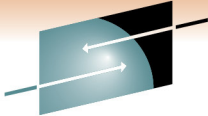
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The screenshot shows the IBM z/OS Management Facility interface. The main window is titled "Monitoring Desktops" and has a "New Desktop" tab selected. The selected metric is "# frames active by job". There are tabs for "Resource", "Metric", "Filter", and "Work Scope". The "Filter Pattern" section contains a list of available resource names: *MASTER*, ALLOCAS, ANTAS000, ANTMAIN, APPC, ASCH, ASCHINT, AUXMON, AXR, AXR04, and RAGE. A "Copy >>" button is next to the list. The "Resource name filter pattern" field contains the text "ANT* | DB2* | CONSOLE | *MASTER*". The "Sorting" section has a "Sort by:" dropdown set to "Value descending". The "Filters" section has "Lower threshold:" set to 1000 and "Upper threshold:" set to an empty field. The "Maximum number of resources to display:" is set to 20, and the "Highest values" dropdown is selected. There are "OK" and "Cancel" buttons at the bottom.

Resource Monitoring – Monitoring Desktops

New Desktop

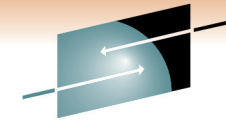


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The screenshot shows the IBM z/OS Management Facility interface. The main window is titled "Monitoring Desktops" and contains a "New Desktop" dialog box. The dialog box has tabs for "Desktops", "New Desktop", and "Help". The "New Desktop" tab is active, showing a "Selected metric" of "# frames active by job". Below this, there are four tabs: "Resource", "Metric", "Filter", and "Work Scope". The "Filter" tab is selected, displaying a "Filter scope" dropdown menu with "WLM service class" selected, and a "* Filter for:" dropdown menu with "SYSSTC" selected. At the bottom of the dialog box are "OK" and "Cancel" buttons.

Resource Monitoring – Monitoring Desktops

New Desktop



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

- Welcome
- Configuration
 - Configuration Assistant
- Links
- Performance
 - Monitoring Desktops
 - Sysplex Status
 - Workload Management
- Problem Determination
 - Incident Log
- z/OSMF Administration
 - Links
 - Roles
 - Users

[Refresh](#)

Welcome Monitoring D...

Monitoring Desktops [Help](#)

Desktops New Desktop

New Desktop (Running)

[Start](#) [Pause](#) [Save](#) [Actions](#)

▼ # frames active by job

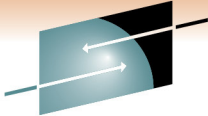
OMVS [000F]	103000
RMFGAT [003C]	45076
RMF [001F]	26963
SMSVSAM [0009]	24677
MVSNFSCS [0027]	11531
GPMSERVE [006B]	10545
GRS [0007]	10352
DFSZFS [001B]	10004

■ SYSF.*,STORAGE # frames active by job

07/27/2010 17:36:00 - 07/27/2010 17:37:00 (1/1)

Resource Monitoring – Monitoring Desktops

New Desktop



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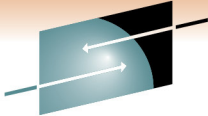
The screenshot shows the IBM z/OS Management Facility interface. The main window is titled "Monitoring Desktops" and displays a bar chart of active frames by job. A "Save Desktop As" dialog box is open, allowing the user to save the current desktop configuration with the name "Storage Soaker".

Job Name	Active Frames
OMVS [000F]	103000
RMFGAT [003C]	45076
RMF [001F]	26963
SMSVSAM [0009]	24677
MVSNFSCS [0027]	11531
GPMSERVE [006B]	10545
GRS [0007]	10352
DFSZFS [001B]	10004

Save Desktop As
* Desktop name
Storage Soaker
OK Cancel Help

Resource Monitoring – Monitoring Desktops

New Desktop



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

■ Welcome
[-] Configuration
 ■ Configuration Assistant
[-] Links
[-] Performance
 ■ Monitoring Desktops
 ■ Sysplex Status
 ■ Workload Management
[-] Problem Determination
 ■ Incident Log
[-] z/OSMF Administration
 ■ Links
 ■ Roles
 ■ Users
[Refresh](#)

Welcome x Monitoring D... x

Monitoring Desktops [Help](#)

Desktops [Storage Soaker](#) ▶ x

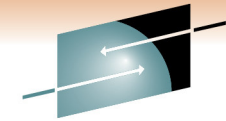
Desktops

Actions ▼

Name
<input type="radio"/> Common Storage Activity
<input type="radio"/> Coupling Facility Overview
<input type="radio"/> Execution Velocity
<input type="radio"/> General Activity
<input type="radio"/> Overall Image Activity
<input type="radio"/> Performance Index
<input type="radio"/> Response Time
<input checked="" type="radio"/> Storage Soaker
<input type="radio"/> Using & Delays
<input type="radio"/> XCF Activity

Total: 10
[Refresh](#) Last refresh: Jul 27, 2010 5:49:35 PM local time (Jul 27, 2010 3:49:35 PM GMT)

Resource Monitoring – Monitoring Desktops



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z/OS and Linux

The screenshot displays the IBM z/OS Management Facility interface for monitoring desktops. The main content area is titled "Monitoring Desktops" and shows a "z/OS & Linux (Running)" view. It features two side-by-side bar charts: "TCB+SRB by Job" and "CPU by Process".

TCB+SRB by Job

Job Name	Value
SYSD.BMAI6 [00AF]	30.9
SYSD.GRS [0007]	3.3
SYSD.BMAI [00AB]	2.9
SYSD.RMFGAT [003D]	1.8
SYSF.RMFGAT [003C]	1.6
SYSE.RMFGAT [0025]	1.5
SYSD.XCFAS [0006]	1.4
SYSE.XCFAS [0006]	1.3

CPU by Process

Process Name	Value
java.5010	171.42
sshd.1058	114.96
nscd.1313	56
kcawd.5358	16.01
ntpd.1115	8.05
klzagent.1863	7.23
slpd.968	6.58
rcd.17815	5.32
ksoftirqd/0.3	4.21
kjournald.303	3.47
gpmddsr.19171	3.41

The interface includes a left-hand navigation menu with categories like Configuration, Performance, and Problem Determination. The top of the window shows the user is logged in as "bhbe" and provides a "Log out" option. The bottom of the charts shows a time range of 07/27/2010 11:48:00 - 07/27/2010 11:49:00 (1/1) for the TCB+SRB chart and 07/27/2010 11:51:00 - 07/27/2010 11:52:00 (1/1) for the CPU chart.

Preview V1.13 – z/OSMF Ensemble Performance Monitoring*

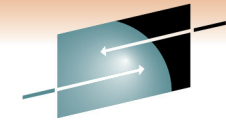


- Started Task: SYS1.PROCLIB(GPM4CIM)
- Runs in USS Environment via BPXBATCH
- Multiple instances can run in parallel: one STC per platform
 - S GPM4CIM.GPM4A
 - S GPM4CIM.GPM4X
 - S GPM4CIM.GPM4Z

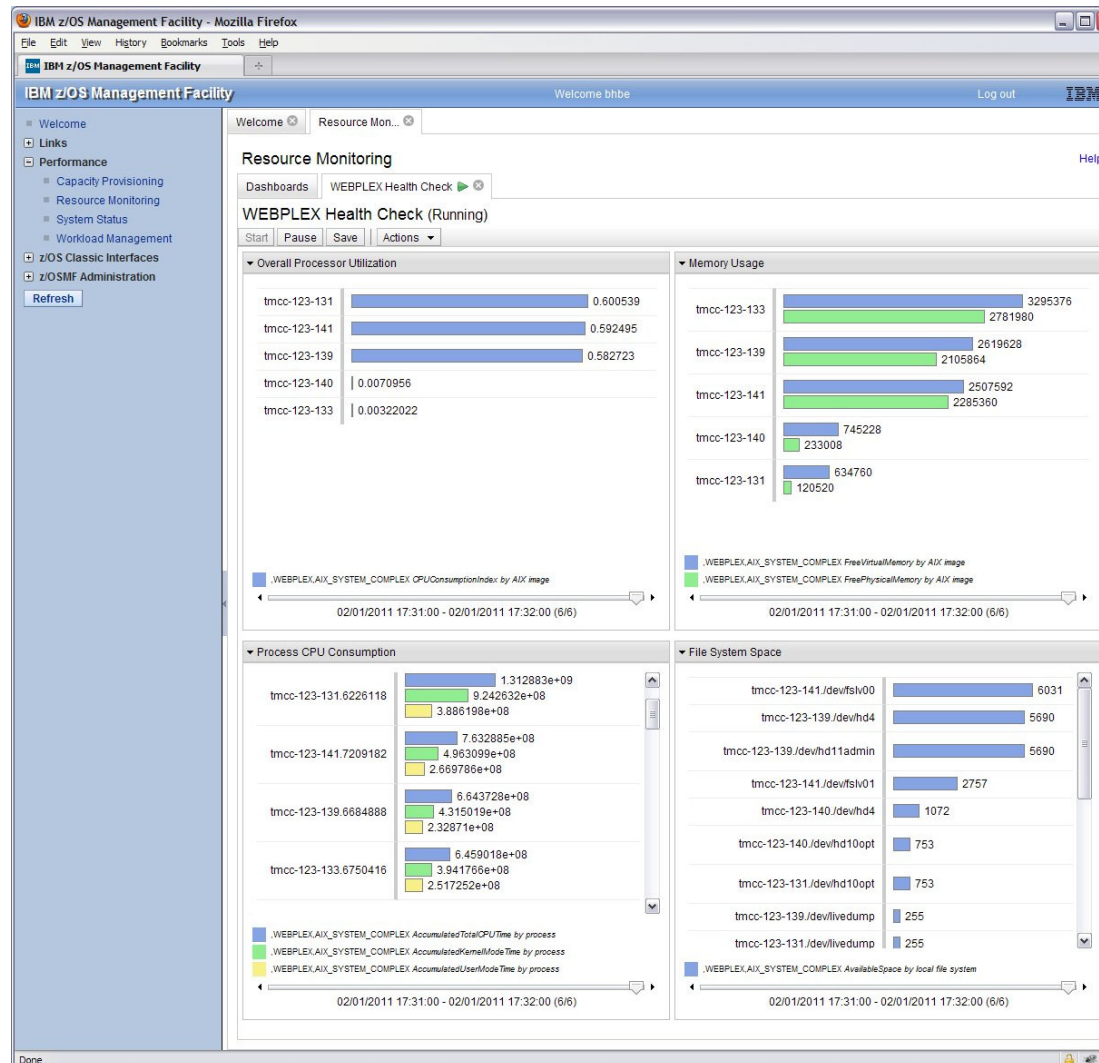
```
//GPM4CIM PROC OS=A
//STEP1 EXEC PGM=BPXBATCH,TIME=NOLIMIT,REGION=0M,
// PARM='PGM /usr/lpp/gpm/bin/gpm4cim cfg=/etc/gpm/gpm4&OS..cfg'
//STDENV DD PATH='/etc/gpm/gpm4cim.env'
//STDOUT DD PATH='/var/gpm/logs/gpm4cim&OS..out',
// PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
// PATHMODE=(SIRUSR,SIWUSR,SIRGRP)
//STDERR DD PATH='/var/gpm/logs/gpm4cim&OS..trc',
// PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
// PATHMODE=(SIRUSR,SIWUSR,SIRGRP)
//SYSPRINT DD SYSOUT=*
//SYSOUT DD SYSOUT=*
// PEND
```

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

Preview V1.13 – z/OSMF Ensemble Performance Monitoring*



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Health Check:
✓ Processor
✓ Memory
✓ Filesystem

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