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The new and improved z/OSMF 2.1….

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SHARE in Boston

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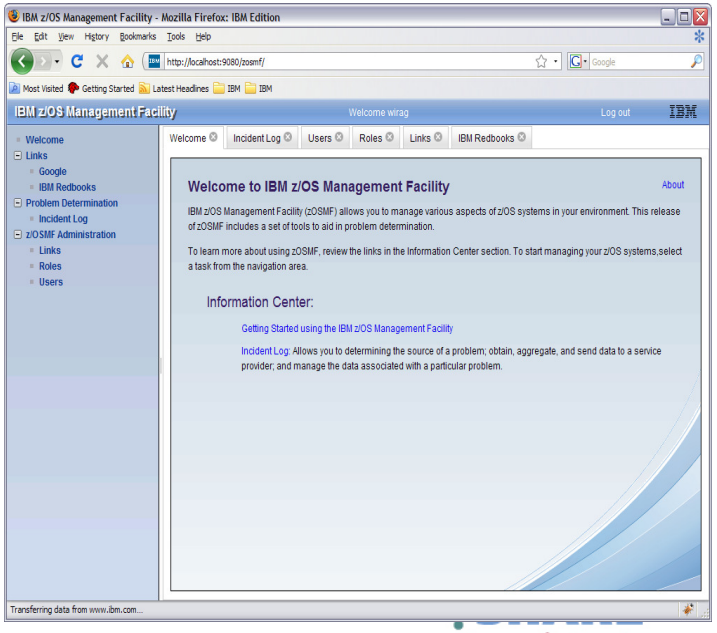
Agenda

- What is z/OSMF?
- How does z/OSMF fit in my environment?
- What's new in z/OSMF 2.1
  - z/OSMF package
  - z/OSMF workflow
- z/OSMF Functions and benefits?
  - Configuration Assistant for the z/OS Communications Server (z/OSMF 1.11)
  - Capacity Provisioning(z/OSMF V1.13)
  - Resource Monitoring (z/OSMF V1.12)
  - WLM Policy Editor (z/OSMF V1.12)
  - Incident Log (z/OSMF 1.11)
  - Software management(z/OSMF V1.13)
  - ISPF – classic (z/OSMF V1.13)
  - Programmatic interfaces (z/OSMF 1.13)
- Summary

What is z/OSMF?

- z/OSMF is a new product for z/OS customers and provides a modern browser based interface to managing the z/OS system.
- z/OSMF helps system programmers to more easily manage and administer a mainframe system by simplifying day to day operations and administration of a z/OS system.
- IBM z/OS Management facility (z/OSMF) delivers on IBM's strategy for mainframe simplification and modernization
- z/OSMF 1.11 was the first release, delivered with z/OS 1.11
- z/OSMF has a zero price for z/OS customers
- z/OSMF has it's own product number
  - Product ID for z/OSMF 2.1 is **5610-A01**
    - z/OSMF 1.13 PID is 5655-S28
  - Service & Subscription ID is 5655-S29
- Both PIDs must be ordered
- It can be ordered in a serverpac with z/OS
  - Or as its own product serverpac
    - Can also be ordered as a separate CBPDO



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Why z/OSMF?

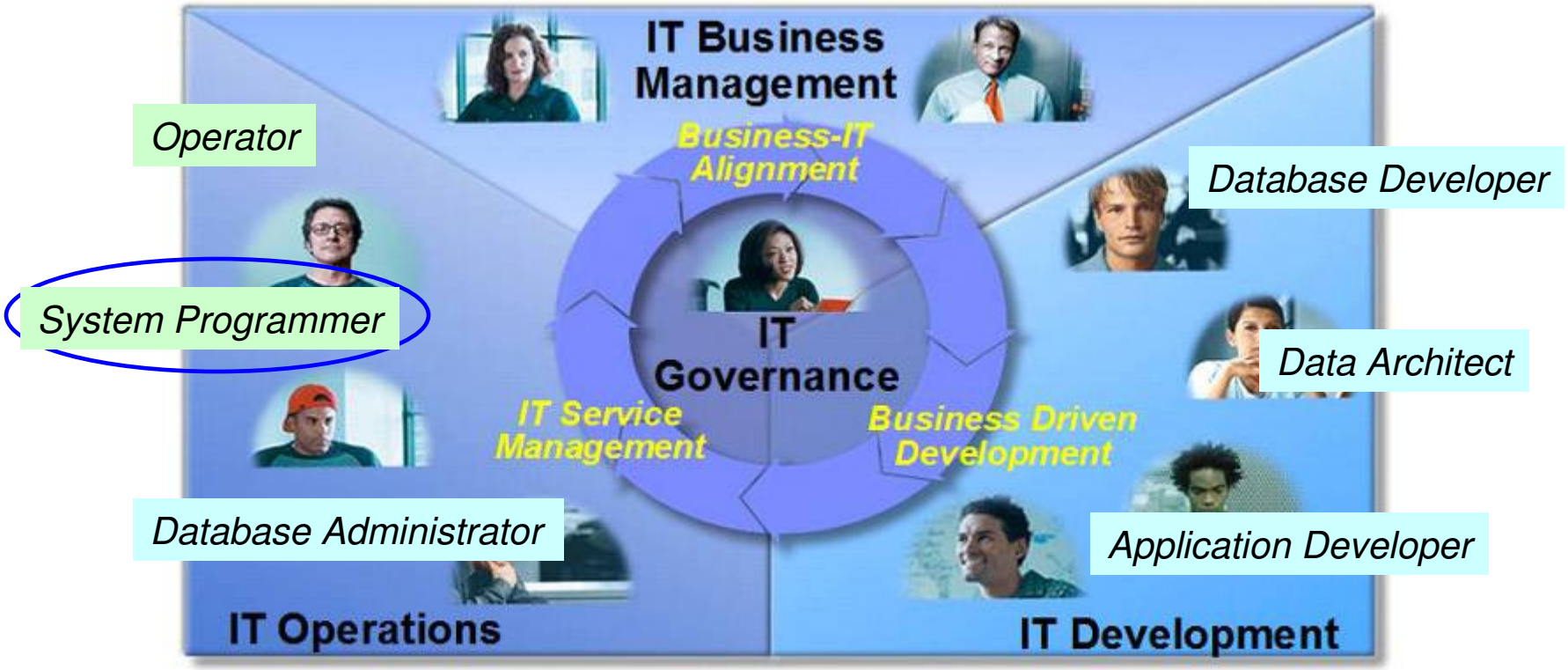
- z/OSMF is more than just a graphical user interface; it is intelligent, addressing the needs of a diversified skilled workforce and maximizing their productivity.
- z/OSMF improves productivity, reduces errors and simplifies tasks
- z/OSMF makes System Programmers who are *new* to the mainframe productive more quickly by:
  - Providing a modern browser-based user interface that is more familiar to those new to the platform
  - Reducing the learning curve with embeded active user assistance in the UI (e.g., wizards that guide users through tasks, online help)

- z/OSMF helps *experienced* System Programmers become more productive by:
  - Making functions easier and less error prone
  - Reduce time to perform some tasks
- z/OS Management Facility is optional for those who prefer traditional interfaces

Where does z/OSMF fit in your enterprise?

✓ Need for simplification of tasks

✓Modernization and integration of tools



✓ Within each domain to enhance productivity

✓Across domains to enhance collaboration

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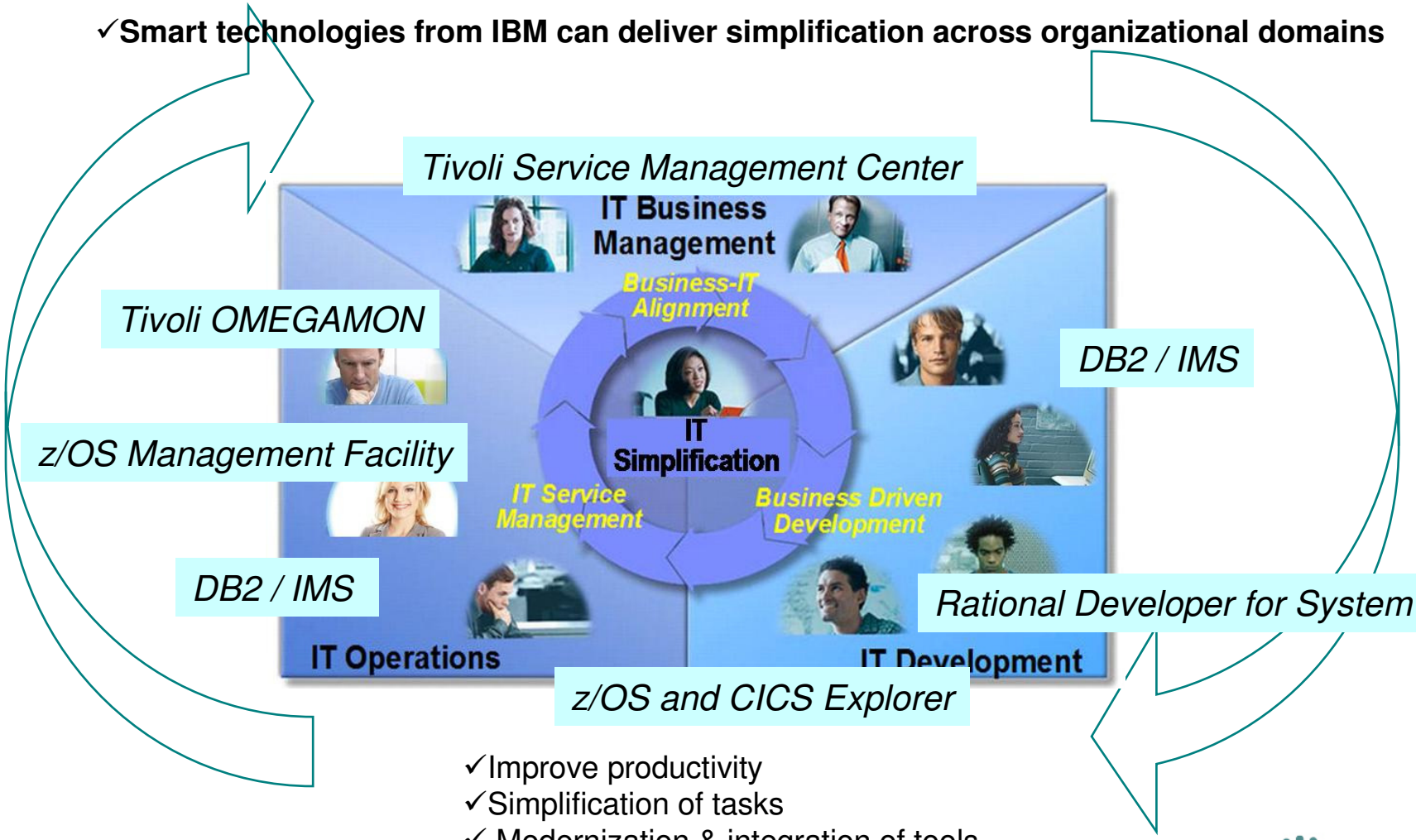
Where does z/OSMF fit in your enterprise?

✓**Smart technologies from IBM can deliver simplification across organizational domains**



✓Improve productivity
✓Simplification of tasks
✓ Modernization & integration of tools
✓Enhance collaboration

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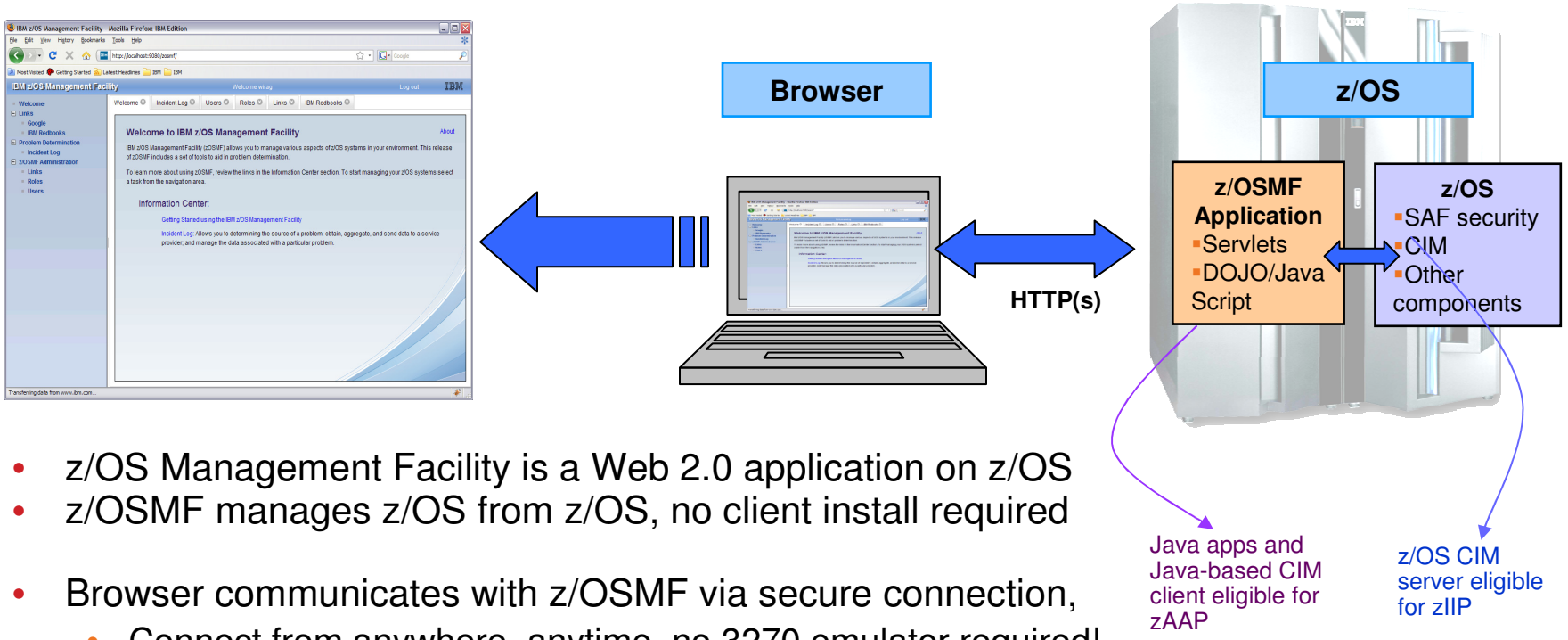
How does z/OSMF fit in the z/OS environment?



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

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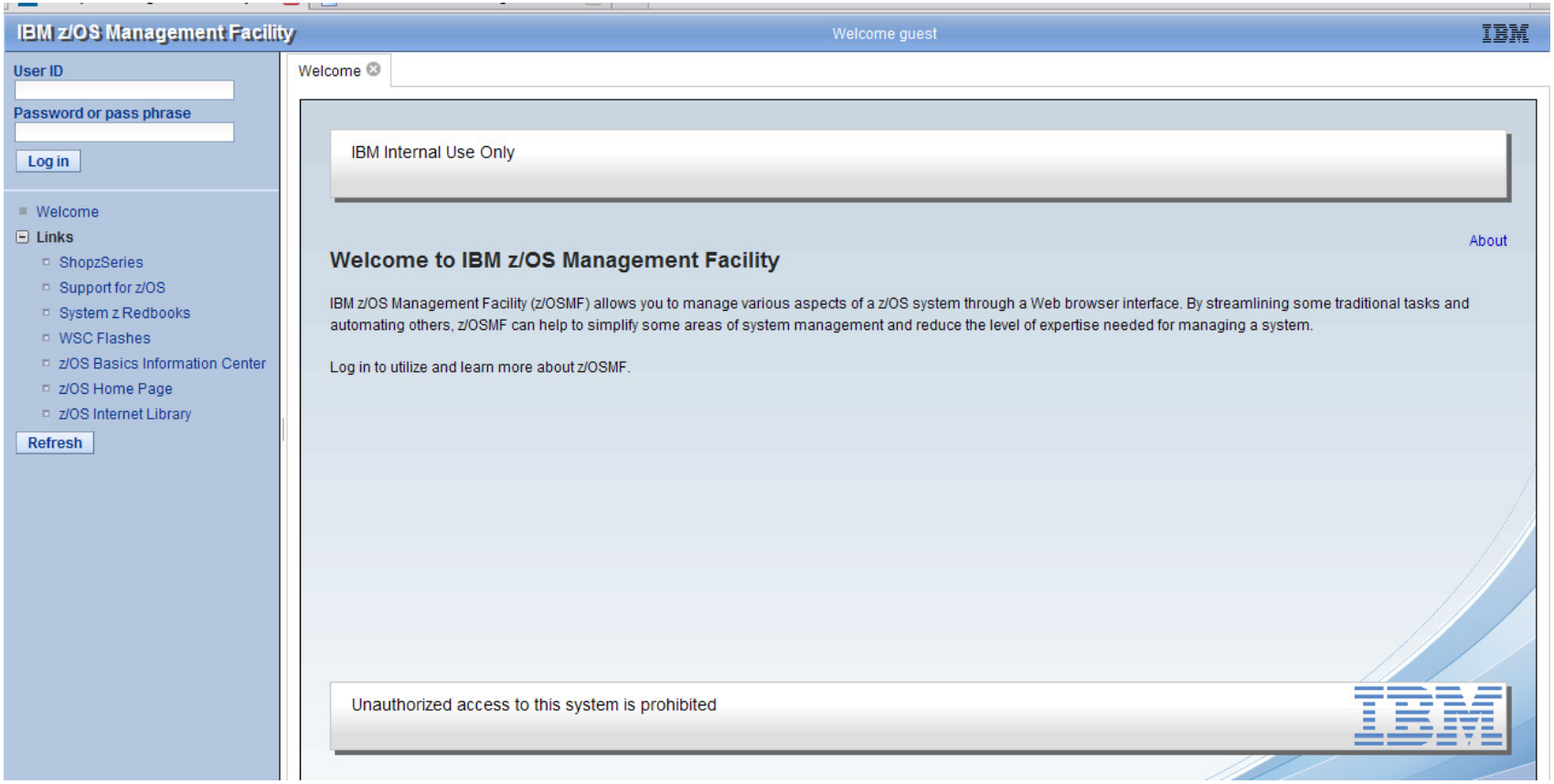
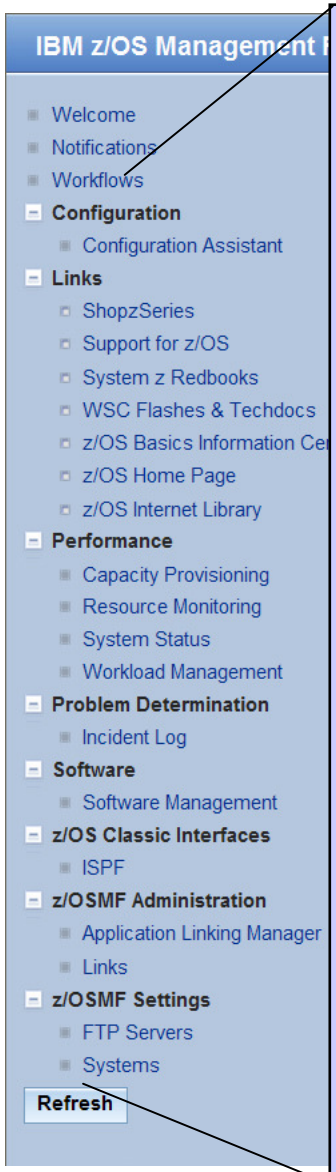
z/OSMF Welcome page



- Secure connection from browser to z/OSMF host
- To log in you will need a z/OS userID that has been defined and enabled to for z/OSMF (and the WebSphere® runtime environment)
  - Guidance is provided.

z/OSMF 2.1



- **Notifications and Workflow *(R2.1)**
- **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
  - **Capacity Provisioning** (updated)manage connections to CPMs, view reports for domain status, active configuration and active policy.
  - **Resource Monitoring, System Status** - provide integrated performance monitoring of customer's enterprise
  - **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
- **Problem Determination** category
  - **Incident Log :** provide a consolidated list of SVC Dump related problems, along with details and diagnostic data captured with each incident; facilitate sending the data for further diagnostics.
- **Software** category (updated)
  - **Management:** deployment of installed software simpler and safer, manage service levels and product levels
- **z/OS classic Interface** category
- **ISPF Task** integrate existing ISPF into z/OSMF to enable tasks from single interface and ability to launch to ISPF functions directly
- **z/OSMF Administration** category
  - z/OSMF authorization services for administrator:- dynamically add links to non-z/OSMF resources; application linking manager(R13)
- **z/OSMF Settings** category (New!)
  - Manage FTP destinations and systems

z/OSMF V2.1*

- z/OSMF is planned to be rebased on the WebSphere Application Server for z/OS V8.5 Liberty profile
  - This is expected to provide significant reductions in the resource requirements for z/OSMF
    - The WASOEM FMID is no longer required and the requirement for separate configuration of the runtime is eliminated.
    - Result is reduced footprint size, reduced memory requirement and reduced CPU requirement
  - z/OSMF setup is simplified
    - Reduced steps to configure z/OSMF
  - Applying service is easier
  - Faster startup of application

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z/OSMF V2.1 Workflows*

- A new z/OSMF Workflow Application is planned.
- This application is designed to allow exploiters to provide configuration assistance for functional setup tasks to simplify z/OS configuration.
- Workflows will provide a guided flow through steps to accomplish a task
  - XML metadata file contains steps and details
  - Steps may be manual or invoke wizards
    - Wizards to update and submit jobs, execute shell scripts and REXX execs
  - Steps may define dependency on other steps
  - Steps go through various stages until complete
    - May be skipped or overridden
  - History maintained of all activities in the workflow task
- This application will route tasks among a number of defined users or people assigned to specific roles, such as "system programmer" and "security administrator," to complete setup tasks.
- z/OSMF user can be notified of assigned steps via Notification task

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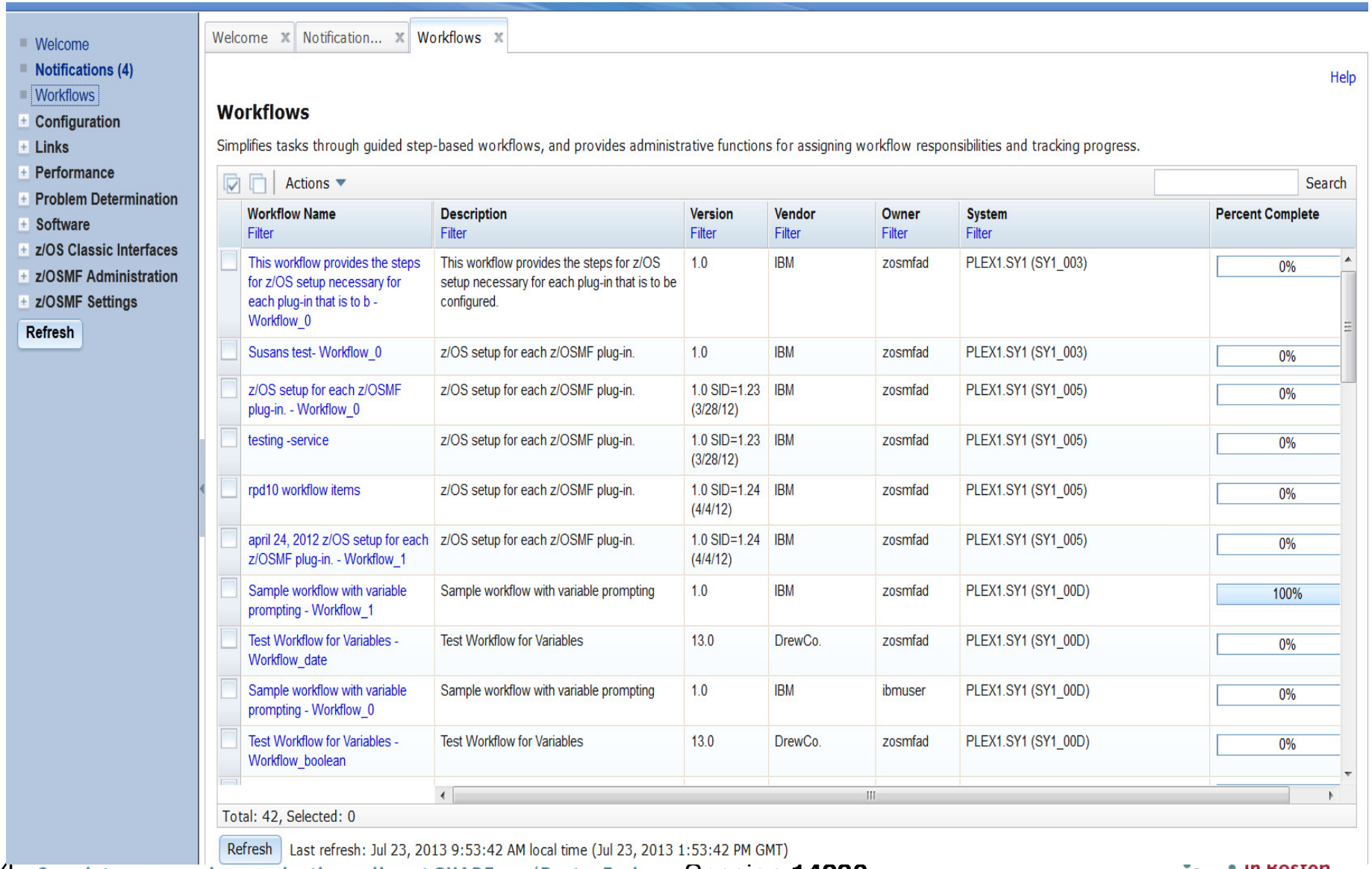
Workflows



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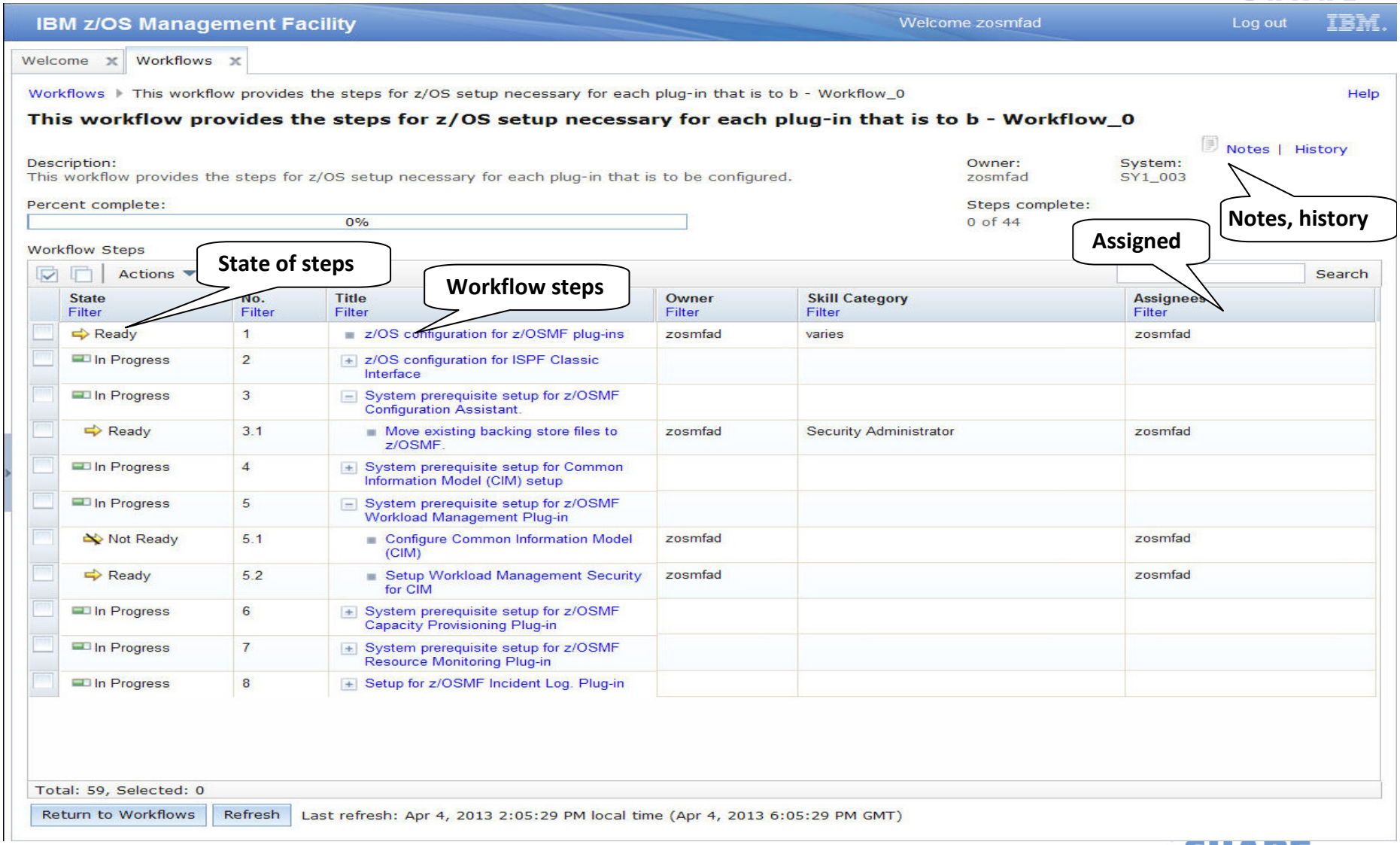
z/OSMF configuration - Workflow example



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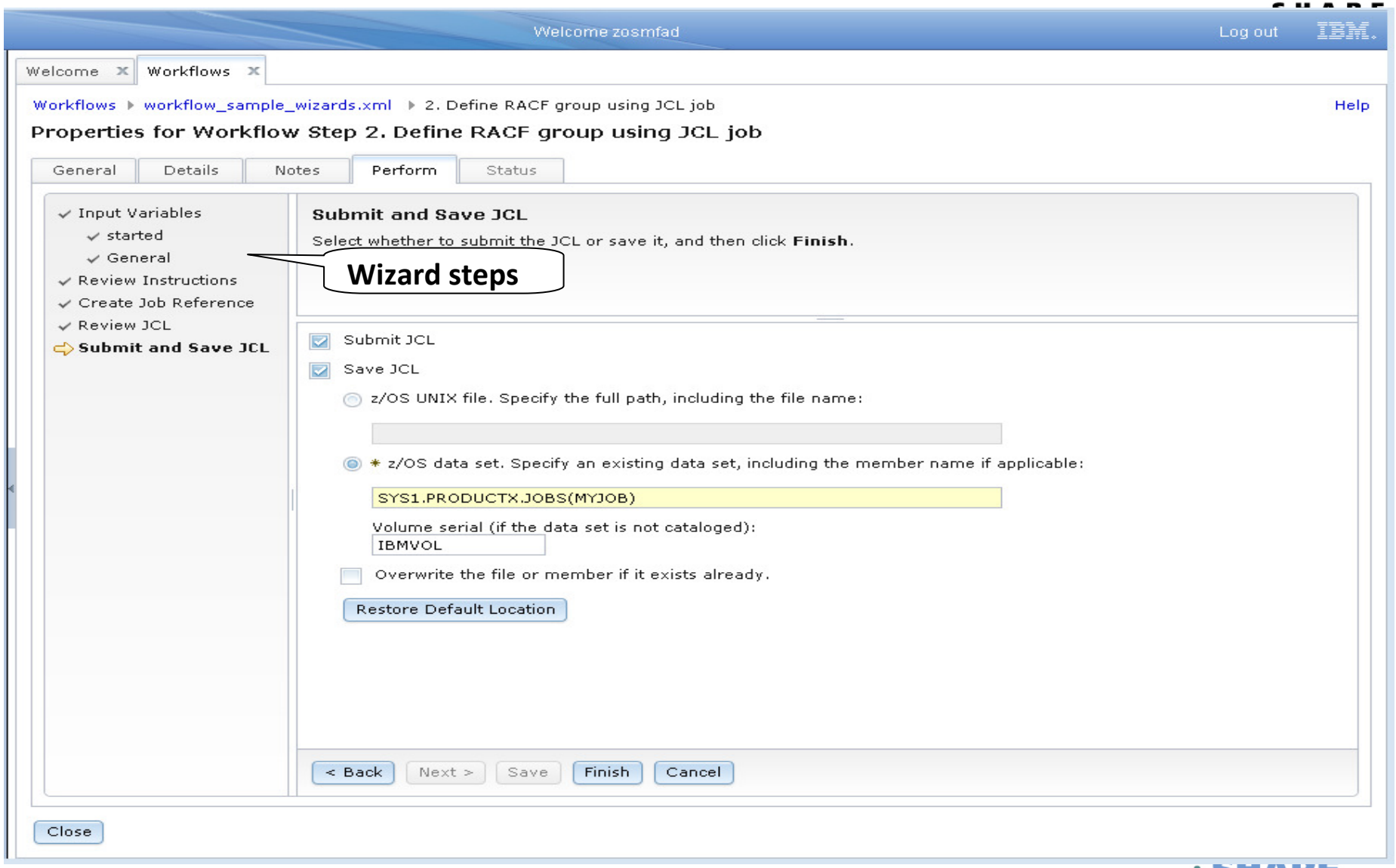
z/OSMF Workflow JCL wizard



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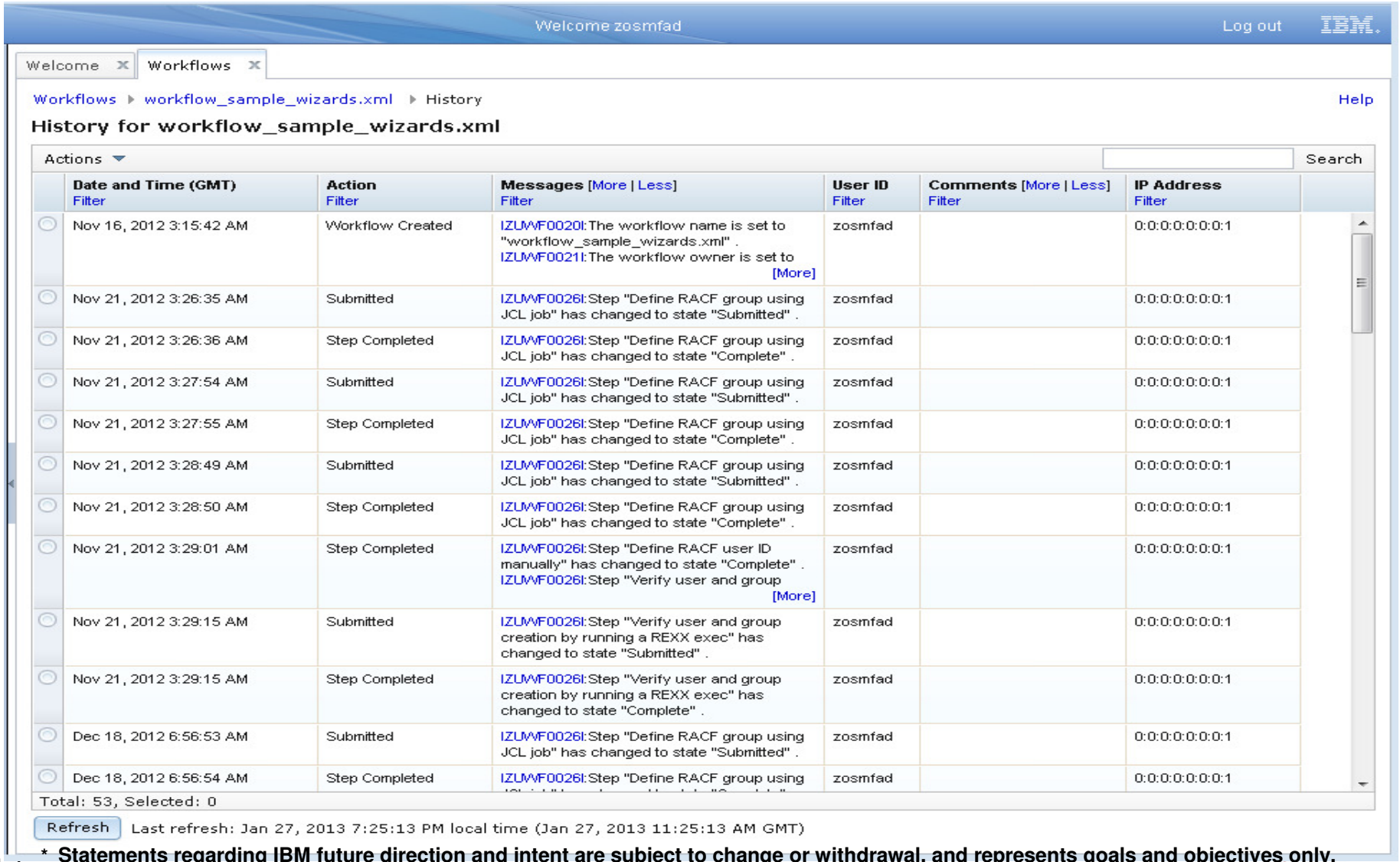
Workflow History



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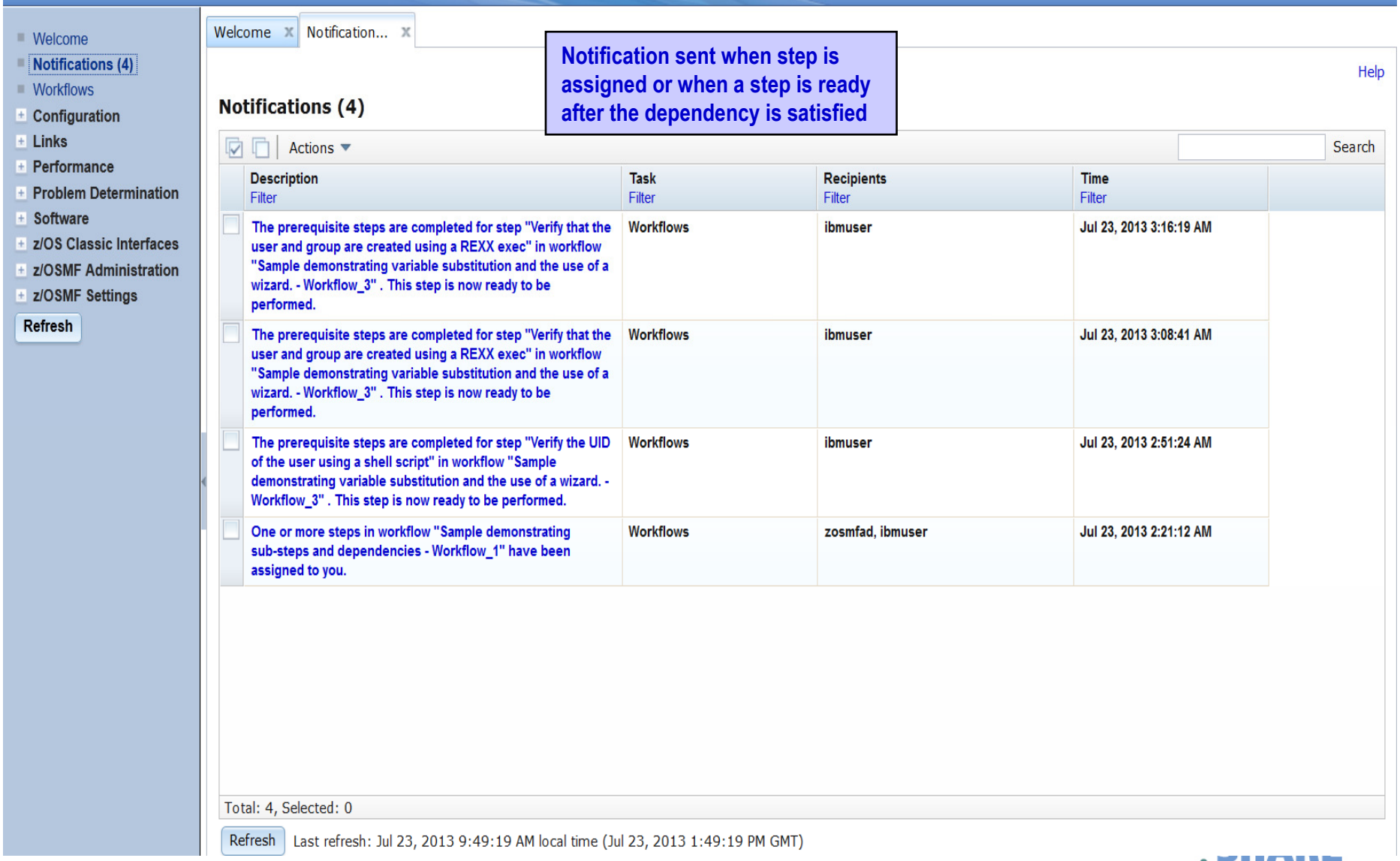
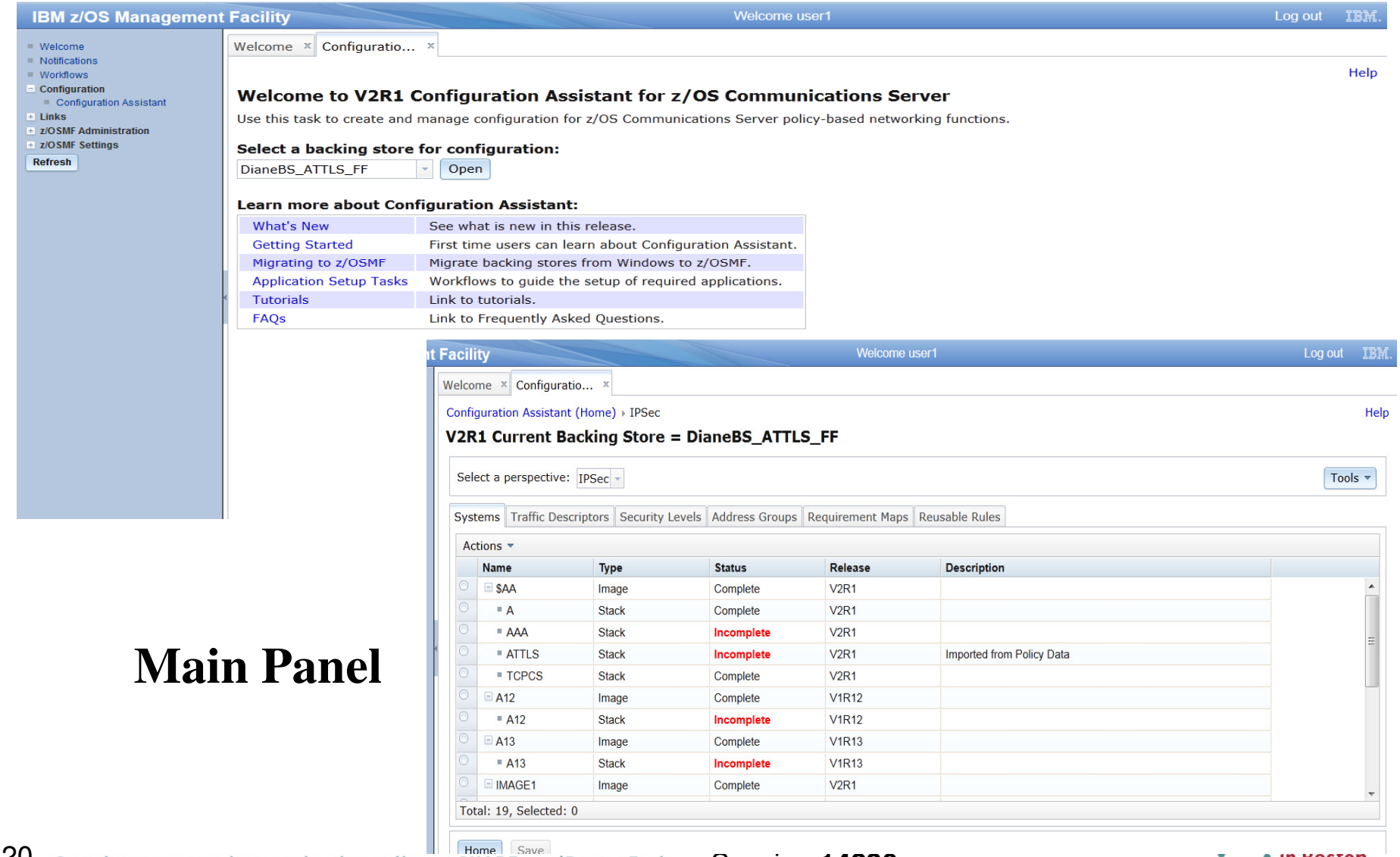
Notifications



Configuration Assistant for z/OS Communication Server

- **A GUI for the z/OS Communications Server Policy Agent – it simplifies the configuration and setup of TCP/IP policy-based networking functions.**
- **Supports the following technologies**
  - **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)**
- **Available with z/OSMF (starting with z/OSMF V1R11 and z/OS V1R11)**
  - **Also available as a Microsoft® Windows® Web download** (since z/OS V1.7)
    - Statement of Direction: z/OS R13 is planned to be the last release for the web download tool. Strategy is to provide it only with z/OSMF
- **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**
  - **Users can also import configuration text files in cases where users have already defined policies and would like to begin using the Configuration Assistant with z/OSMF**
- **With V2R1*, Windows download will no longer be provided, users must migrate to z/OSMF**
  - **This function is planned to be redesigned for new and improved web user experience and performance**
  - **New function provided in support of V2R1 z/OS Communications Server Policy-Based Networking***
    - ***AT-TLS support of TLS V1.2***
    - ***Policy-based Routing (PBR) support for IPv6***

Configuration Assistant z/OSMF V2R1 Welcome Panel



Main Panel

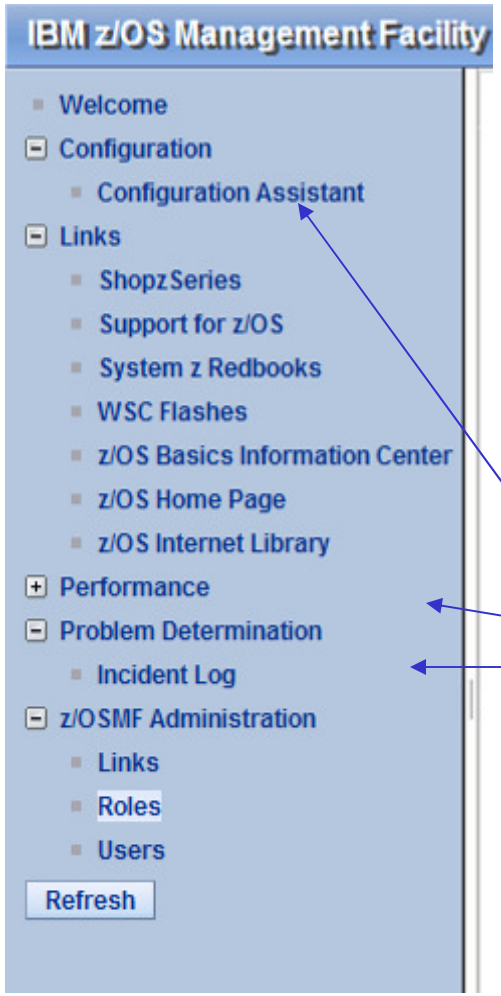
z/OSMF Configuration Assistant for z/OS CS
Benefits

	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	•Learn how to set up IP filters •Review the IP Configuration Guide •Configure the Policy Agent application •Create configuration policy for IP Filter rules •Configure default filter rules in the TCP/IP profile •Configure the TRMD application •Configure the Syslogd application **Hours (or even days for initial setup)**	• Configuration Assistant guidance • Go to IP Security Perspective • Add a connectivity rule for an IP Filter • Use Application Setup Tasks to assist with the configuration and setup of the required applications •The Configuration Assistant will generate and help you deploy the configuration files to your z/OS system **As little as 30 minutes**
Secure your TN3270 server connections with SSL	•Manual process •Review the IP Configuration Guide •Configure the Policy Agent application •Configure TTLS in the TCP/IP profile •Configure the Syslogd application •Create configuration policy for AT-TLS for your TN3270 Server **Hours (or even days for initial setup)**	•Configuration Assistant guidance • Go to AT-TLS Perspective • Select the AT-TLS rule for the TN3270 server and enable • Use Application Setup Tasks to assist with the configuration and setup of the required applications •The Configuration Assistant will generate and help you deploy the configuration files to your z/OS system **As little as 30 minutes**

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.

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

z/OSMF Links

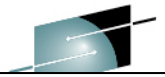


- This category contains the pre-defined links provided by IBM as well as any new links added by the z/OSMF administrator
- The links are available to all users of z/OSMF
- Administrator can define which roles have access to each of the defined links.
- The IBM pre-defined links are accessible to all users, including guests, by default.
- Ability to add non-z/OSMF launch points and links to the left hand side navigation tree under any category. (V1.12)

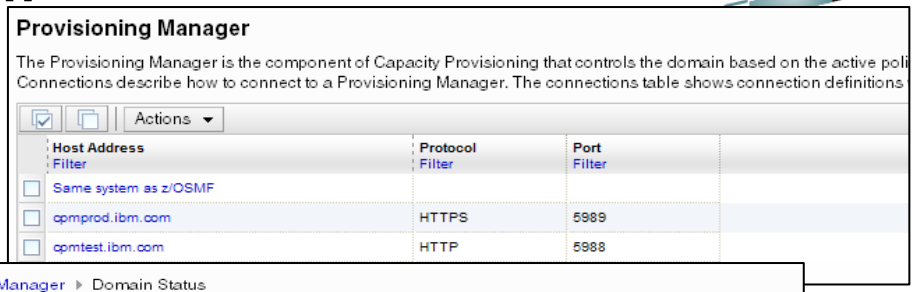
Capacity Provisioning

- 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.
- The Capacity Provisioning Control Center (CPCC) is the user front end to *administer* Capacity Provisioning policies
  - Available as a separate Windows-based stand-alone client.
- Initially part of the functionality was integrated into z/OSMF V1.13 to ease the monitoring of CP status for different domains.
  - manage connections to CPMs
  - view reports for domain status, active configuration and active policy.
- With APAR PM74519 the z/OSMF Capacity Provisioning application is enhanced to allow you to create, edit, and activate domain configurations and capacity provisioning policies.
  - With these new functions z/OSMF Capacity Provisioning supports all the functions available in the Microsoft Windows-based Capacity Provisioning Control Center (CPCC).
- z/OSMF 2.1 supports all the latest enhancements in Capacity provisioning feature.

z/OSMF Capacity Provisioning Function

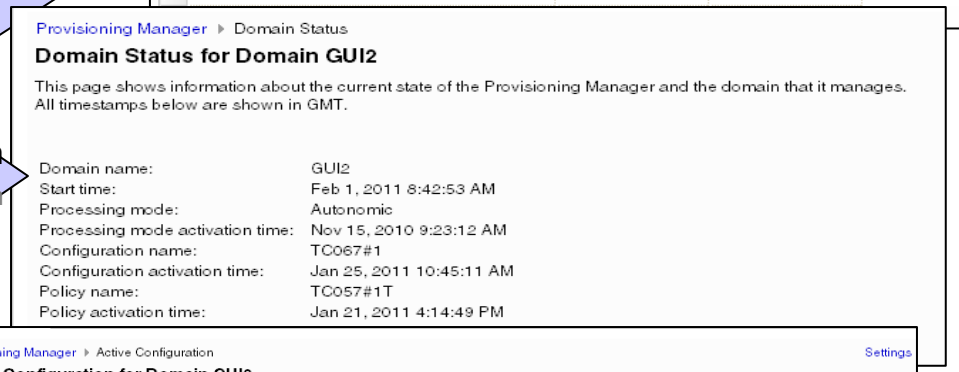


Manage CIM connections to access a Provisioning Managers



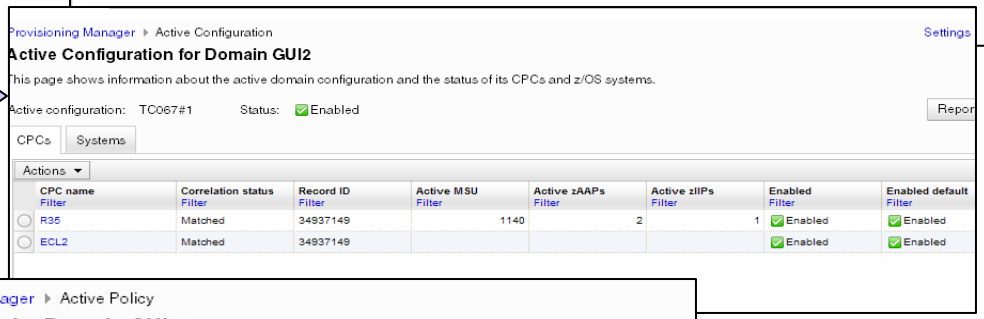
View detailed status about a domain

Quick switch between reports for same domain



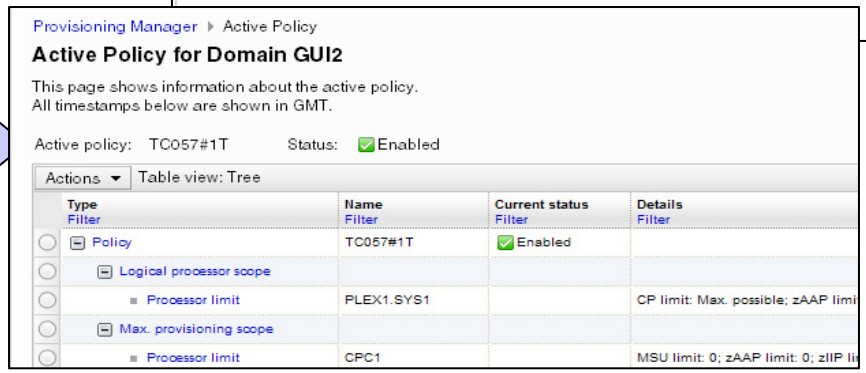
View information about the active configuration for a domain

•Drill down to CPC or system



View information about the active policy for a domain

Drill down to policy element



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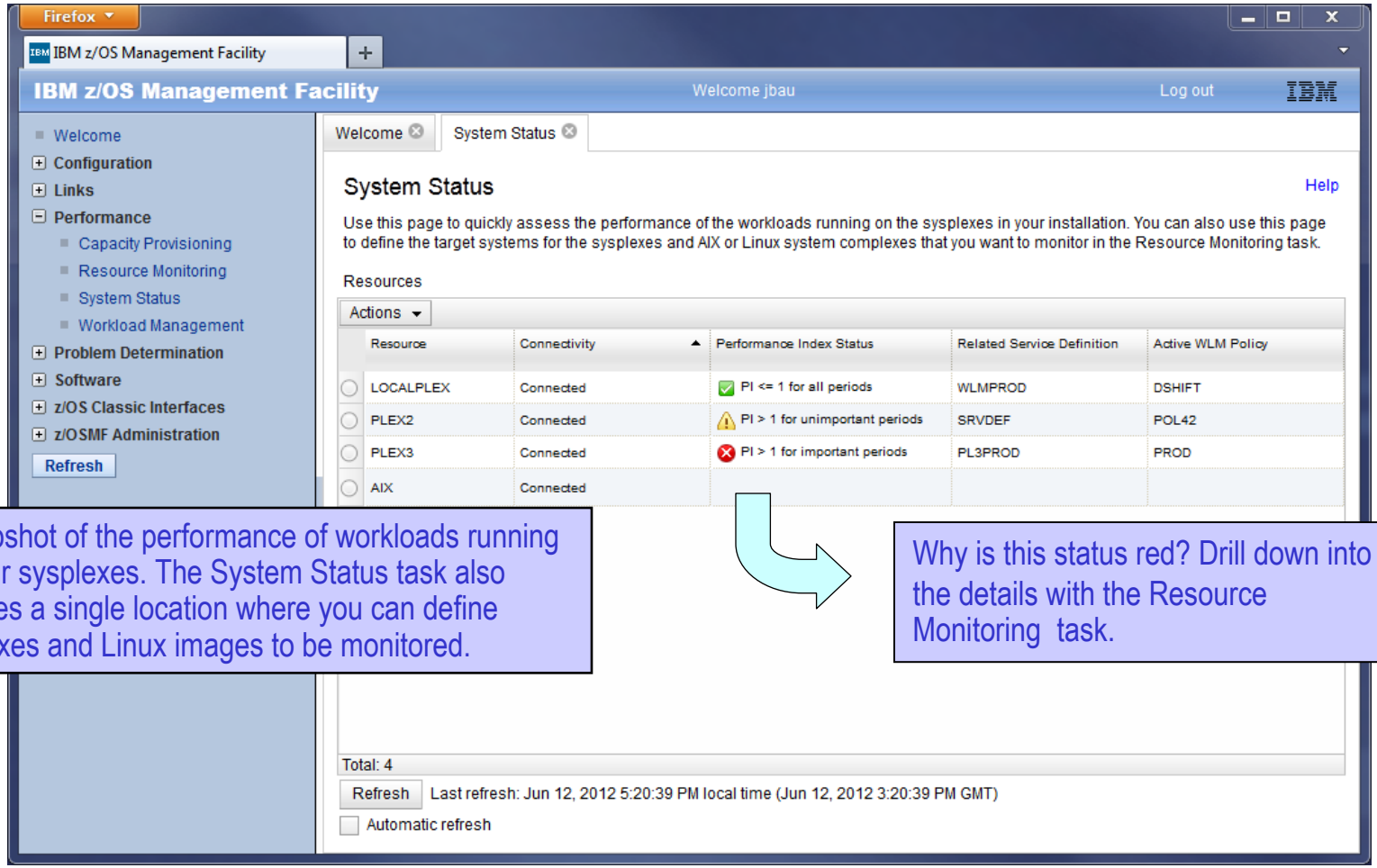
z/OSMF Resource Monitoring

- The z/OSMF Resource Monitoring application provides integrated performance monitoring in the customer's environment
- Supports 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.
- With z/OS V1.13 and z/OSMF V1.13, RMF has new CIM-based performance data gatherers for Linux on System z, Linux on System x, and AIX systems to provide a consistent monitoring solution for zEnterprise ensembles.
- **With z/OS 2.1 support has been added for windows 2008 server**

- There are two z/OSMF tasks: *Resource Monitoring and System Status*
  - Resource Monitoring task:
    - Monitor most of the metrics supported by the Resource Measurement Facility (RMF™) Monitor III, create and save custom views of the metrics easily, and display real-time performance data as bar charts. Predefined views provided for a quick start. Advanced filtering features for focused monitoring
  - System Status task:
    - Quickly Assess the performance of the workloads running on the z/OS sysplexes in your environment. The System 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.

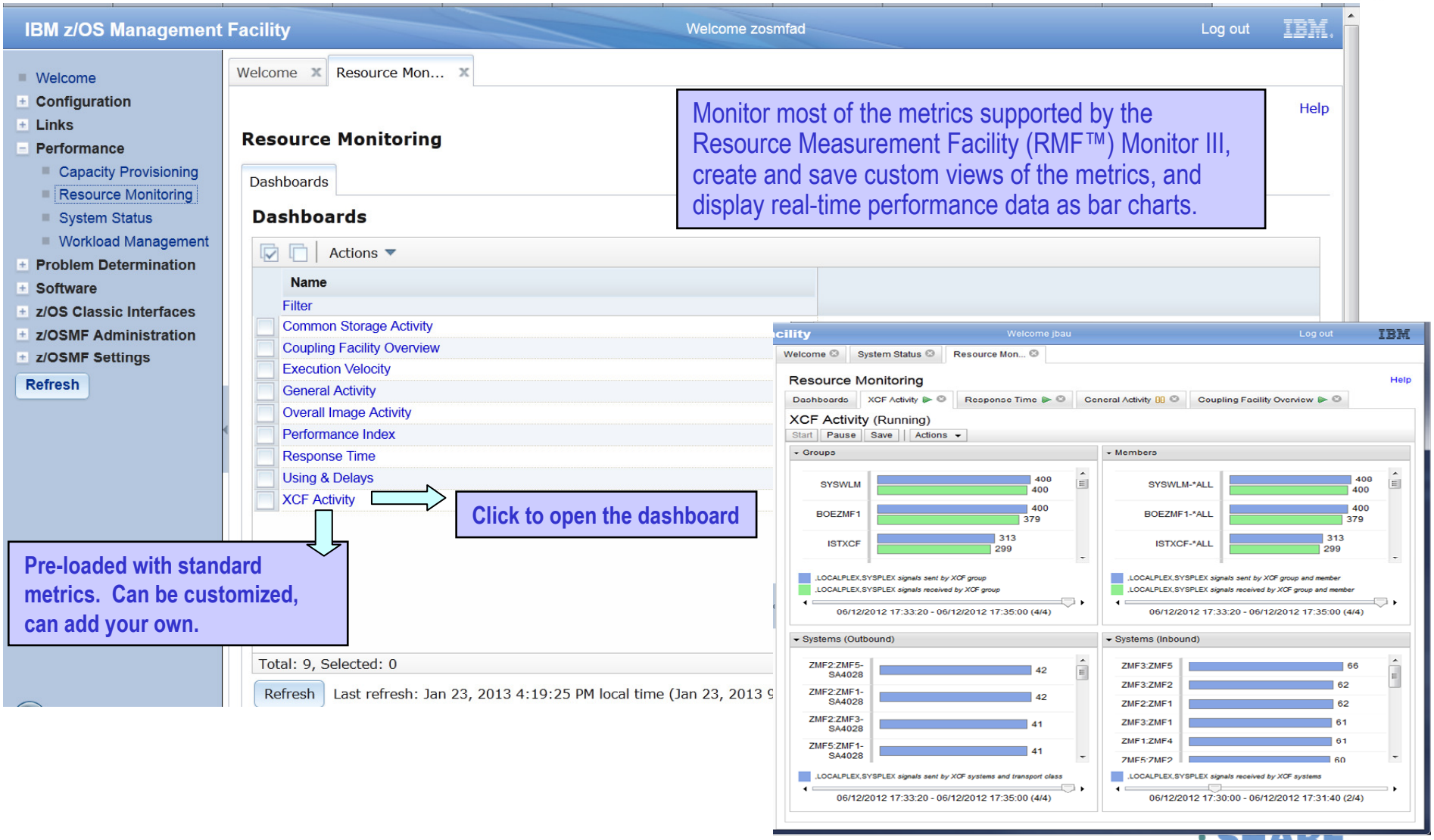
Resource Monitoring : System Status



A snapshot of the performance of workloads running on your sysplexes. The System Status task also provides a single location where you can define sysplexes and Linux images to be monitored.

Why is this status red? Drill down into the details with the Resource Monitoring task.

Resource Monitoring: Monitoring Dashboards



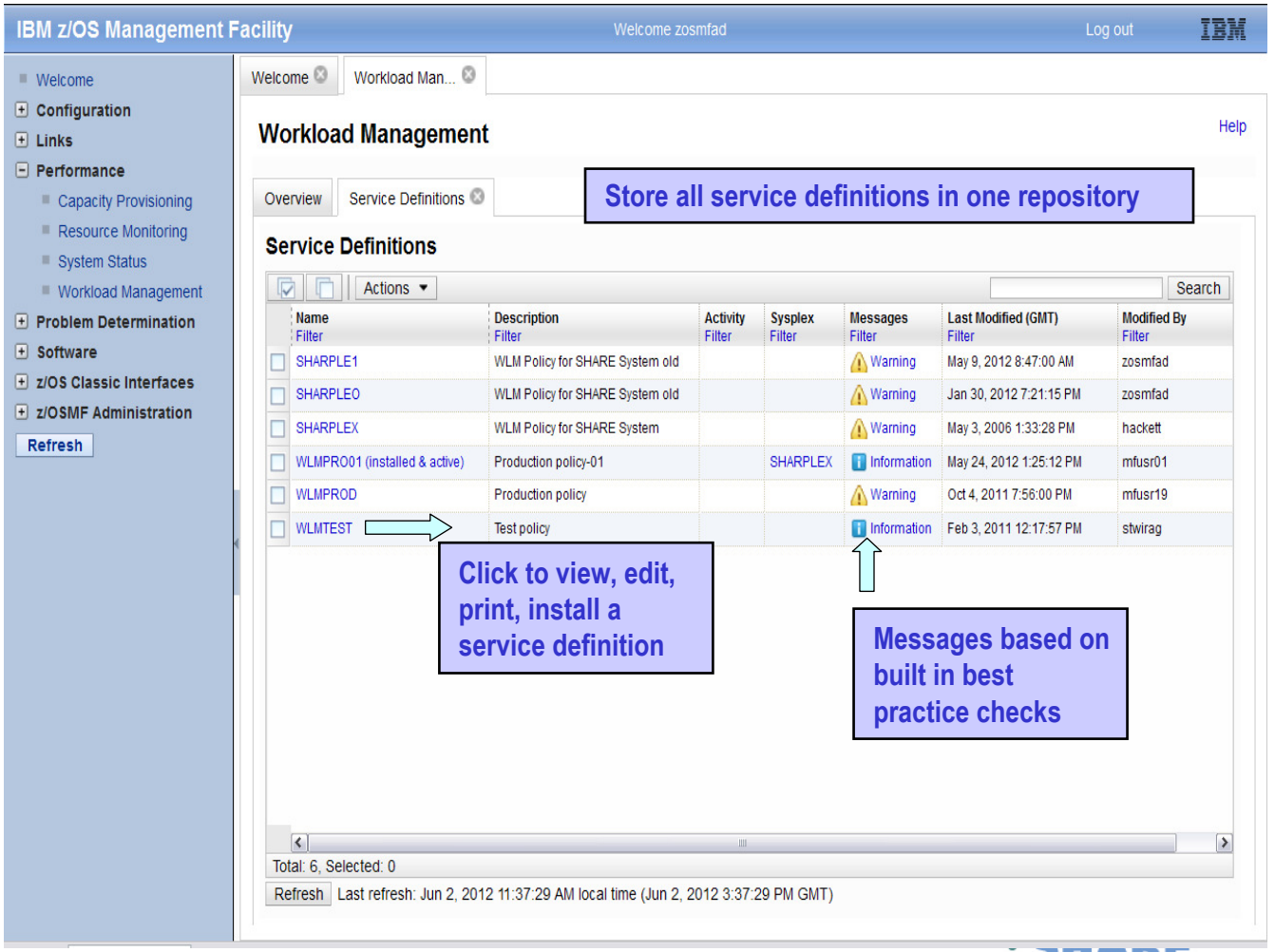
z/OSMF Resource Monitoring
Benefits

	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) **Up to 15 minutes to look up each sysplex and high degree of skill needed to interpret reports**	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.) **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 **A long time, depending on data required and correlations needed. In some cases, generating reports is not possible.**	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. **About 5 minutes to set up a custom monitoring desktop, 3 key clicks to view real-time statistics**

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

z/OSMF Workload Management

- WLM Policy Editor available on the z/OS Management Facility provides
  - All the same functions as in the 'as is' 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
  - Enables you to manage WLM service definitions



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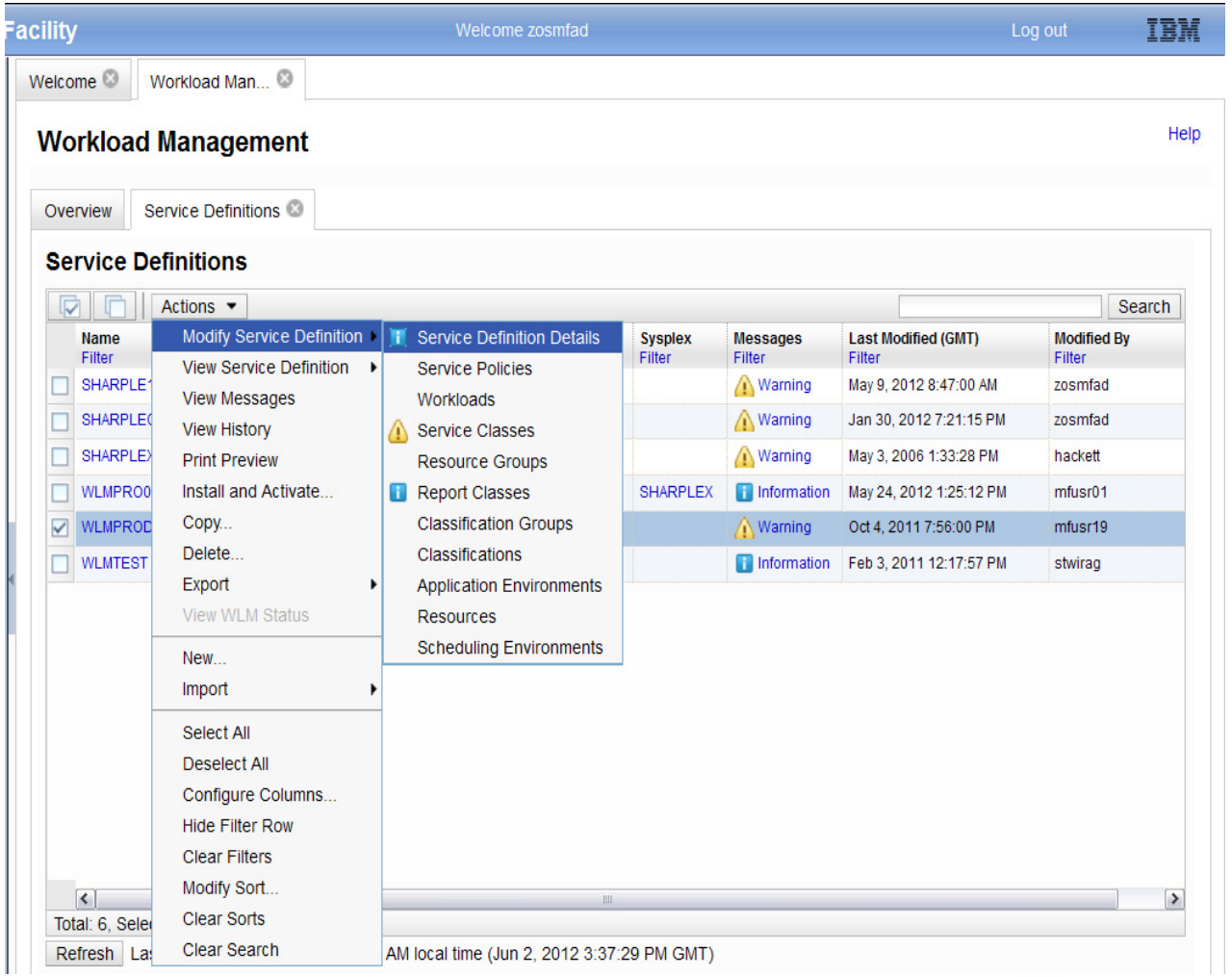
z/OSMF Workload Management (V1.12)
functions

- 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
- Different authorization levels for viewing, modifying and installing service definition



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z/OSMF WLM Policy Editor
Benefits

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

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

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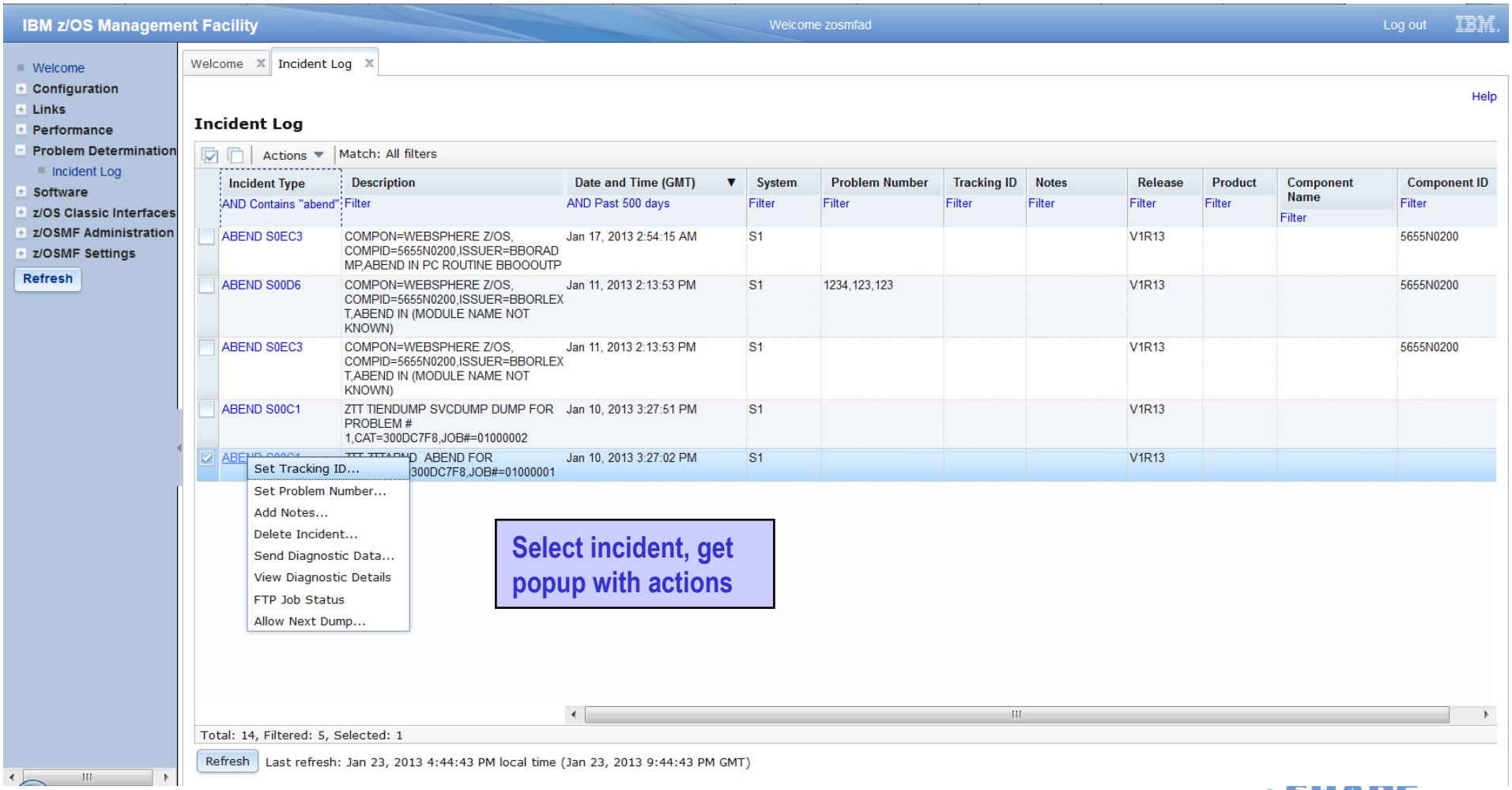
z/OSMF Incident Log

- Focus on Problem data management
  - Identifying system-detected problems - Abend and user initiated SVC dumps
  - Providing a consolidated view of all system detected problems in a sysplex and management of incidents
  - Improved FFDC for system-detected problems

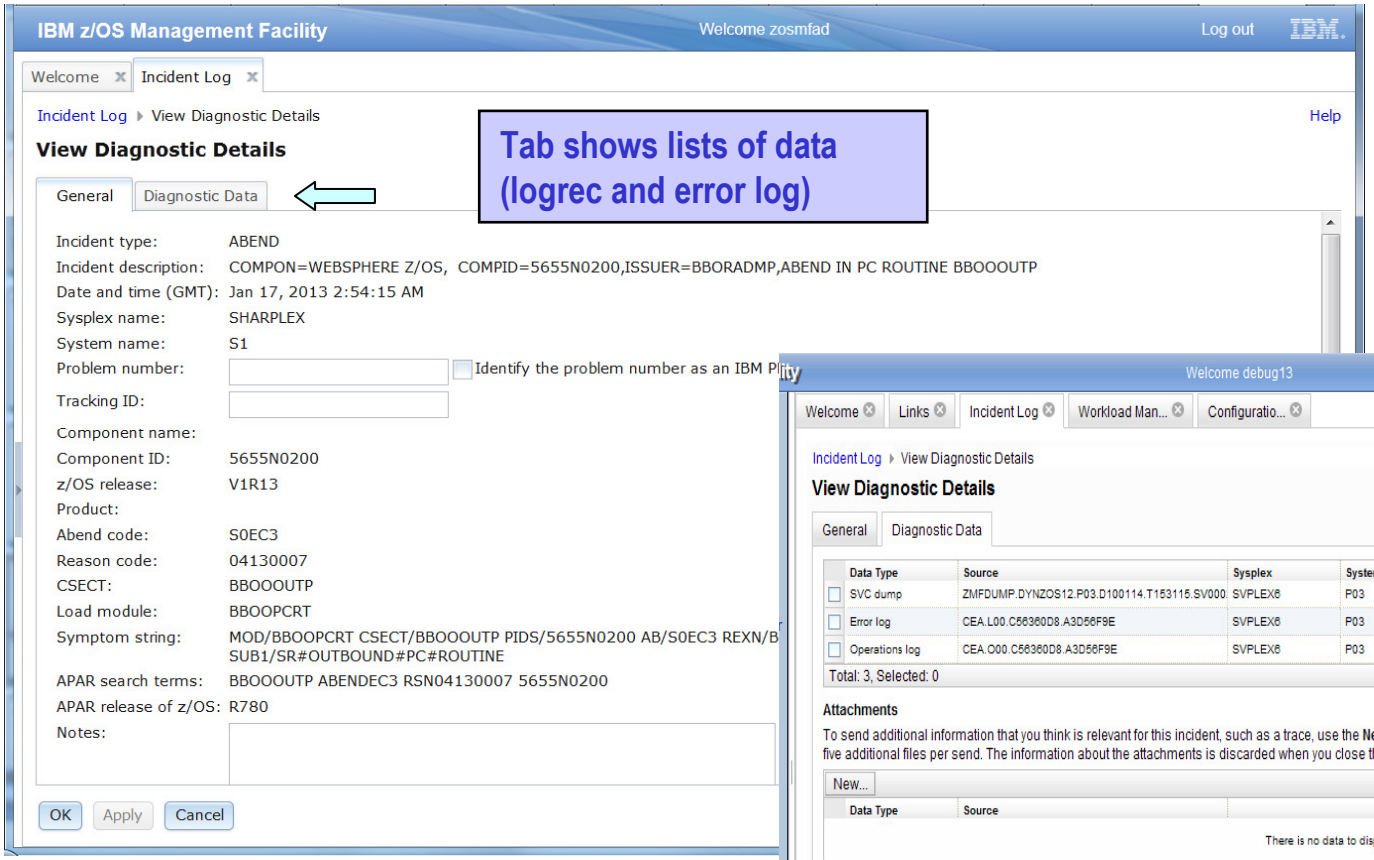
- Reduced time and skill required to collect and send diagnostic data for analysis
  - Collect and manage diagnostic data “snapshots” via Auto-capture of basic diagnostic materials, triggered when the dump is written to a data set, managed via PARMLIB member
    - Snapshots of 30 min Operlog or Syslog, 1 hr Logrec detail, and 4-hour Logrec summary
    - 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

- Manage incidents with z/OSMF Incident log application:
  - Manage the list of incidents across the sysplex (Filter/ sort/ configure/ delete)
  - Display properties – view incident details and list of diagnostic data, logs
  - Set properties: associate problem number and tracking id , add notes
  - Send diagnostic data via FTP: Manage FTP jobs status and define FTP Profiles (firewall), support for encrypted and parallel FTP to IBM
  - Send additional user-defined diagnostic data
  - Allow next dump with simplified informing to DAE to take the next dump for the incident's symptom string

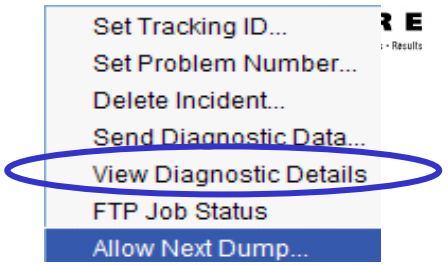
Incident Log – manage incidents

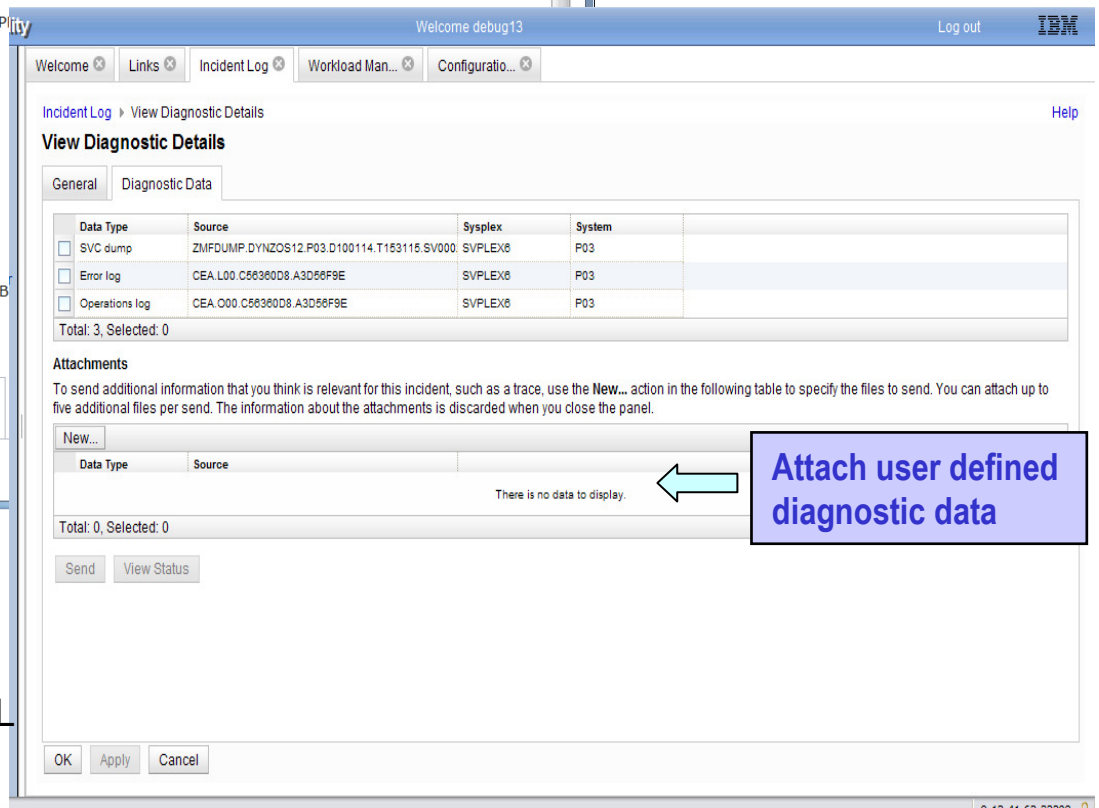


Incident Log – Incident Details



Tab shows lists of data (logrec and error log)





Attach user defined diagnostic data

- View logs directly
- **8 char HLQ support for log snapshots**
- Delete incidents via GUI or batch CEATOOL

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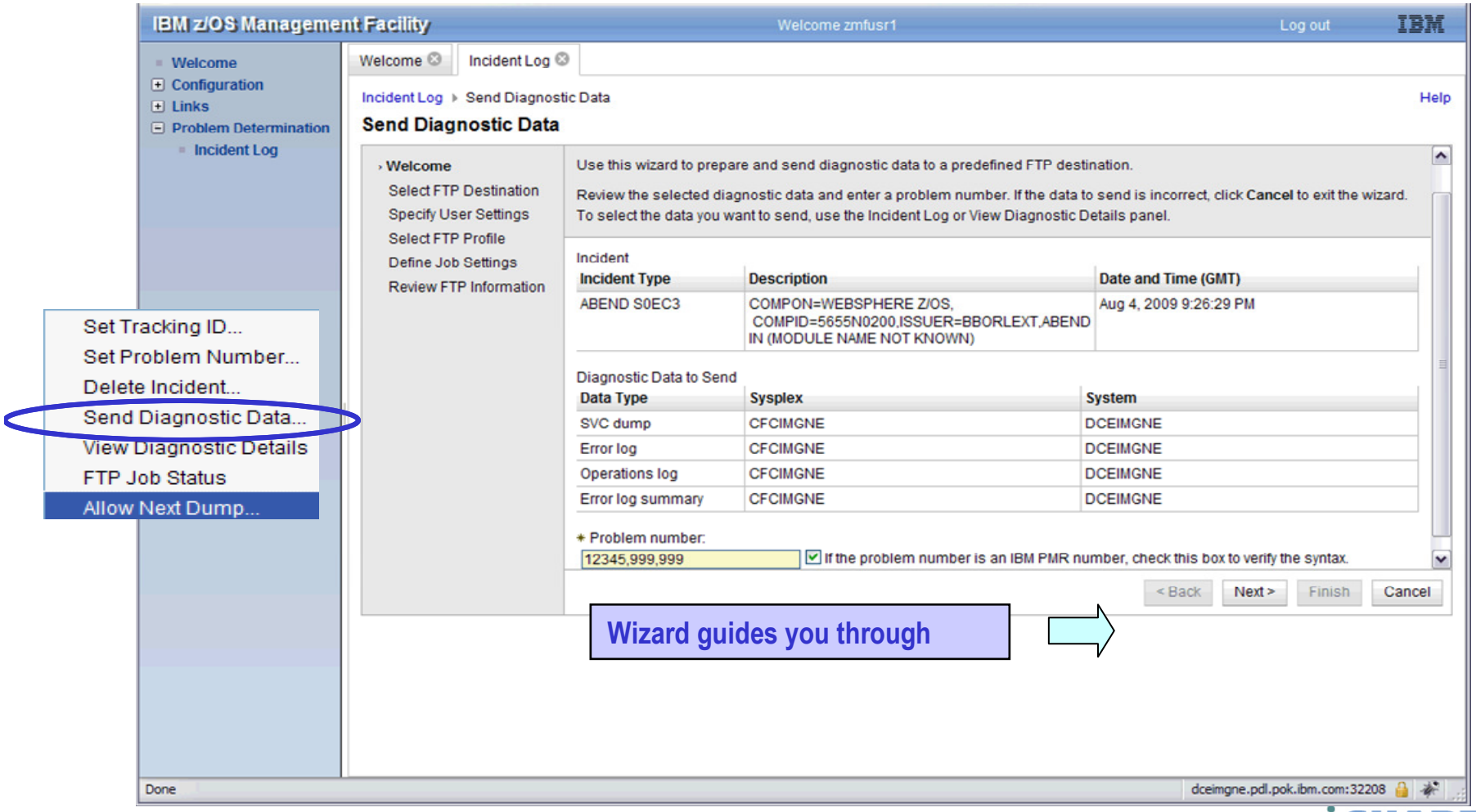
Incident Log – Send Diagnostic Data



z/OSMF Problem Determination – Incident log
Benefits

	Without z/OSMF Incident Log **	With z/OSMF Incident Log **
Recognizing a system-detected (dumped) problem occurred	**Requires 5 to 7 manual steps, plus skill on effective use of IPCS to extract data from each of the dumps.** **Up to 5-6 minutes**	**Display in 1 click. Greatly reduced skill required** **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**
Viewing diagnostic datasets within context	**•Context switch to ISPF green screen interface, login if necessary, manual input of dataset name.** **•Up to 1 minute**	**•2 clicks to open diagnostic dataset** **•As little as 7 seconds** R13

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

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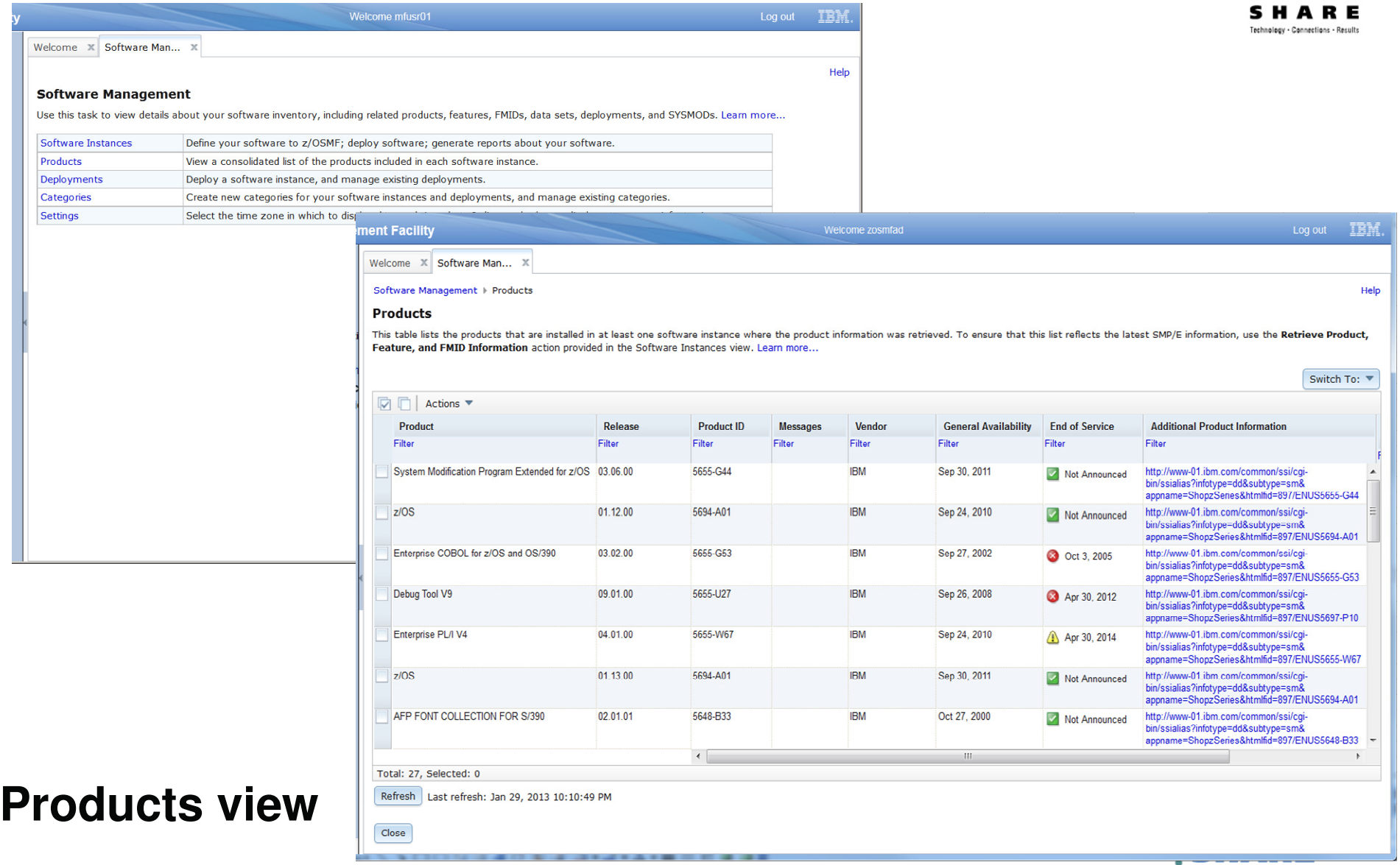
Software Management

The z/OSMF Software Management application (was previously called Software Deployment) extends the Software Deployment task to provide additional actions on instances of SMP/E installed software. available on z/OS V1.13 with the PTF for APAR PM73833.

The Software Management task supports

- deploying a software instance,
- inspection of a software instance to view the product, feature and FMID content, and view the physical data sets that compose a software instance.
- actions to analyze and report on software instances and products within instances to:
  - Identify software products that are approaching, or have reached, end of service support, thus helping customers with upgrade and migration planning.
  - Identify missing HIPER and PE fixes, and fixes associated with one or more fix categories to help customers assess the risks and stability of installed software and ensure hardware and software requisites are installed.
  - Validate the SMP/E structure and content of a software instance is correct by cross-check SMP/E inventory information with catalog entries, volume residency and data set content.
  - Determine if individual fixes are installed and in which software instances.
  - Compare the service and functional content of two software instances to aid in debugging or migration planning.

Software Management



Products view

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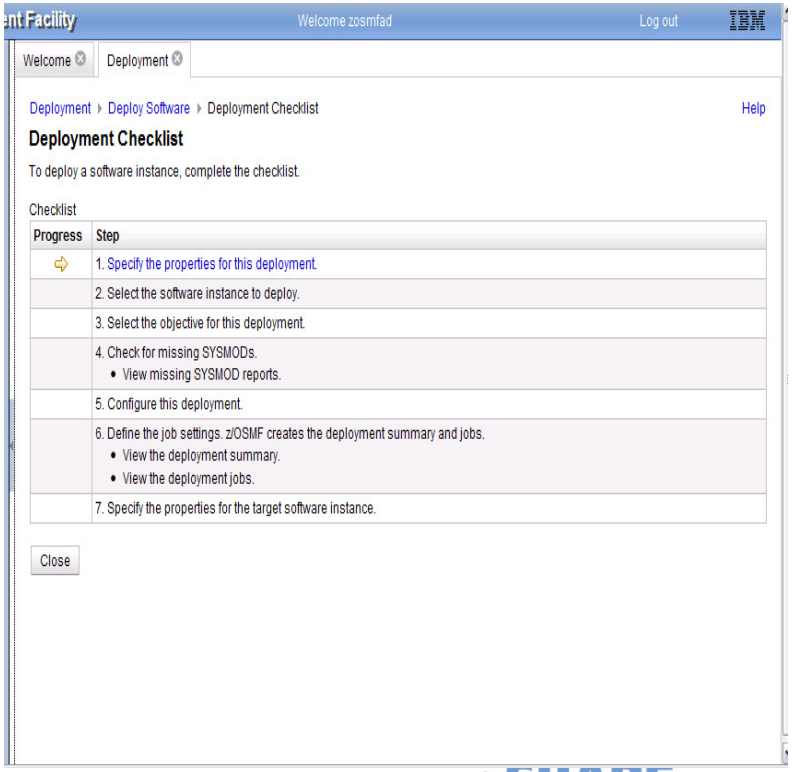
in Boston

Software Deployment

- Software Deployment makes cloning 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.
- Scope of software managed
  - All SMP/E installed software, IBM or non-IBM
    - Service upgrades for all of the above (via complete replacement)
- Software deployment key functions include
  - Verify cross system and cross product software requisites are satisfied.
  - Verify software fixes are not regressed.
  - Clone ALL parts of the software (including the SMP/E CSI inventory)
  - Validate the configuration against the target system, Summarize the deployment actions
  - Generate jobs to perform the cloning
- Software Deployment will clone software
  - Locally, either on a single system or system-to-system within a sysplex
  - Remotely, system-to-system across a network and multiple sysplexes

- **Software Deployment uses a checklist approach to guide you through all the steps of a deployment.**



z/OSMF and ISPF (R13)

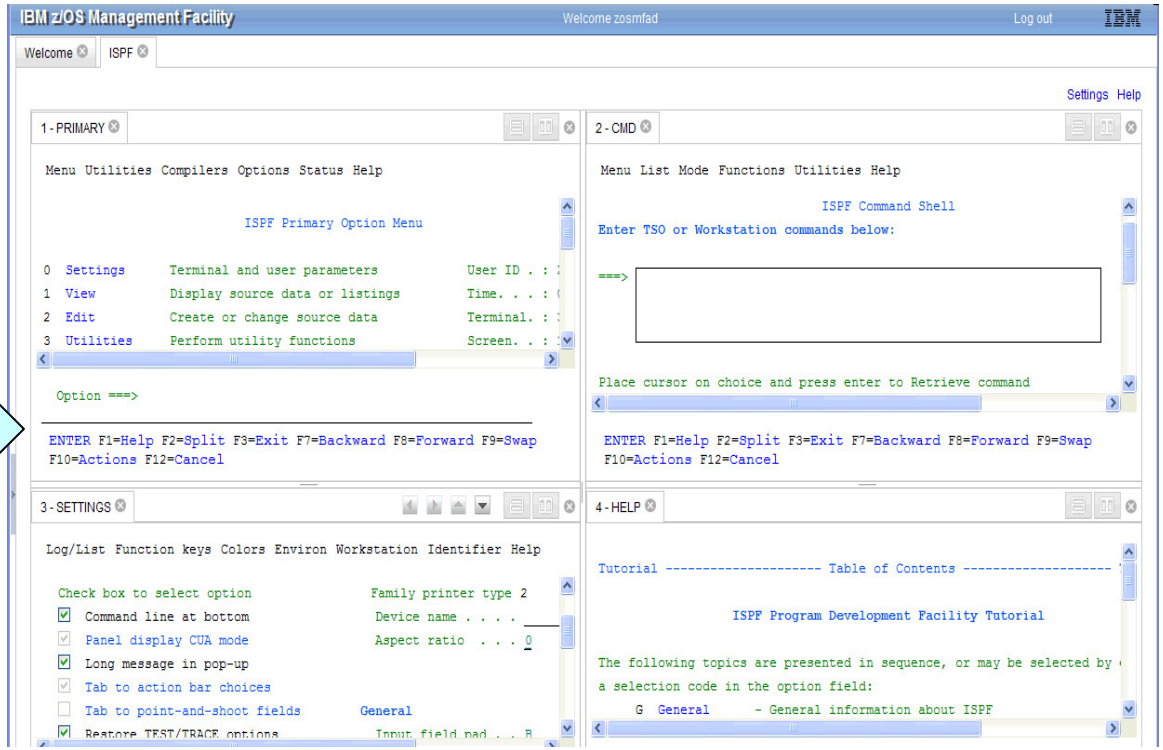
Work with existing interfaces

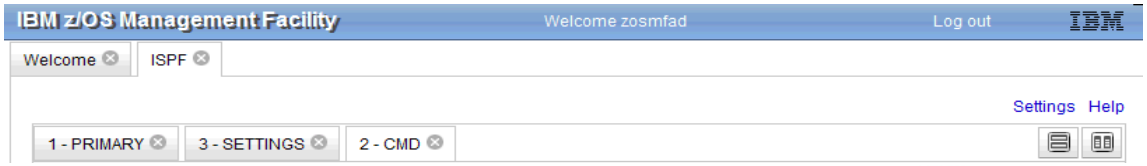
- **Enables system programmer to perform tasks from one interface.**
- Makes ISPF applications URL Web-accessible for linking and launching from other applications

- Up to 4 panes
  - Panes can be sized. Each pane can have multiple ISPF sessions, tabs can be moved between panes
  - Shows ISPF Menu bar, Command line, Function keys

- Multiple logins with profile sharing enabled

- Also available in tabbed format





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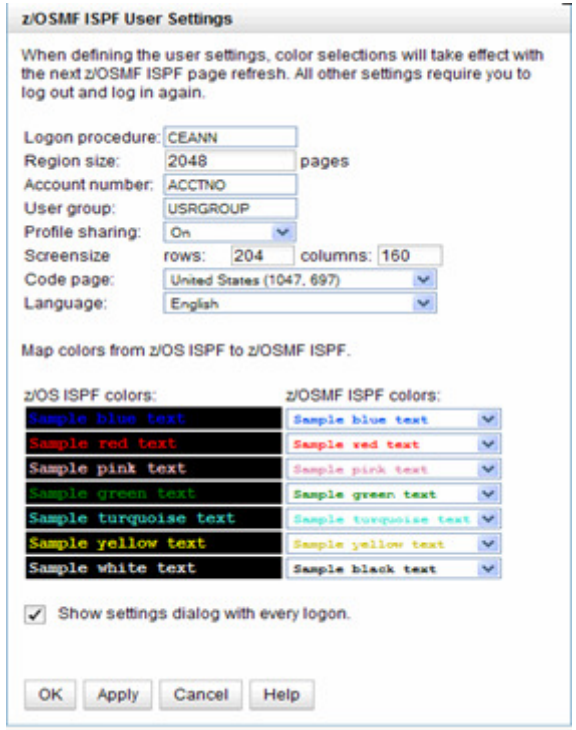
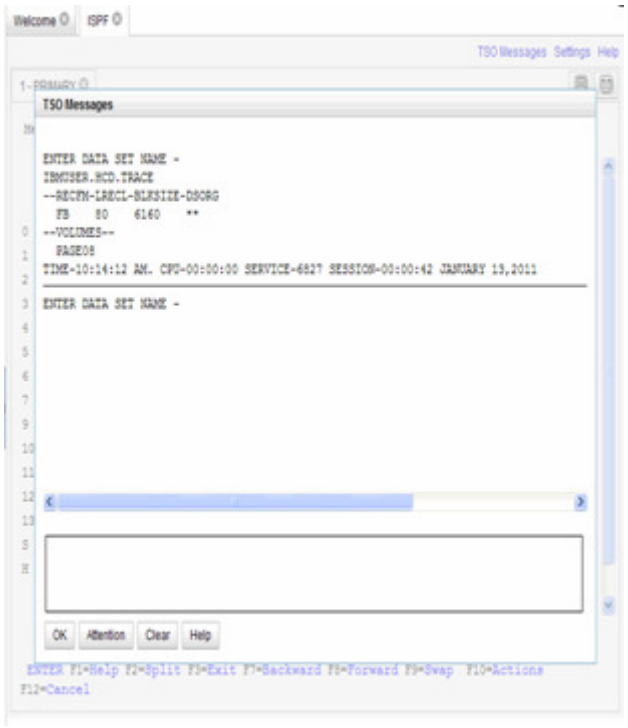
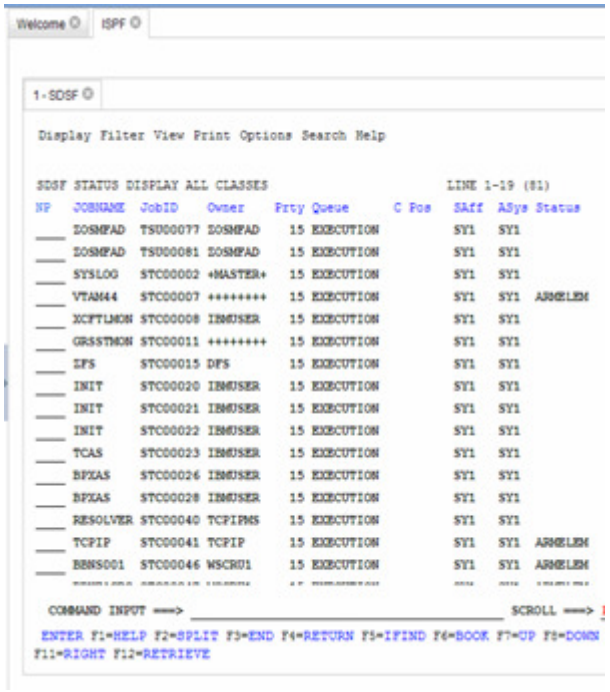
z/OSMF and ISPF (R13)
Additional screens



- **Customize settings**



- **TSO messages have priority and pop up**



- **Example: SDSF status**

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New programmatic interface for z/OSMF

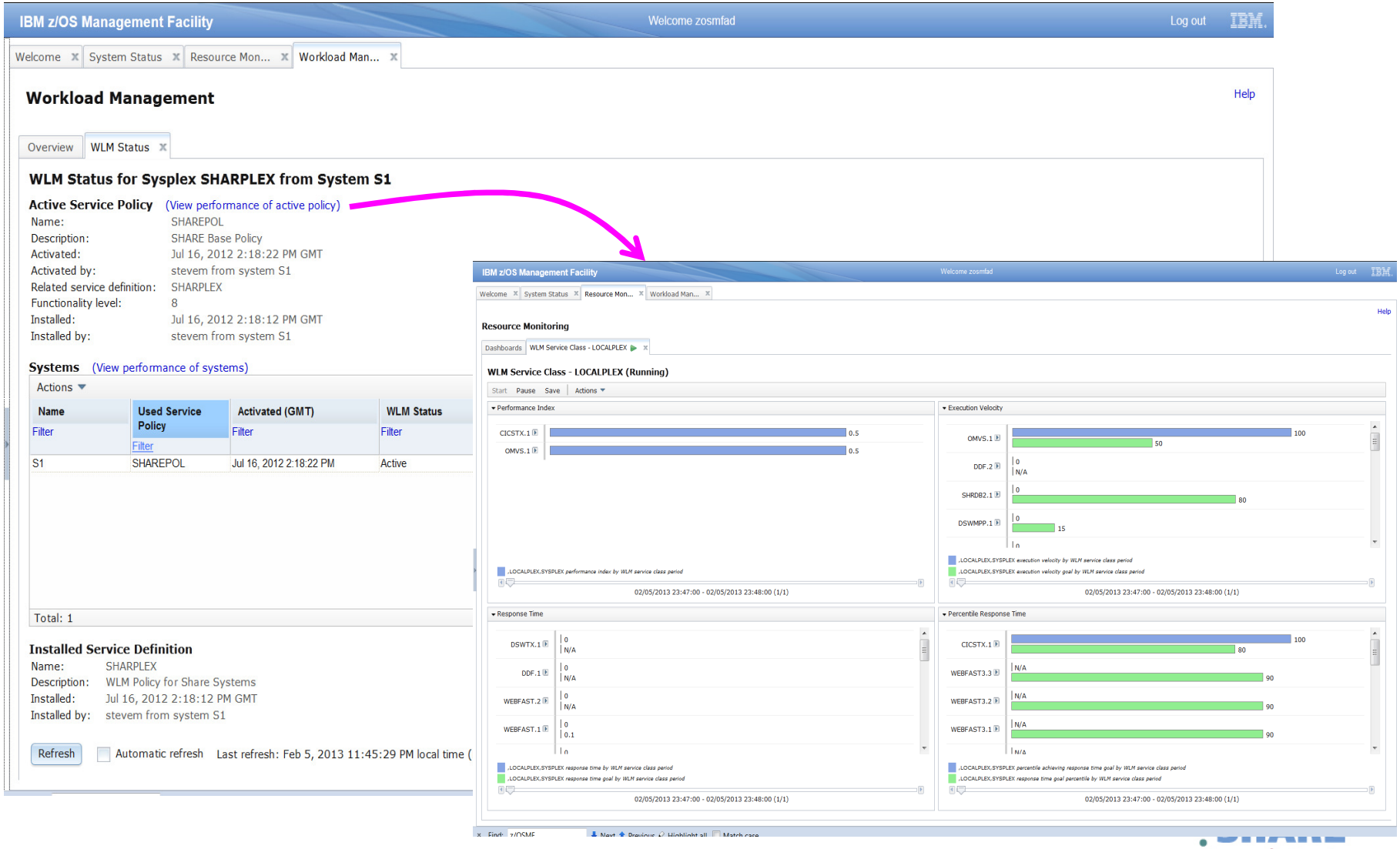
- z/OSMF R13 introduces a new REST API (HTTP(s)) interface to z/OS for submitting and accessing batch job information.
  - Enhancements in service stream in R13
    - Submit jobs from Unix file or MVS dataset
  - **Additional enhancements in V2R1**
    - **Support for JCL symbolics, use correlator instead of jobname/jobid, asynchronous notification on job completion**
- z/OSMF R13 enables Cross application linkage and context sensitive launching between z/OSMF applications and also between z/OSMF applications and external applications
  - Via programmatic interface and GUI interface

Recent R13 application linking exploitation

With APAR PM74508 and APAR PM74517

- The z/OSMF Resource Monitoring application is linked to the z/OSMF Workload Management application in context, and the z/OSMF Workload Management application is linked to the z/OSMF Resource Monitoring application.
- The System Status task is linked to the Workload Management task such that the active service definition, active service policy, or WLM status can be opened and viewed. The Workload Management task is linked to Resource Monitoring dashboards such that while viewing the active service definition or service policy, resource monitoring dashboards with performance metrics for service classes, workloads, and report classes can be opened and viewed.

View performance of Active policy



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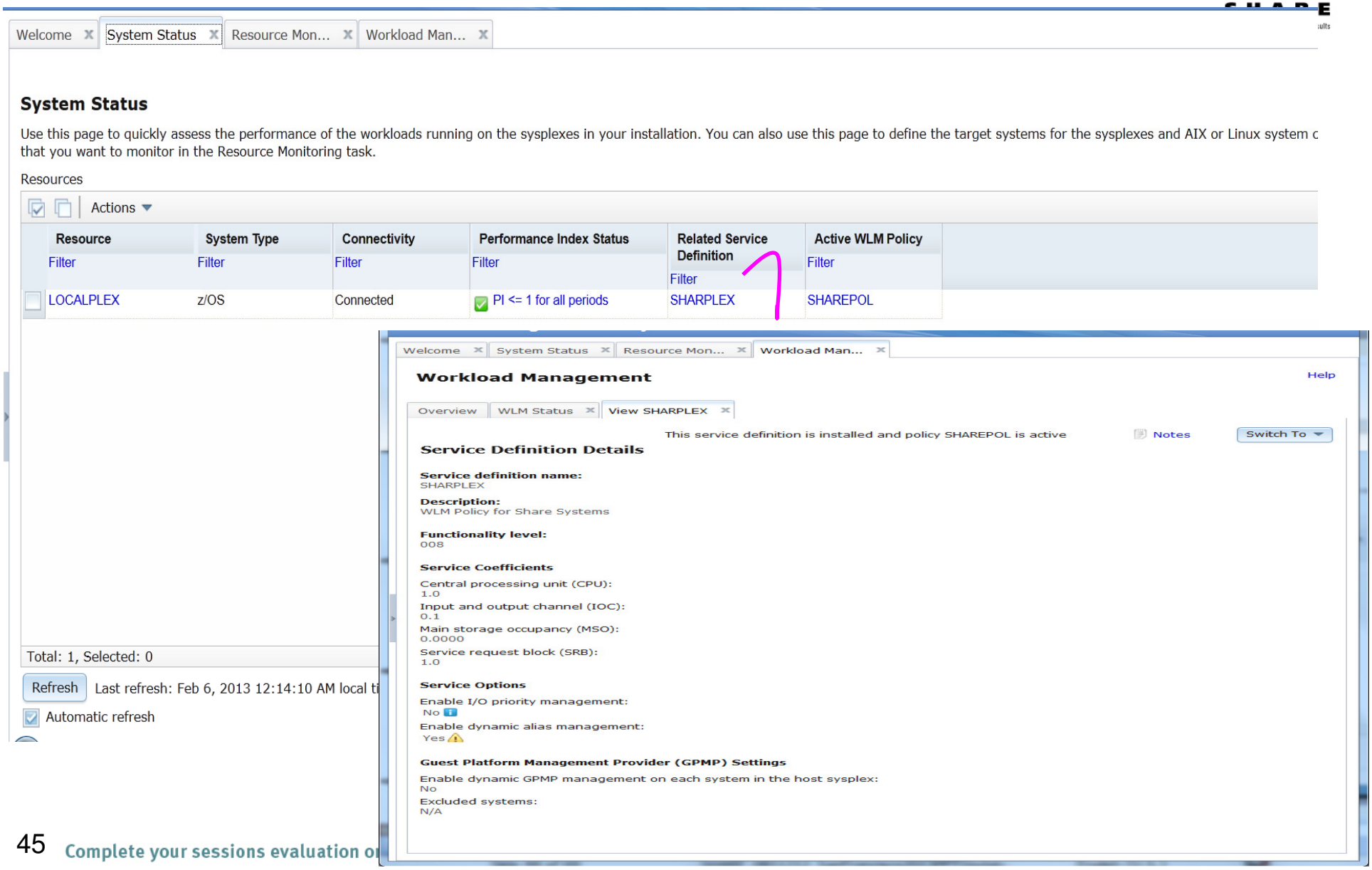
View active service definition



Complete your sessions evaluation o

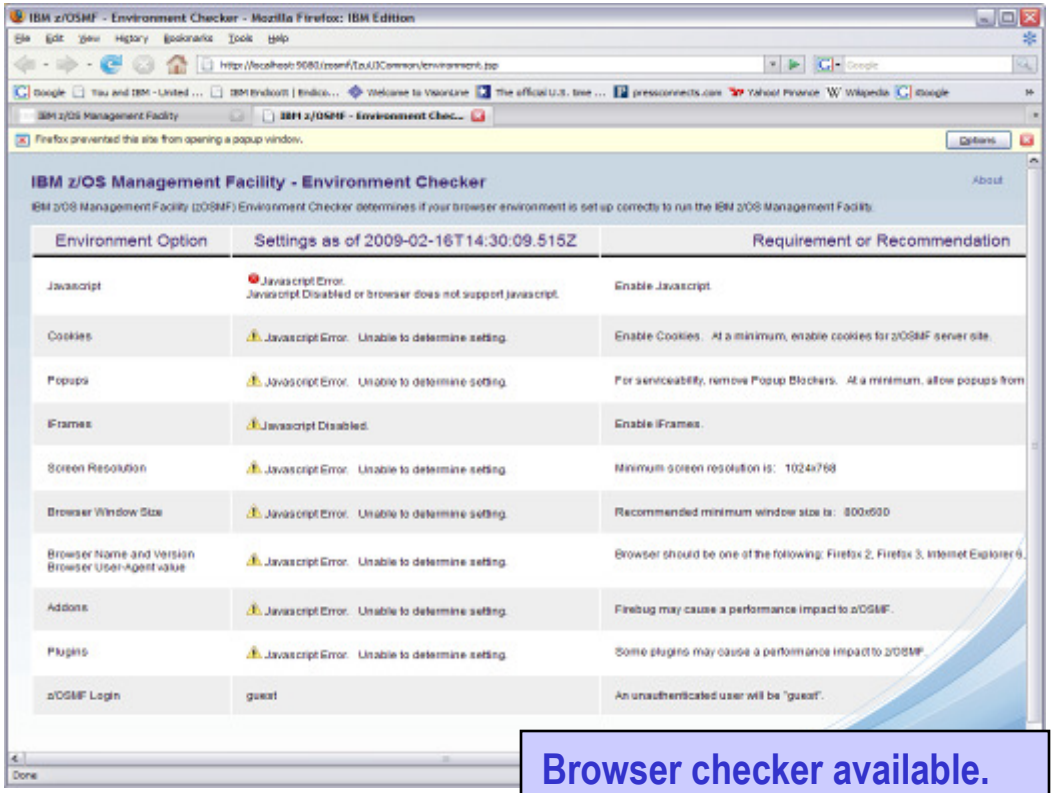
Additional details on usage

- z/OSMF 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
  - 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.
- 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

Prerequisites

- z/OSMF 1.12 requires z/OS 1.12
- z/OSMF 1.13 requires z/OS 1.13
- z/OSMF 2.1 will require
  - z/OS 2.1
  - JAVA V7 64 bit SR3

- Client machine
  - Windows with Mozilla Firefox and Internet Explorer® 7
  - See Supported browser web page from the z/OSMF home page for latest information



Browser checker available. Your browser connects to the z/OS Management Facility and checks the browser settings

z/OSMF Home page

http://www-03.ibm.com/systems/z/os/zos/zosmf/

Statement Of Directions z/OSMF 2.1

- IBM intends to add z/OSMF function to support presentation services for other applications. A new set of programming interfaces is designed to allow TSO/E based applications to be imported into z/OSMF and supported within the z/OSMF user interface, while providing the capability to exploit graphical user interfaces supported by the client browsers.
- IBM intends to provide additional REST programming interfaces in z/OSMF V2.1. These new RESTful interfaces are designed to provide access to z/OS data sets and files, with authorization control and serialization. This new function is intended to make it much easier to access data stored on z/OS from other platforms, such as from distributed servers or browser-based applications.
- IBM intends to provide support for secure FTP (SFTP) in the Incident Log application in z/OSMF V2.1.
- IBM intends to use the z/OSMF Workflow function to provide simplified instructions for installation of z/OSMF plug-ins.

- IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

Additional information

- **z/OS Management Facility website**
  - http://ibm.com/systems/z/os/zos/zosmf/
- **IBM z/OS Management Facility education modules in IBM Education Assistant**
  - http://publib.boulder.ibm.com/infocenter/ieduasst/stgv1r0/index.jsp
  - **Scroll down to z/OS Management Facility**
- **z/OS Hot Topics, Issue 21, 23, 25 and 27:**
  - http://ibm.com/systems/z/os/zos/bkserv/hot_topics.html
- **Program Directory for z/OS Management Facility** GI11-2886
- **IBM z/OS Management Facility User's Guide** SA38-0652
- **IBM z/OS Management Facility License Information** GC52-1263
- **IBM z/OS Management Facility Information center**

Summary

- The IBM z/OS Management Facility is a new product for z/OS 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.
- z/OSMF 2.1 is rebased on the Websphere Application Server 8.5 for z/OS Liberty profile
  - This provides reduced resource requirements, improved configuration and faster startup.
- z/OSMF 2.1 introduces the new Workflow and notification function that is planned to provide the infrastructure needed to further automate the flow of management tasks to people in the appropriate roles, improving the quality and efficiency of management.

Backup

What our clients are saying……..

"The z/OS Management Facility initiative has been expanded with a number of new functions available with z/OS V1.13. This product shows great promise of being a great help for the younger z/OS system programmers, who may not have many years of experience with the platform. "

Bertil Andersson, Senior Enterprise IT Architect, Svenska Handelsbanken

"The IBM z/OS Management Facility is the most important new facility since the Workload Manager and Parallel Sysplex. Every z/OS staff should be planning for their z/OSMF implementation now. This is a 'must have' for the system programmers of tomorrow (or even today). "

Cheryl Watson, Watson and Walker Inc.

See more testimonials on the z/OSMF web page

http://www-03.ibm.com/systems/z/os/zos/zosmf/

What our clients are saying……..

"We are using z/OSMF primarily for Workload Management (WLM) and z/OS Communication Server purposes. The WLM component is amazing. It simplifies the maintenance of the WLM policy and makes it much easier to review and update. It also alerts us to warnings and errors in our policy. The Configuration Assistant is being utilized for z/OS Communication Server AT-TLS and IPSec configuration. We are also using Incident Log, which seamlessly retrieves error data and sends it to IBM for analysis. This function has greatly simplified the daily work of a system programmer. "

'Large Government Customer'

What our customers are saying……..

My z/OSMF migration from V1R11 to V1R13 went very smoothly! Of all the new features in V1R13, I was particularly interested in the new software Deployment capability for cloning and deploying software. I found it easy to use and especially liked that it supports any SMP/E installed product. I plan to use it with our ISV products. *'Information Technology and Marketing Services'*

We are using z/OSMF 1.12 and the Incident Log function is very efficient. After entering the PMR number, the diagnostic data were sent in just a few clicks!
'Large equipment manufacturing'

"Being relatively new to the Systems Programming role, IBM's z/OS Management Facility (z/OSMF) has helped my role as a Systems Programmer, by providing a web browser based tool that brings together some routine day-to-day operations and administration of z/OS systems into one simple to use web interface. Using z/OSMF has helped me to become more productive in my new role as a Systems Programmer." *Government Agency (Europe)*

Summary

- 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

- **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**
- **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**
- **z/OSMF interface:**
  - **Designed to allow you to add links programmatically to the z/OSMF Navigation tree**
- **Continued enhancements to Incident Log and Configuration Assistant for Communication server**

Summary – z/OSMF V1.13 highlights

- A new software management capability to simplify management and cloning of installed software
- A new Capacity Provisioning Manager application is designed to support easier managing of z/OS Capacity Provisioning Manager (CPM)
- ISPF in the web as a z/OSMF Classic interface
- Application Linking and context sensitive launching enablement between z/OSMF applications and also between z/OSMF applications and external applications
- RESTful APIs for z/OS job management
- Improved z/OSMF authorization with SAF mode
- Ongoing enhancements to existing functions

The new z/OSMF 2.1

- z/OSMF 2.1 is rebased on the Websphere Application Server 8.5 for z/OS Liberty profile
  - This provides reduced resource requirements, improved configuration and faster startup.
- z/OSMF 2.1 introduces the new Workflow and notification function that is planned to provide the infrastructure needed to further automate the flow of management tasks to people in the appropriate roles, improving the quality and efficiency of management.

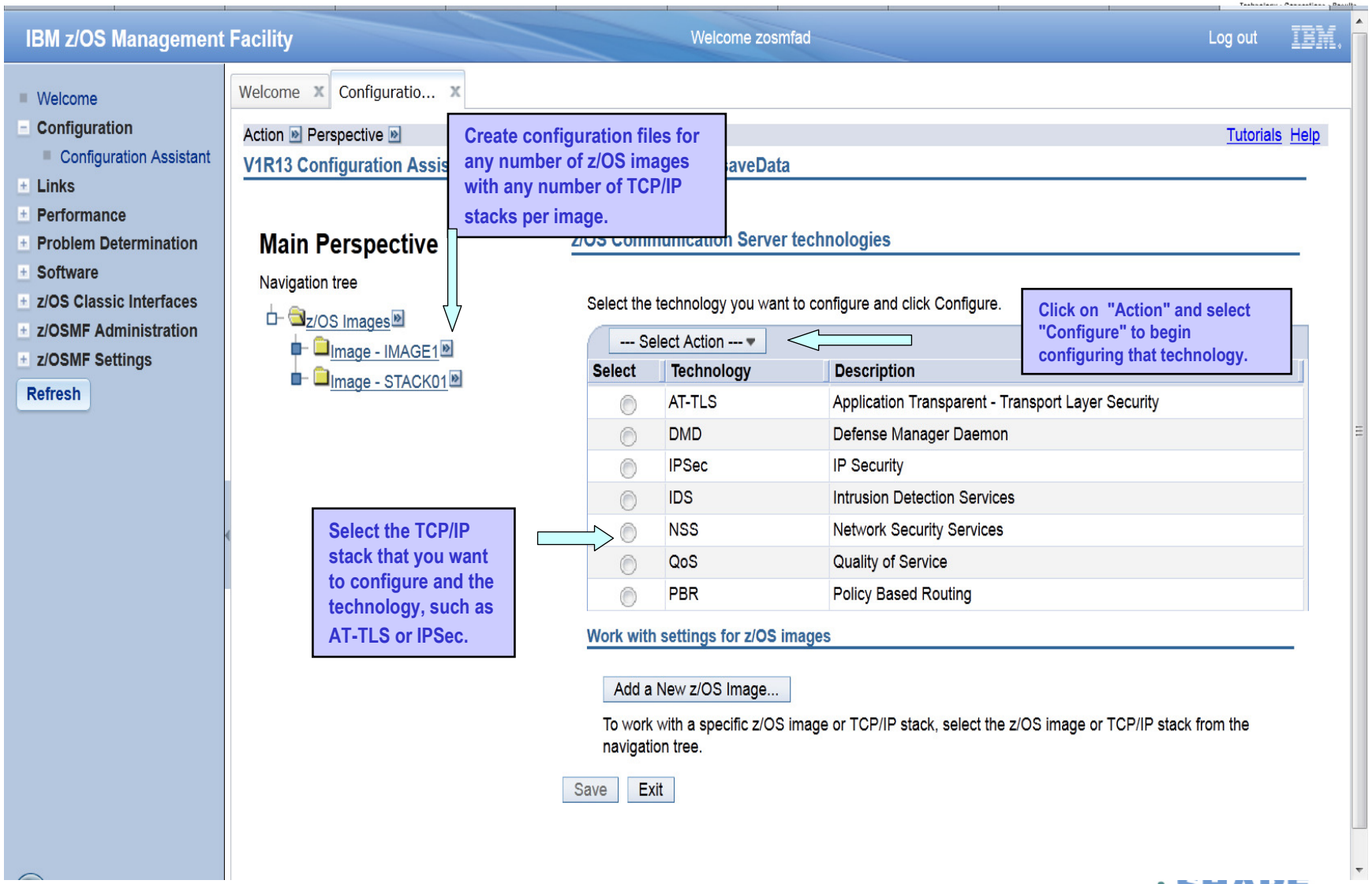
z/OSMF V1R13 Product Package

- **The IBM z/OS Management Facility is a separate licensed program product comprised of**
  - **z/OS Management Facility (5655-S28)**
  - **z/OS Management Facility Subscription and Support (5655-S29)**
- ***z/OSMF V1r13 contains the following FMID#***
  - ***HBBN700 (IBM WebSphere Application Server OEM Edition for z/OS v7.0)***
    - **COMPID 5655I3512 - WEBS APP SVR OEM**
  - HSMA130 - IBM z/OS Management Facility
    - COMPID 5655S28SM - zOSMF Core
    - COMPID 5655S28RJ - zOSMF RestJobs
  - HSMA131 - IBM z/OS Management Facility – ISPF
    - COMPID 5655S2801 - zOSMF ISPF
  - HSMA132 - IBM z/OS Management Facility – RM
    - COMPID 5655S2802 - zOSMF RM
  - HSMA133 - IBM z/OS Management Facility – WLM
    - COMPID 5655S2803 - zOSMF WLM
  - HSMA134 - IBM z/OS Management Facility – Deplymnt Mgr
    - COMPID 5655S2804 - zOSMF Core
  - HSMA135 - IBM z/OS Management Facility - Incident Log
    - COMPID 5655S2805 - zOSMF PD Incident Log
  - HSMA136 - IBM z/OS Management Facility – Capacity Prov
    - COMPID 5655S2806 - zOSMF Capacity Provisioning
  - HSMA13A - IBM z/OS Management Facility - Config Assist
    - COMPID 5655S28CA – Comm server Config ASST
  - HSMA13F - IBM z/OS Management Facility - DFSMS
    - COMPID 5655S28DF z/OSMF Storage manager

Other enhancements to z/OSMF 1.13

- Support for Internet Explorer 9 and Mozilla Firefox ESR 10
- The z/OSMF Incident Log application allows you to modify its default JCL to meet the needs of your organization (APAR PM74518)
- The z/OSMF ISPF application is enhanced to get the completion status of long running commands, without any user intervention (APAR PM74507)
- With APAR PM74502 on z/OSMF V1R13, the Systems and FTP Servers tasks are available under z/OSMF Settings.
  - The Systems task allows you to define the settings required for z/OSMF to access other systems in your installation and to define the HTTP proxy settings for z/OSMF to use when establishing an HTTPS connection to another system.
  - The FTP Servers task allows you to define the settings required for z/OSMF to access the FTP servers that are running on internal or external systems and to define the settings for z/OSMF to use when transferring files between systems.
- Usability: Additional filter capabilities are designed to improve ease of use for the user. The z/OSMF table filtering support has been enhanced to allow for AND/OR filtering as well as case sensitive filtering for more granular filtering capabilities (APAR PM74502)

Configuration Assistant for z/OS Comm. Server z/OSMF V1R13



Config. Assist. for z/OS Communications Server

- Delivered in 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.
- Updates for z/OSMF R13
  - Retrieving TCP/IP profile information from active TCP/IP stacks, enabling it to import lists of IP addresses that are available for policy configuration.
  - Allowing a single instance of the Configuration Assistant to be used to configure both z/OS V1.12 and z/OS V1.13 Communications Server. This is intended to allow you to configure systems in a mixed-release environment from a single instance of the Configuration Assistant running under z/OSMF.
  - Allowing a policy rule to be defined once for multiple stacks, to permit more efficient policy configuration for multiple systems without having to individually define every policy rule for every stack.
  - z/OS Communications Server intrusion detection services (IDS) technology is enhanced to add support for IPv6 traffic and also additional attack types, including Enterprise Extender, data hiding, and out of sequence packet denial of service attacks.
- New in z/OSMF V2.1
  - New function provided in support of V2R1 z/OS Communications Server Policy-Based Networking*
    - AT-TLS support of TLS V1.2
    - Policy-based Routing (PBR) support for IPv6

Incident Log - *Updates for z/OSMF 1.13*

- FTP destination and Firewall Proxy settings shared with Software deployment
  - Saved under new Settings Category, FTP servers task (new)
  - Can be updated during the wizard and can be locked for update
- The name of file being transmitted is also included in the message when FTP job is submitted
- Support the PDUU included with z/OS as of R13
- Use of ftp.data when using PDUU
- Use of system temp dataset for working with Unix files also – compressing before sending
- Retain search string added in the View Diagnostic Details

- Migrated dataset handling
  - In the past, working with migrated diagnostic data sets could be lengthy resulting in timeouts; now z/OSMF can process migrated data sets with improved handling
  - z/OSMF APAR - PM46302
  - z/OS CEA APAR – OA37149

- Managing deletion of incidents –
  - CEATool OA38812 , UA65835
  - Delete multiple incidents at a time that satisfy criteria
  - Deletes the diagnostic data that is associated with the incidents that will be deleted. That is: error log, error log summary, operations log, the entry for the dump in the sysplex dump directory and optionally, the SVC dump dataset.
  - The utility deletes only inactive incidents that are not associated with a problem number or tracking ID.

- Editing JCL for sending data
  - APAR PM74518
  - The z/OSMF Incident Log application will allow for customization of the generated JCL to help you develop an appropriate job stream customized for your environment.
  - This is implemented via an 'Edit JCL' option in the Send Diagnostic Data wizard.
  - Note: This is an advanced function and not recommended for general users.

Complete your session evaluation online at SHARE.org/BostonEval

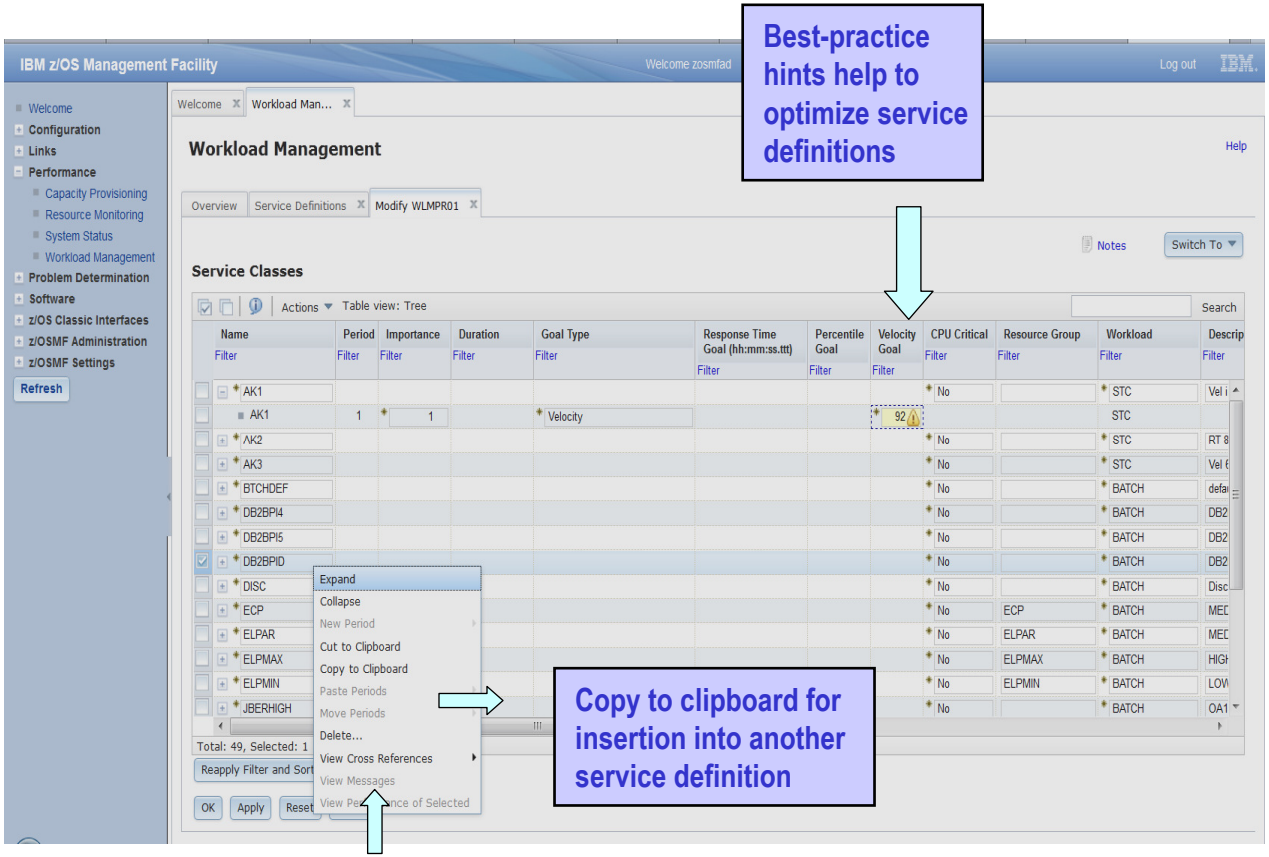
Software Installation

- z/OSMF V1.13 ordered in a z/OS ServerPac
  - Provides default customization via ServerPac provided customization job
    - Provided for Full System Replace installation path
    - Software Upgrade jobs and documentation provided but may need changes based on your existing environment
  - Can also use the WebSphere Application Server OEM Edition Configuration Guide and z/OSMF Configuration Guide
    - Product configuration scripts to setup, if defaults are not viable
- z/OSMF V1.13 ordered in a CBPDO
  - Use Program Directory to get started
  - Use the WebSphere Application Server OEM Edition Configuration Guide and z/OSMF Configuration Guide
    - Product configuration scripts to setup

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
  - Serialization of the editing of the active service definition
  - 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 editing without loosing the context
  - Cut, Copy, Paste of policy elements between service definitions



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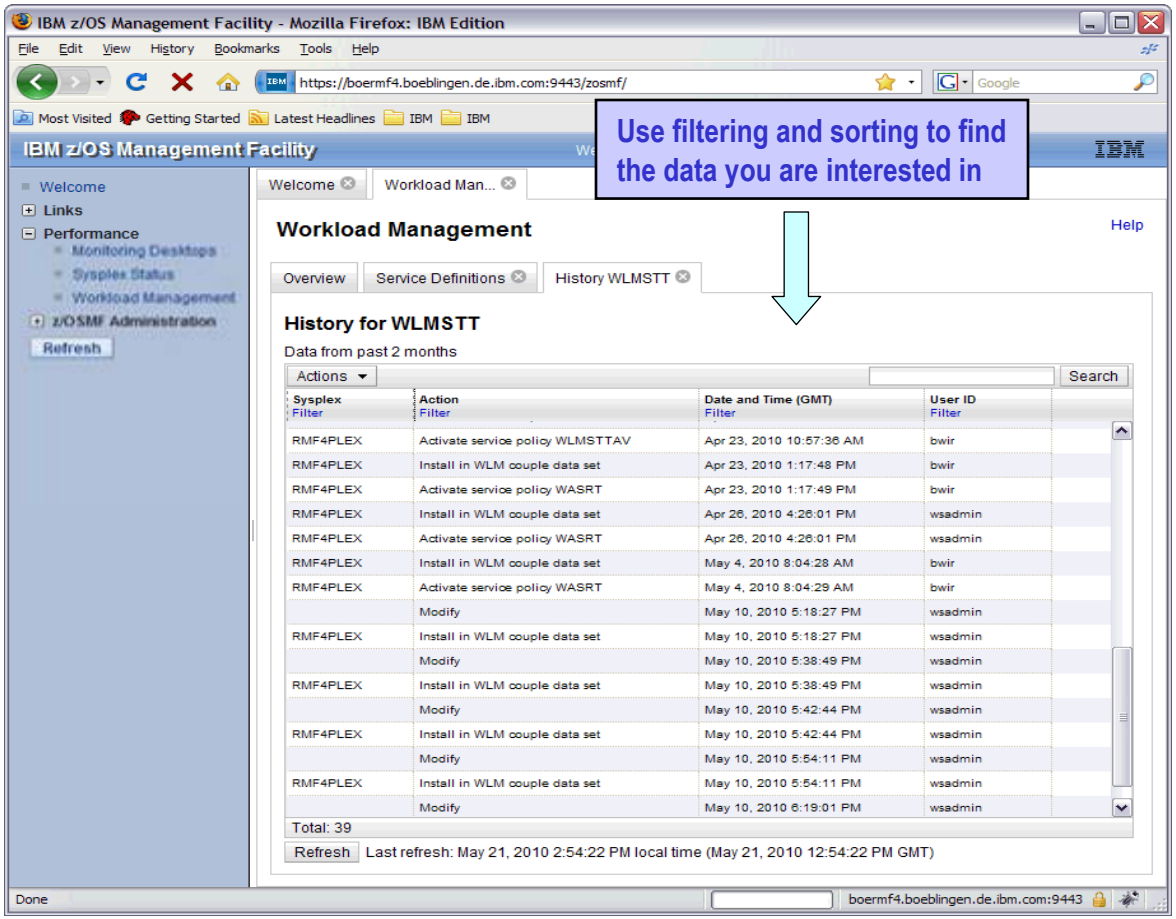
z/OSMF Workload Management (V1R12)

Service Definition History

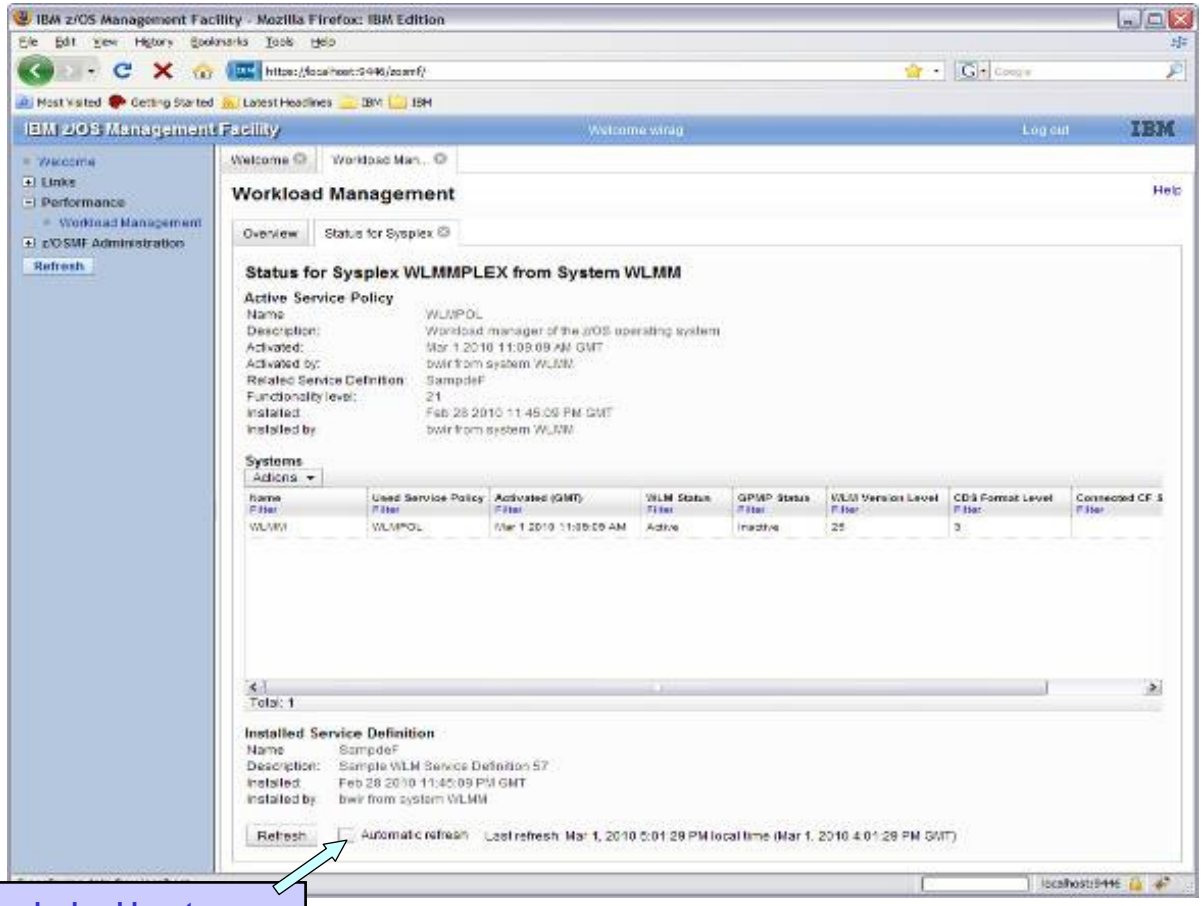
- **A history is provided for each service definition**
  - **Lists the activities performed on the service definition**
  - **Contains edit, install, activate, import, export activities**
  - **Displays timestamp and user**
  - **The user can customize how long the history is kept**



z/OSMF Workload Management (V1R12)

View Sysplex Status

- **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**
  - **WLM status report is automatically updated if the WLM status on the systems changes**



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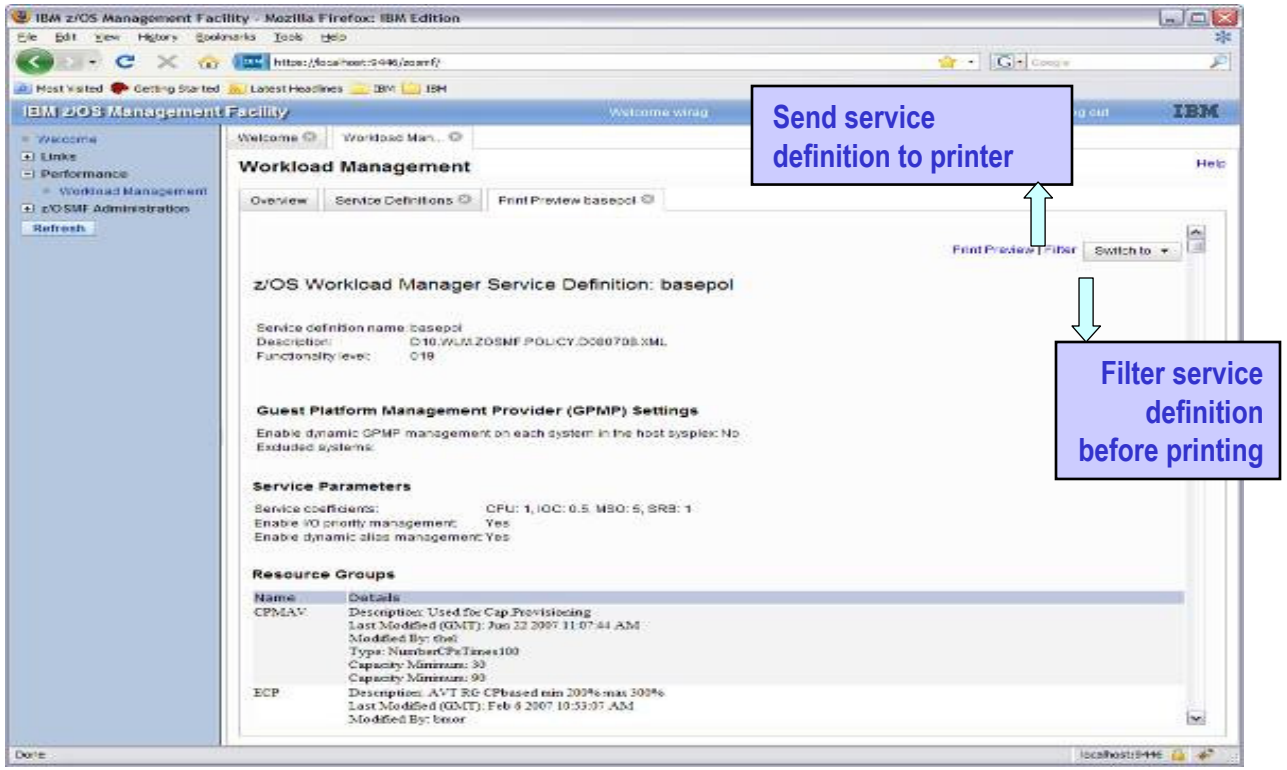
z/OSMF Workload Management (V1R12)

Printing Service Definitions

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



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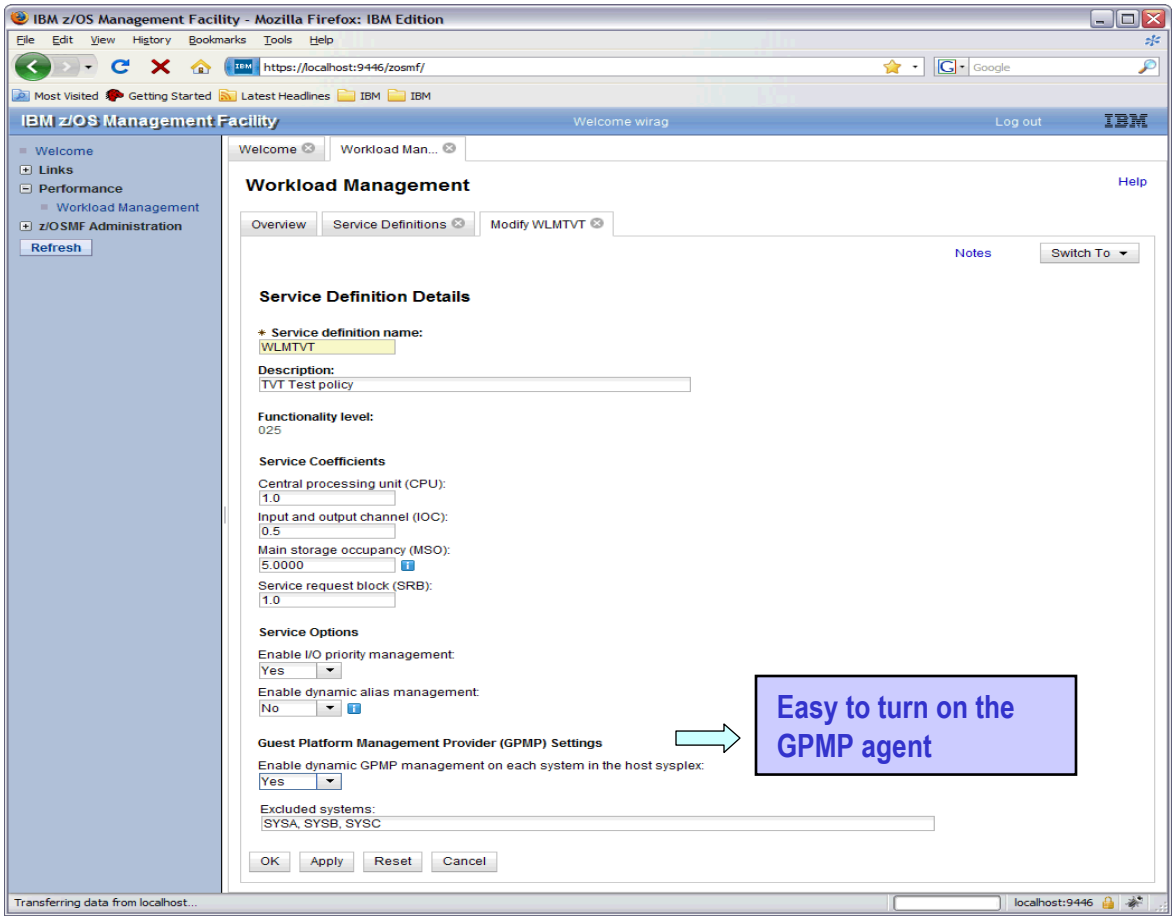
z/OSMF Workload Management

Can send basic data to the zEnterprise server

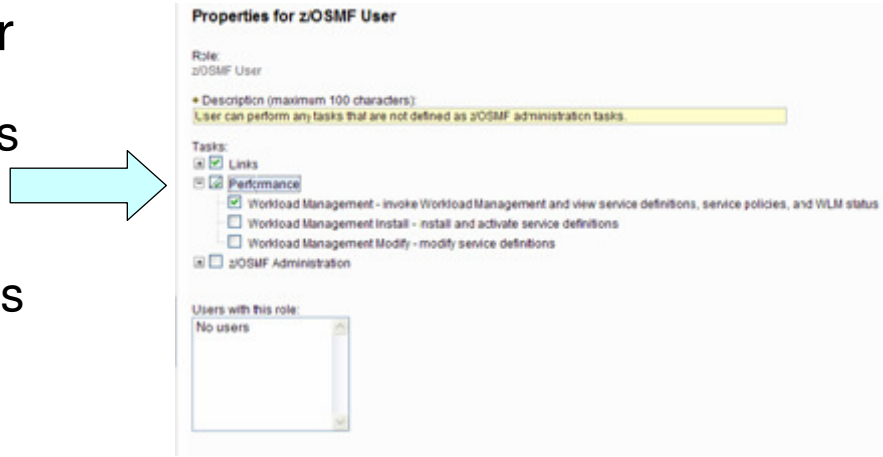
- **Integration with the new IBM zEnterprise server**
  - **Unified Resource Manager (Monitors Dashboard) can monitor heterogeneous workloads.**
- **New agent in z/OS R12 will feed data to Unified Resource Manager.**
  - **System resource utilization, system delays, paging delays**
- **Unified Resource 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**



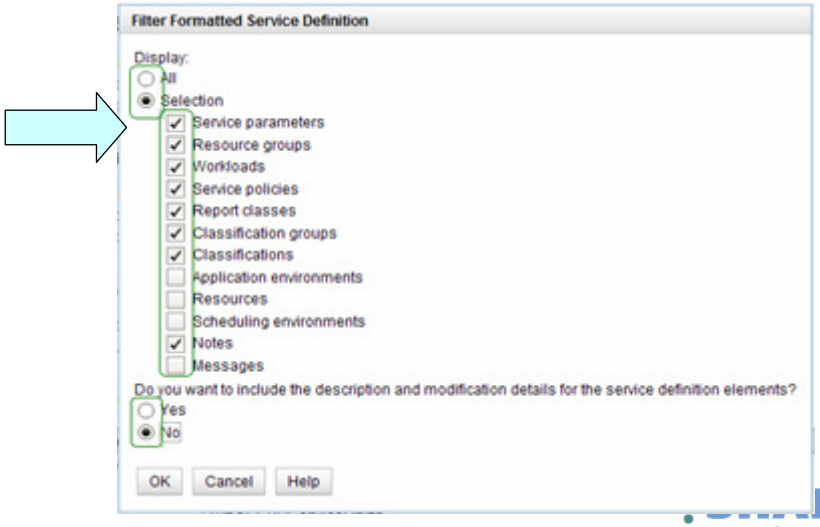
z/OSMF Workload Management

Updates for z/OSMF R13

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



- 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



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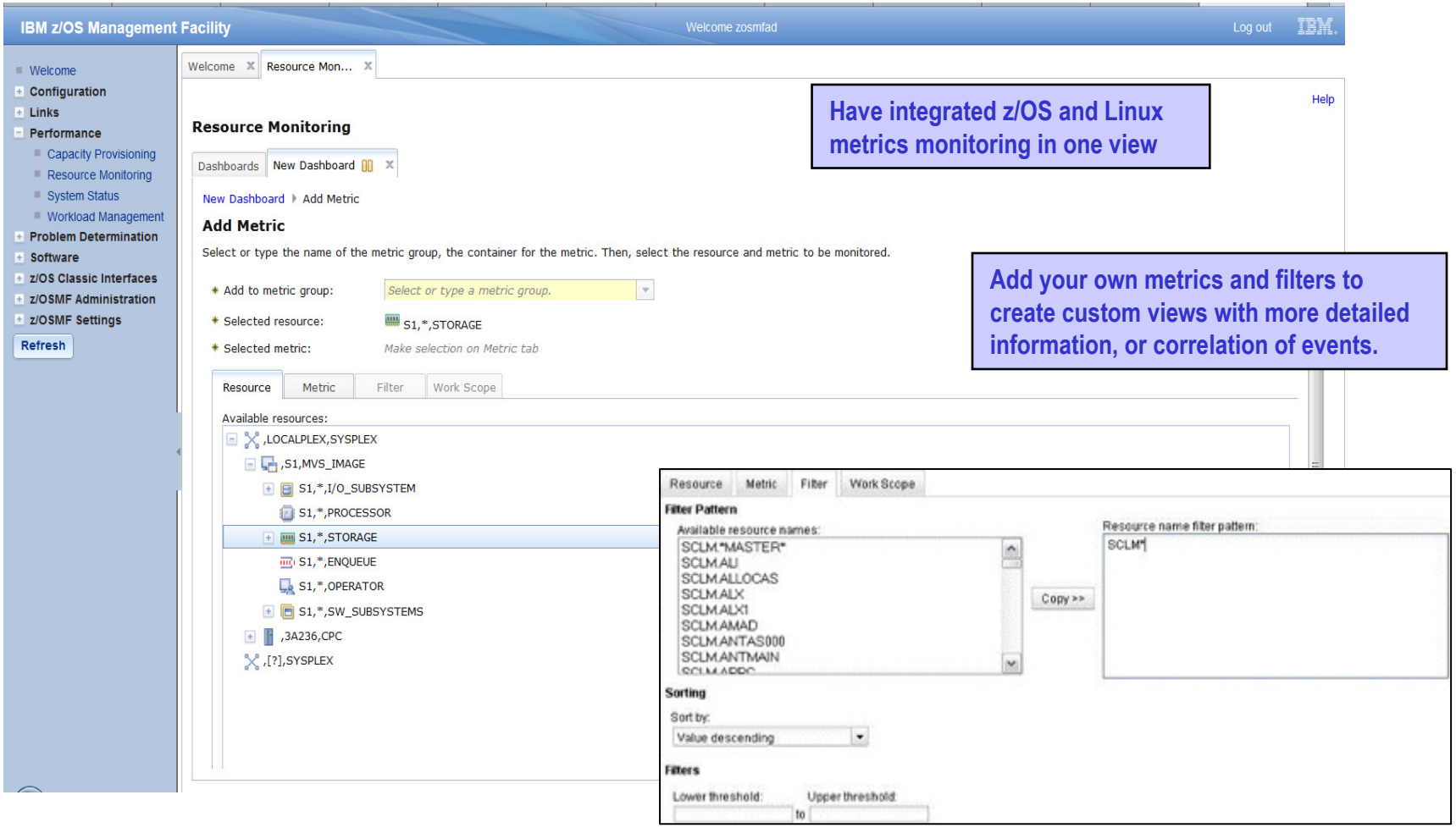
Dashboards – add a metric



Have integrated z/OS and Linux metrics monitoring in one view

Add your own metrics and filters to create custom views with more detailed information, or correlation of events.

z/OSMF Capacity Provisioning (R13)
Benefits

	Without Capacity Provisioning in z/OSMF**	With Capacity Provisioning in z/OSMF**
View active CP policy and compare with data provided by RMF and WLM	**Start stand-alone Windows-based client (CPCC) for Capacity Provisioning, connect to CPM and display active configuration report. Open z/OSMF in a browser and inspect RMF and WLM data.** **5 – 10 minutes until all tasks are completed**	**Use integrated z/OSMF GUI to work with CP, RMF and WLM and compare data provided by each exploiter.** **2 – 3 minutes until all tasks are completed**
Operating person needs to reuse existing connection	**Connection information like hostname, protocol and port needs to be manually gathered from primary person. Available domains must be known.** **Up to 5 minutes**	**Usage of shared connection repository in z/OSMF. List of available domains is retrieved form server and shown to user.** **No extra time to be spent**
Installation of the capacity provisioning UI application**	**Install Windows client (CPCC) on workstation.** **Hard to install on managed clients, 20 minutes otherwise**	**Centrally managed z/OSMF application available to all authorized users.** **No extra time to be spent**

The **z/OSMF Capacity Provisioning** task requires the base feature z/OS Capacity Provisioning

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

z/OSMF Software Deployment (R13)
Benefits

Task	Without z/OSMF Software Deployment	With z/OSMF Software Deployment
Identify missing requisite PTFs on instances that will share resources with the deployed software.	▪manually create and run SMP/E jobs to identify missing required service on other instances. ▪Analyze smpe report output manually ▪Missing coexistence PTFs can cause sysplex wide outages which require fallback to prior levels. ▪Deep smpe skills required	•2 wizard steps in the deployment checklist to generate the complete report •Supports cross-system checking. •Fewer skills, simpler
Identify regressed software on the prior level instance.and Identify required actions from PTF HOLDs.	▪manually create and run SMP/E job to compare source with prior instance. ▪Can not be done if source and prior instance are on different systems. ▪Manually identify the delta and required actions •No SMP/E report capability to compare source with the prior instance available. •Ignoring actions or regressing service on the target system causes problems to occur.	•3 wizard steps in the deployment checklist to generate the complete report •Supports cross-system checking. •Few minutes (can be combined with previous action)
Identify complete content of software to be deployed.	▪manually analyze SMP/E inventory to identify the correct content to deploy. •More typical is to deploy entire volumes or data sets by prefix. This requires strict volume and data set name conventions, which contribute to user errors. For example: • Copy PDSE without UNIX file system (was common with WAS V6) • Copy one data set without another causing partial APAR fixes. • Renaming a data set causes it to not be copied.	•Automatically use specified SMP/E inventory to identify the all of the data sets that compose the source to be deployed.

z/OSMF Software Deployment (R13)
Benefits

Task	Without z/OSMF Software Deployment	With z/OSMF Software Deployment
Modify the target software layout (data set names, location, and catalog).	Manual: •Define target system datasets, volumes and catalogs. •ensure the desired catalogs will be updated and new HLQs are identified •Best-guess for volume free space and required space for target data sets. •Mistakes typically require cleanup and deployment jobs to be rerun. •Hours	Automated checklist and wizard will; •Analyze target system catalogs to identify which will be updated for the target data sets, accounting for new, deleted, and replaced data sets. •Calculate volume free space and ensure target data sets will fit. Account for data sets added, deleted, replaced. •Ensure no existing data sets are accidentally clobbered. •Few minutes
Create deployment jobs.	•Create jobs from scratch or copy IBM supplied samples. Manual and error prone. •Easily allows users to mistakenly deploy subsets of software. •Inhibits exploiting new technologies, like zFS.	•Complete and accurate jobs are automatically created that always deploy complete software instances. •Supports current technologies.
View the planned target system updates before running the jobs.	•If done at all, manually compare source with the target system.	•Automatically generate reports to summarize the changes to the target system before making those changes. •Save reports for later audit or problem determination.