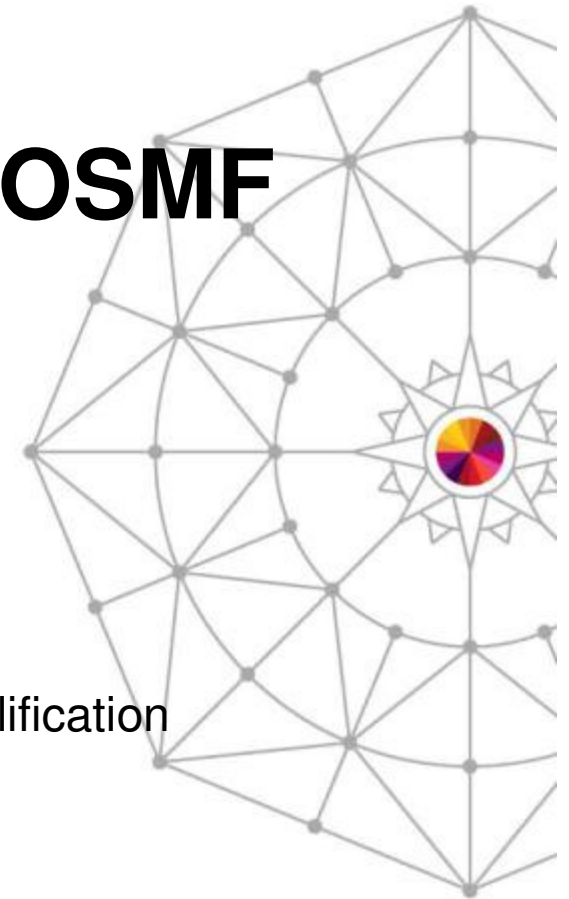# The new and improved z/OSMF 2.1….
Session 15115

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Trawademarks

Agenda

- z/OSMF V2.1 highlights
- New functions
  - z/OSMF Workflow
  - Support for External Applications
    - Exploitation by SDSF
  - New Dataset and files REST Api
- Enhancements to existing plugins
- Other enhancements
  - JOBs REST Apis
- Looking ahead
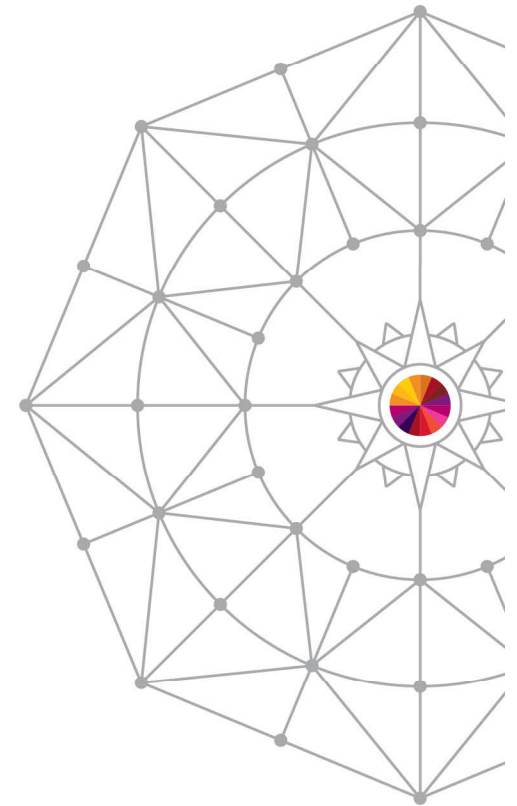
z/OSMF V2.1 highlights

- z/OSMF 2.1 delivered in 3Q2013 with new enhancements announced in Feb 2014.

- z/OSMF V2.1 is rebased to use the WebSphere Application Server for z/OS V8.5. Liberty profile. This provides improved performance, faster startup, reduced resource requirements, improved service update process and simplified configuration.

- A new z/OSMF Workflow Application is delivered to simplify performing tasks on z/OS.

  - Workflow exploitation for z/OSMF plugin configuration

- New support for external applications to create and import a plug-in into z/OSMF **

  - New Import Manager task to support registration and management of external applications and links and exploitation by SDSF (APAR 86303)

- New RESTful API allows an HTTP client application to list data set names and z/OS UNIX directories or files.**

- Enhancements to plugins and Jobs Rest API.

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

z/OSMF 2.1

IBM z/OS Management

- Welcome
- Notifications
- Workflows
- **Configuration**
  - Configuration Assistant
- **Links**
  - ShopzSeries
  - Support for z/OS
  - System z Redbooks
  - WSC Flashes & Techdocs
  - z/OS Basics Information C
  - z/OS Home Page
  - z/OS Internet Library
- **Performance**
  - Capacity Provisioning
  - Resource Monitoring
  - System Status
  - Workload Management
- **Problem Determination**
  - Incident Log
- **Software**
  - Software Management
- **z/OS Classic Interfaces**
  - ISPF
- **z/OSMF Administration**
  - Application Linking Manager
  - Links
- **z/OSMF Settings**
  - FTP Servers
  - Systems
- **Refresh**

- **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 (R13) (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 **(R13)** (updated)
  - **Management:** deployment of installed software simpler and safer, manage service levels and product levels
- **z/OS classic Interface** category **(R13)**
  - **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

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z/OSMF 2.1 (including new enhancements)**

IBM z/OS Management

- Welcome
- Notifications
- Workflows
- ☐ Configuration
  - Configuration Assistant
- ☐ Jobs and Resources
  - SDSF
- ☐ Links
- ☐ Performance
  - Capacity Provisioning
  - Resource Monitoring
  - System Status
  - Workload Management
- ☐ Problem Determination
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  - ISPF
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  - Import Manager
  - Links
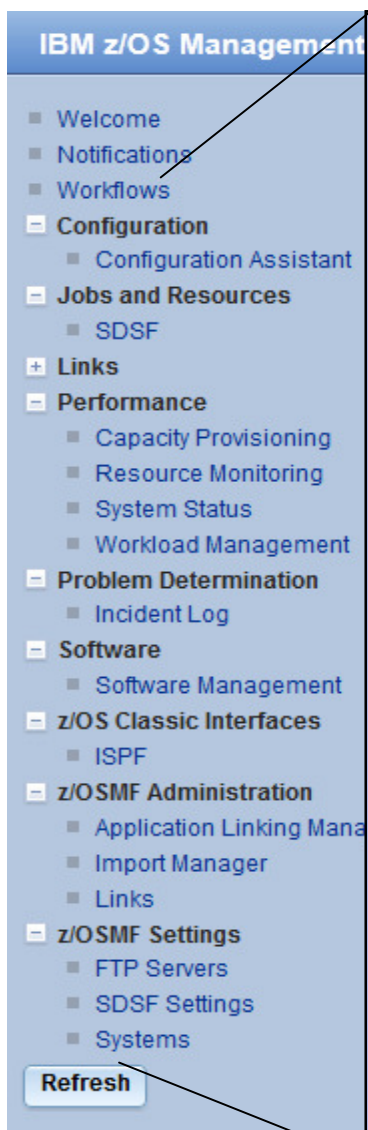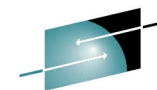- ☐ z/OSMF Settings
  - FTP Servers
  - SDSF Settings
  - Systems

Refresh

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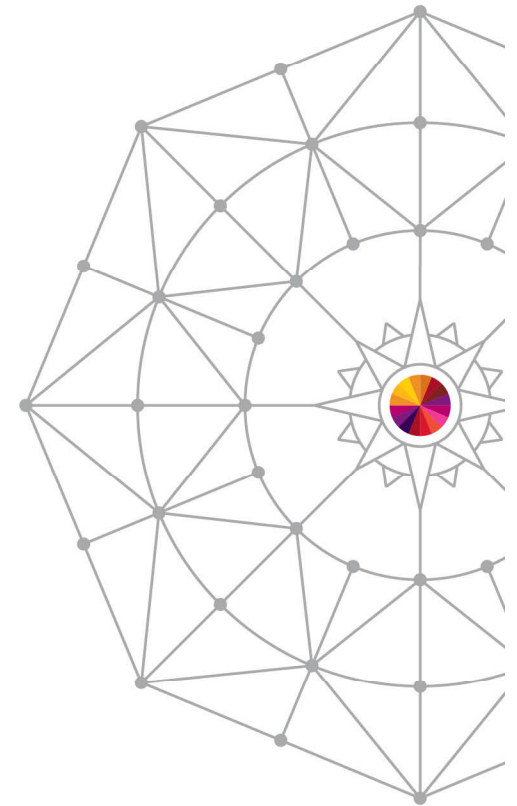- **z/OSMF Settings** category (New!)
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** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

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z/OSMF Workflow

- **Problem being solved:**
  - **Configuring a new product or component on z/OS is complex and a pain point for end users**
  - **There is a requirement for a consistent, simplified and less error prone way to configure and perform a set of tasks on z/OS**
- **z/OSMF provides a workflow framework with a focus to simplify configuration on z/OS or perform a set of tasks on z/OS**
  - **z/OSMF V2.1 delivers on stage 1 of the function**
- **z/OSMF workflow function will enable bringing together the end-to-end steps for performing a task on z/OS**
  - **Provide an programmatic to-do list (aka workflow)**
  - **Shorten the time to value**
- **Note: the workflow framework will be generic, although the initial focus is on configuration tasks.**
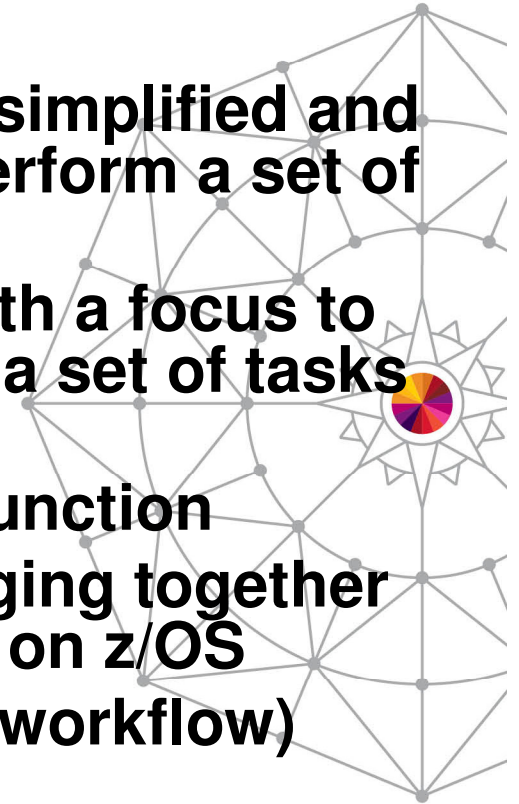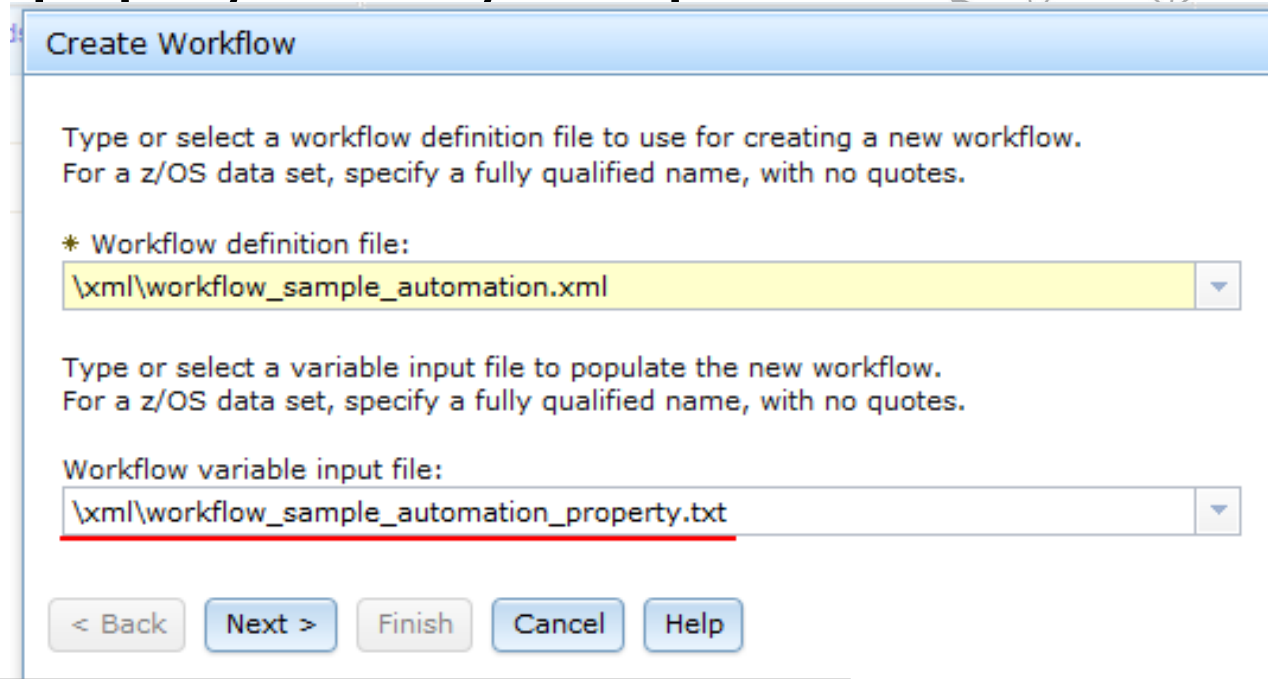
z/OSMF V2.1 Workflows

- Workflows will provide a guided flow through end-end steps required 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
    - User can provide variable input manually or via an input file (new)**
  - Steps may define dependency on other steps
  - Steps go through various stages until complete
    - The stages may be unassigned, assigned, accepted, not ready, ready, in progress, complete, complete (override), skipped
  - Steps may be performed automatically if they meet criteria (new)**
  - History is 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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Create Workflow with Input variables in a property file

- **The user must create an instance of the workflow to perform the steps in a workflow.**

- **When creating a workflow instance, in addition to the workflow XML file name, the user can specify a property file which includes all variables, instead of having to input one by one manually. This will greatly improve working efficiency.**

- **The content of a property file is key value pair.**

Create Workflow

Type or select a workflow definition file to use for creating a new workflow.
For a z/OS data set, specify a fully qualified name, with no quotes.

* Workflow definition file:

```
\xml\workflow_sample_automation.xml
```

Type or select a variable input file to populate the new workflow.
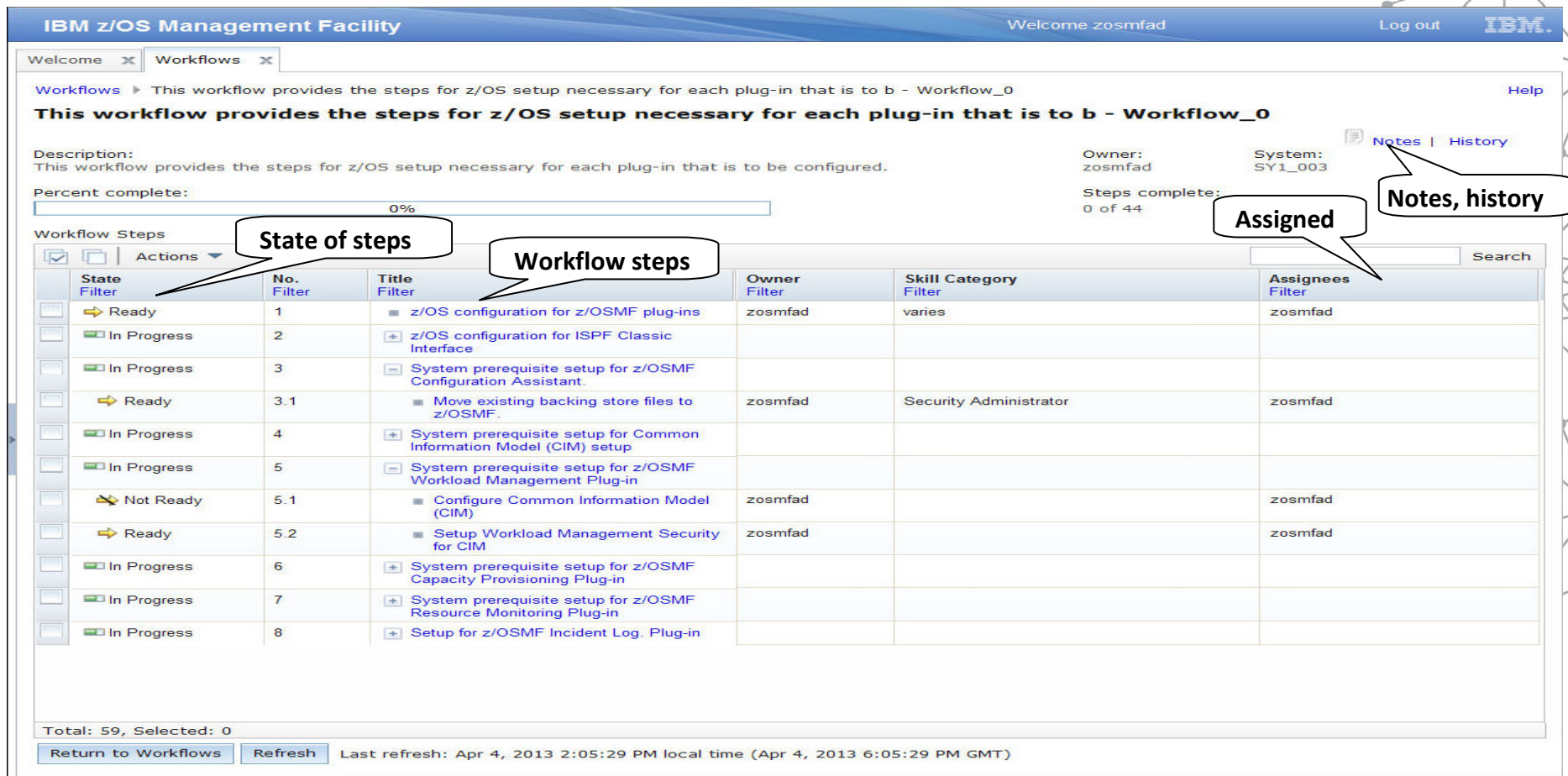For a z/OS data set, specify a fully qualified name, with no quotes.

Workflow variable input file:

```
\xml\workflow_sample_automation_property.txt
```

[< Back] [Next >] [Finish] [Cancel] [Help]

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z/OSMF configuration - Workflow example

- **The steps in the workflow XML are dynamically loaded into the z/OSMF Workflows task. The end user performs these steps and wizards manually or automatically to complete the task on z/OS.**

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

z/OSMF Workflow JCL wizard

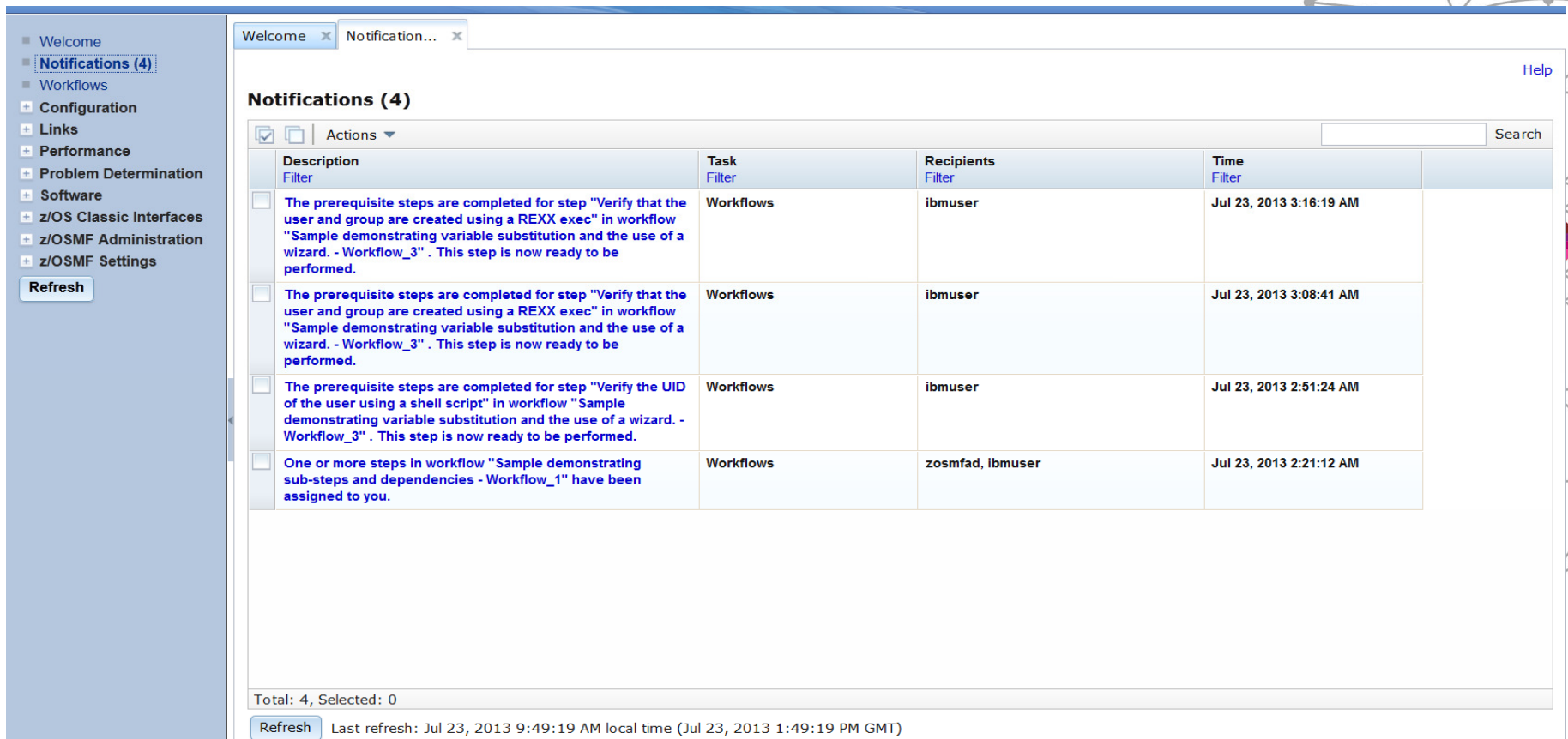- The JCL template provided with the workflow is updated with the current variable values and can also be modified and saved.
- The JCL can run automatically if eligible and all input requirements are met**.
  - The workflow XML must state that the step can run automatically.

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Notifications

- When a z/OSMF user logs in, they can see if there is any notification for them
- New notifications that have not been 'read' are included in the count for a quick view.
- Notification are sent when a workflow step is assigned or when a step is ready after the dependency is satisfied


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Use Case scenario

- A product decides to participate in z/OSMF workflow
- The product owner defines the metadata file with steps required by their product
    - z/OSMF will define and publish the schema (and samples) for product owners to code to
- The product delivers its metadata file with their product package (SMP/E or non SMP/E) and documents its location in their program directory (or equivalent)
    - It is possible that the metadata file is generated as part of some other configuration steps for that product.
- The product is installed (SMP/E or non SMP/E) on the customer's z/OS system
- The customer now wants to configure the product on their z/OS system
- They will follow the product instructions for configuring the product and at some point in the instructions it will instruct to use the z/OSMF Workflow task to configure the z/OS artifacts
    - The customer/system programmer would then need to log in to z/OSMF and open the 'Workflow task'
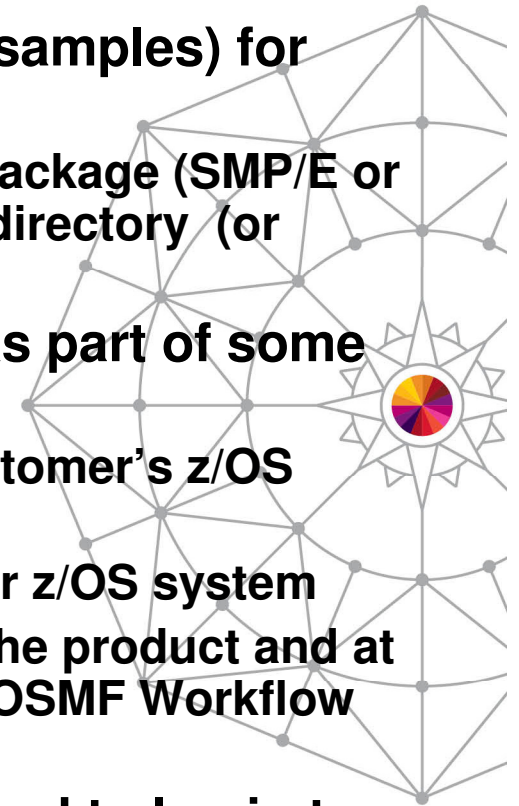
Use case scenario

- **The system programmer logs on to z/OSMF and loads the workflow metadata file for the unit to be configured.**
- **In the new Workflow task, the user can define the unit to be configured by identifying the metadata file via Action: CREATE in this new task**
  - **Prompts the user to provide the fully qualified location**
  - **Reads in the metadata file(s). Once loaded, it is ready to be used. The original metadata file(s) is no longer used. If the product provides an update to the metadata file(s), then the z/OSMF user would need to have the Workflow task re-import it to pick up the changes**
- **The system programmer can then start by opening a workflow**
- **This will start a workflow instance that will allow the user to view/assign/perform all the steps necessary to configure the given product**

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

Workflow - Benefit

Example Task	**Without** z/OSMF Workflow	**With** z/OSMF Workflow
Product & System Configuration	Manual process, users need to refer document, checklist, execute JCL/REXX/Script, verify the output. Frequent window switching is error prone.	Predefined steps, integrated environment for JCL/REXX/Script edit, execution and display make the configuration convenient.
Cooperation & Management	For complicated, multi-person involved work, lack of overall view & management .	Unified process & view for system / storage/ security /middleware owners Provides convenient job assignment and progress tracking
Skills and risks	Need in-depth knowledge of the product and local environment, customized tips & documents are scattered, difficult to maintain	The workflow wizard & instructions make the configuration easier. Metadata file is in z/OS server, easy to maintain.

z/OSMF workflow exploitation

- **z/OSMF exploits the z/OSMF workflow for z/OSMF plugin configuration**
  - **V2R1 delivers stage 1 of the configuration workflow.**
  - **Intent is to enhance over time and add more capability**
  - **The configuration guide is still the complete source of information, although the workflow may be used to manage the steps required to setup the system pre requisites at a high level.**
- **z/OSMF Configuration Assistant delivers seven new workflows, and uses the Workflow engine to setup the policy agent and other daemons.**
- **Samples are provided to help create additional workflows**

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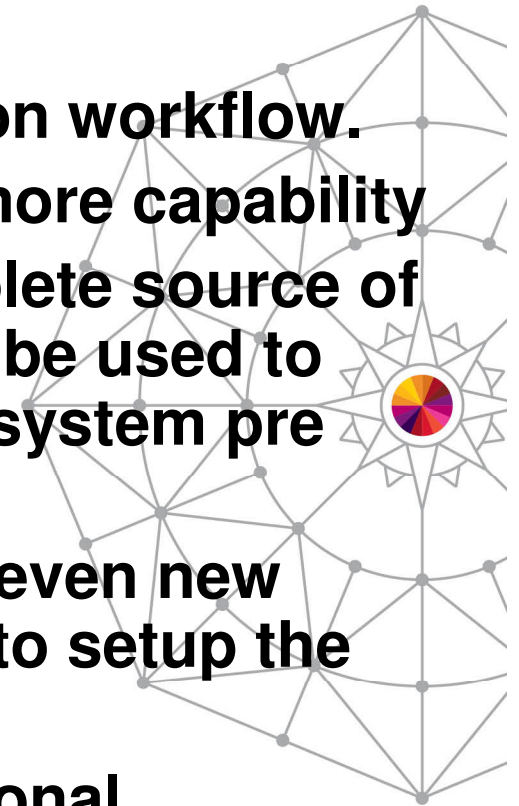
Workflow – z/OSMF Plug-in Configuration (1)**

- z/OSMF provides a **workflow sample** (izu.config.setup.xml) to simplify z/OS customization for each plug-in. Following 3 group of steps are combined to complete the auto discovery and configuration of incident log related setup.

  - "Highlights and pre-reqs of Config Workflow"
    - This workflow is used describe must-be-known items in order to run the workflow auto performing steps.
    - The dependency of priced software are addressed
    - Authorities and access level to z/OS resources required by auto-performing scripts are addressed

  - "Incident Log plug-in"
    - these are the existing workflows developed in V2.1 GA
    - these workflow steps are enhanced with auto-performing scripts
    - these workflows are used to run the auto-performing scripts to configure incident log related z/OS setup(SDDIR,CEA,SYSREXX,etc).

  - "Add Plug-ins into z/OSMF Server"
    - These are the new workflows to do the "-add" function of a plug-in
    - Can be used to add the incident log plug-in into current z/OSMF server.
    - Can be used to add other plug-ins to z/OSMF server as well.
    - Provide the same function as "-add" option of configuration & setup scripts("izusetup.sh -add") , but it is provided on z/OSMF web console
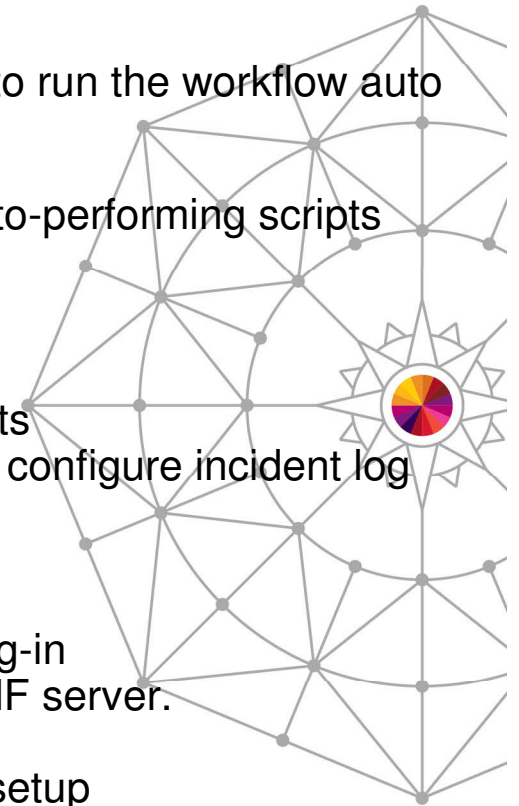
** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

Workflow – z/OSMF Plug-in Configuration (2)

State Filter	No. Filter	Title Filter
⇨ Ready	1	■ Highlights and pre-reqs of Config Workflow
🖳 In Progress	2	⊞ Configuration Assistant plug-in
🖳 In Progress	3	⊞ ISPF plug-in
🖳 In Progress	4	⊞ Common Information Model (CIM) server
🖳 In Progress	5	⊞ Workload Management plug-in
🖳 In Progress	6	⊞ Resource Monitoring plug-in
🖳 In Progress	7	⊞ Capacity Provisioning plug-in
🖳 In Progress	8	⊟ Incident Log plug-in
⇨ Not Ready	8.1	■ Ensure that the CIM server is configured
🖳 In Progress	8.2	⊞ Set up a sysplex dump directory
🖳 In Progress	8.3	⊞ (Optional) Configure dump analysis and el...
🖳 In Progress	8.4	⊞ Configuring automatic dump data set allocation
🖳 In Progress	8.5	⊞ Ensure that CEA is configured
🖳 In Progress	8.6	⊞ Ensure that SYSREXX is configured
⇨ Ready	8.7	■ Authorizing the data set for AMATERS...
🖳 In Progress	9	⊟ Add Plug-ins into zOSMF Server
🖳 In Progress	9.1	⊞ Choose to-be-added plug-ins and setup its properties
🖳 In Progress	9.2	⊞ Perform -add function
⇨ Ready	9.3	■ Re-start the z/OSMF Server

- Auto-performing steps are developed for z/OS setup (SDDIR,CEA,SYSREXX,etc).

- This step and sub steps are to select which plugins to configure..
- The variables corresponding to each property in the .cfg file are presented and guide the users to specify the values which are saved in the override file

- This workflow step and sub steps perform the 3 steps previously performed to add a plug-in
- Workflow receives the necessary Environment variables, and call the "izusetup.sh -add" function directly. The messages are also re-direct in to the 'Status' panel without any changes

- A manual step telling user should re-cycle the current z/OSMF server to refresh

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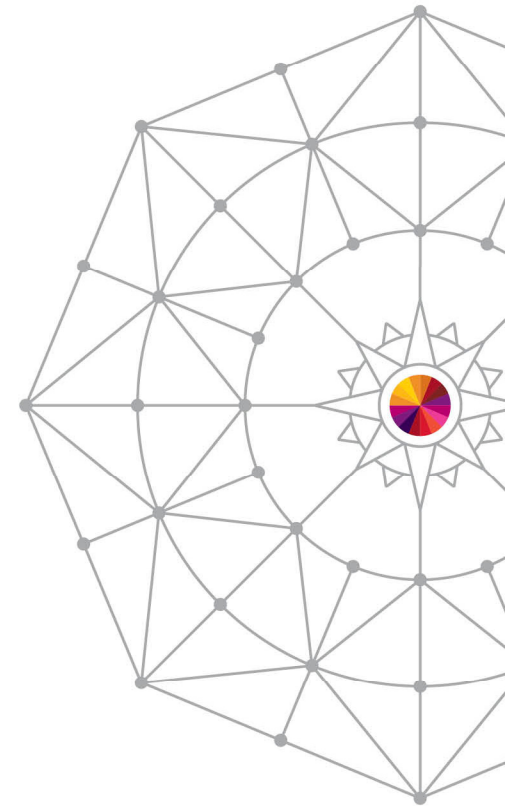
Support for external applications

- **Statement of Direction in z/OSMF V2.1 announcement on July 23, 2013**

- **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.**

- **This support will be made available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs**

External application support**

- **External application support enables non z/OSMF web application – html and/or JavaScript applications to render the UI and run in the z/OSMF browser.**

- **The external applications can be added to z/OSMF navigation in a category selected by the user, and communicate with associated z/OS back-end components.**

- **Customers and vendors can create their own web applications and register to z/OSMF at runtime.**
  - **SDSF is the first exploiter.**

- **No special configuration is required to add the web application to the navigation.**

- **z/OS customization may be needed for backend z/OS component e.g. security setup, starting the z/OS function**
  - **Application specific z/OS setup should be defined by the application owner.**

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs
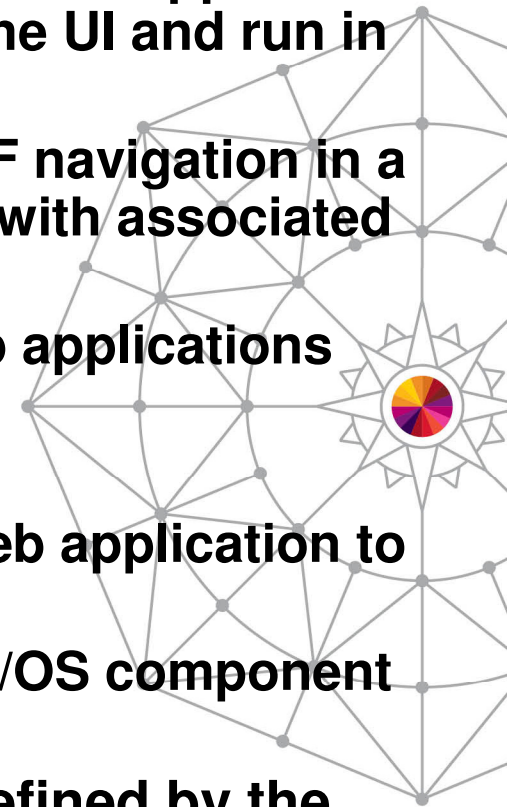
Process of plug-in registration

- Before adding a plug-in to z/OSMF, user should have one or more web applications ready for the z/OS application, including the client side source code and online help documentation in the Unix file system.

- The z/OS application needs to provide a property file that describes the attributes for the web interface and defines all the required parameters for z/OSMF.

- The user can register the web application by providing the path of the property file in the Import Manager.

- The Import Manager task will convert the parameters in property file into plug-in object and register the plug-in with tasks.

- With the successful registration and FileServingServlet, the navigation URLs of external plug-ins tasks could be accessed following the pattern of "/zosmf/IzuUICommon/externalfiles/relativefilepath".
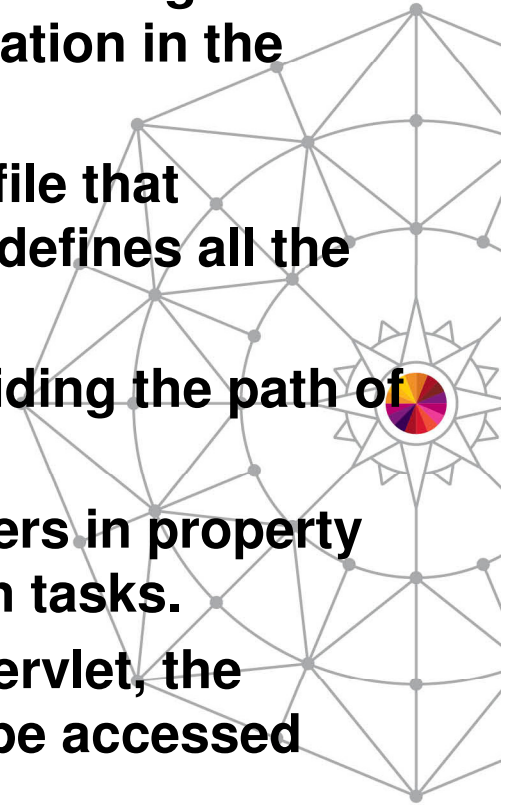
External application properties file

- **In one property file only one type of definition can be specified**
  - **External plug-ins**
  - **Application linking handlers**
  - **Application linking events**
  - **External links**
- **A properties file may contain multiple definitions of any one type**
  - **multiple links, or multiple handlers or multiple plugins**
- **z/OSMF will provide format of properties file in the programming guide**
- **z/OSMF will provide services to integrate with the z/OSMF framework**
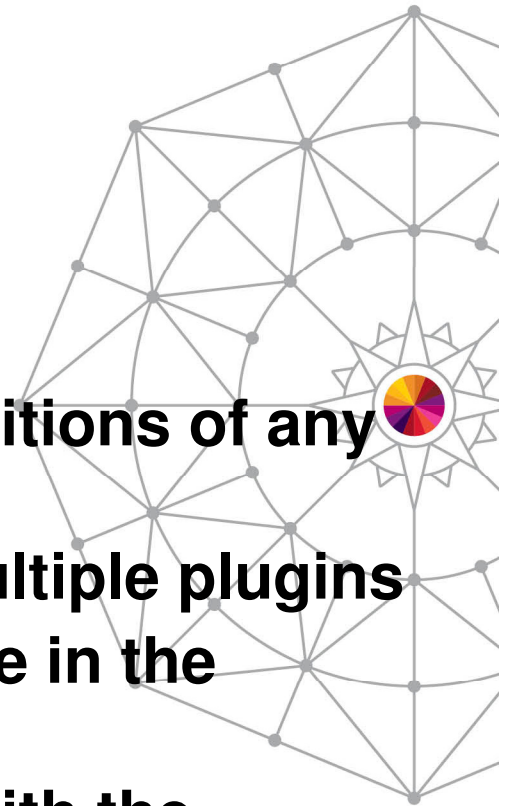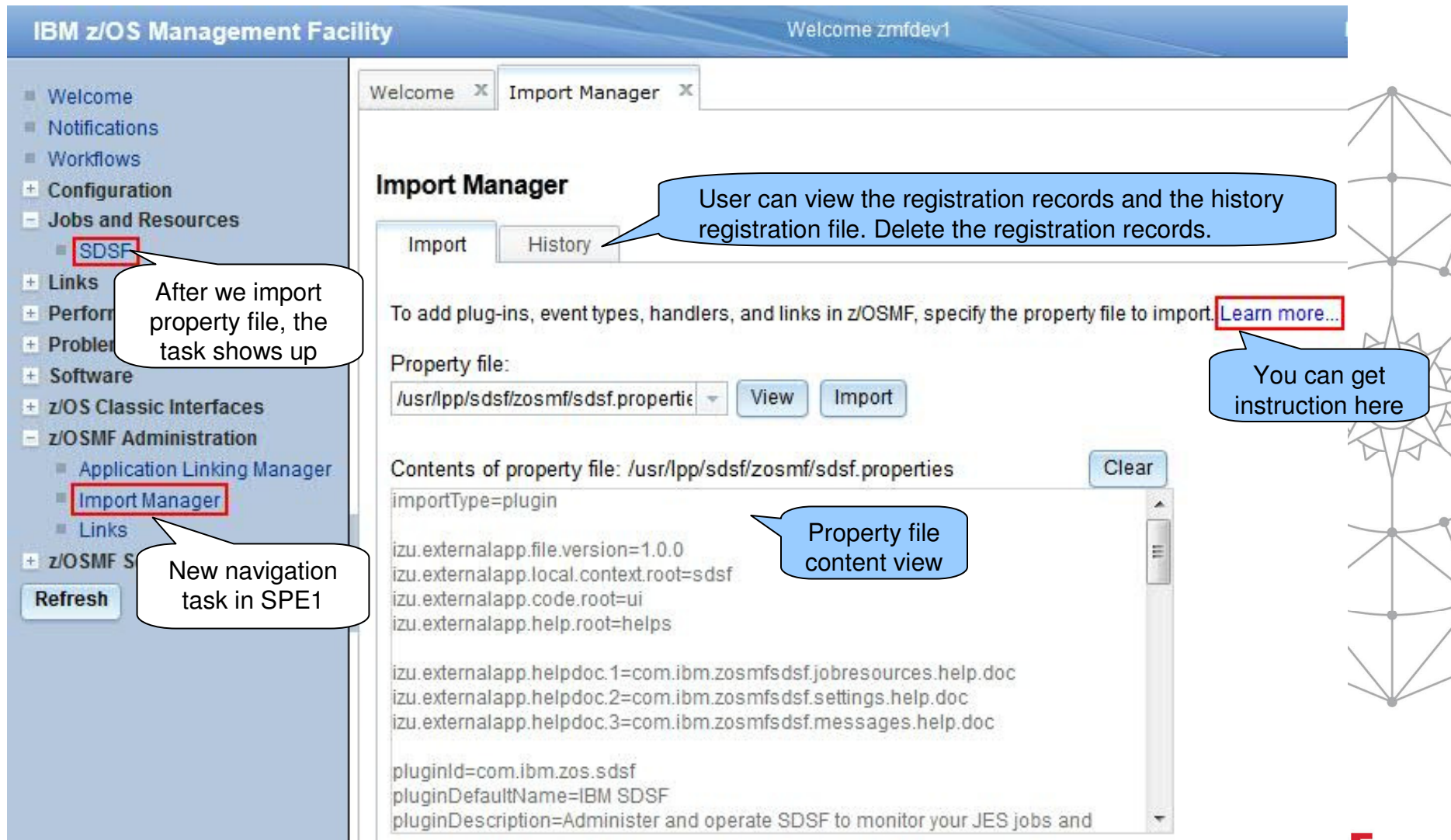
External Application Support in z/OSMF

- **External application support includes two major parts:**
  - **A set of Restful services which are invoked by external application to retrieve or send data to associated z/OS back-end applications. Services include:**
    - **TSO/E Services,**
    - **Persistence services and**
    - **File Serving Services**

  - **Import Manager, task and application linking registration mechanism by properties files, externalized JavaScript logger and JavaScript callbacks.**
    - **The new Import Manager task under z/OSMF Administration provides the GUI interface to import the properties file and register the web application in the navigation**

Import Manager – Import Tab

IBM z/OS Management Facility   Welcome zmfdev1

- Welcome
- Notifications
- Workflows
- + Configuration
- − Jobs and Resources
  - SDSF
- + Links
- + Perform
- + Proble
- + Software
- + z/OS Classic Interfaces
- − z/OSMF Administration
  - Application Linking Manager
  - Import Manager
  - Links
- + z/OSMF S
- Refresh

Welcome ✕ | Import Manager ✕

Import Manager

Import | History

To add plug-ins, event types, handlers, and links in z/OSMF, specify the property file to import. Learn more...

Property file:
/usr/lpp/sdsf/zosmf/sdsf.propertie ▾ | View | Import

Contents of property file: /usr/lpp/sdsf/zosmf/sdsf.properties | Clear

```
importType=plugin

izu.externalapp.file.version=1.0.0
izu.externalapp.local.context.root=sdsf
izu.externalapp.code.root=ui
izu.externalapp.help.root=helps

izu.externalapp.helpdoc.1=com.ibm.zosmfsdsf.jobresources.help.doc
izu.externalapp.helpdoc.2=com.ibm.zosmfsdsf.settings.help.doc
izu.externalapp.helpdoc.3=com.ibm.zosmfsdsf.messages.help.doc

pluginId=com.ibm.zos.sdsf
pluginDefaultName=IBM SDSF
pluginDescription=Administer and operate SDSF to monitor your JES jobs and
```

Callouts:
- User can view the registration records and the history registration file. Delete the registration records.
- After we import property file, the task shows up
- You can get instruction here
- New navigation task in SPE1
- Property file content view

Import Manager**

- **The Import Manager task provides the following functions:**
    - **Add plug-in to z/OSMF**
    - **Add application linking event types and handlers to z/OSMF.**
    - **Add links to z/OSMF**
    - **View the property file content before import.**
    - **View/Delete the import history records.**
    - **View the historical property file content of the import records.**
    - **Application linking from Links and Application Linking Manager tasks to Import Manager**
- **Note: Existing Links task registers external links one at a time via GUI interface**
    - **User has to type in all the information on the GUI panel**
- **Note: Existing Application linking manager still available for defining application linking events and handlers via a GUI**
    - **one at a time**
    - **required for other apps that are not hosted in z/OSMF**

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs
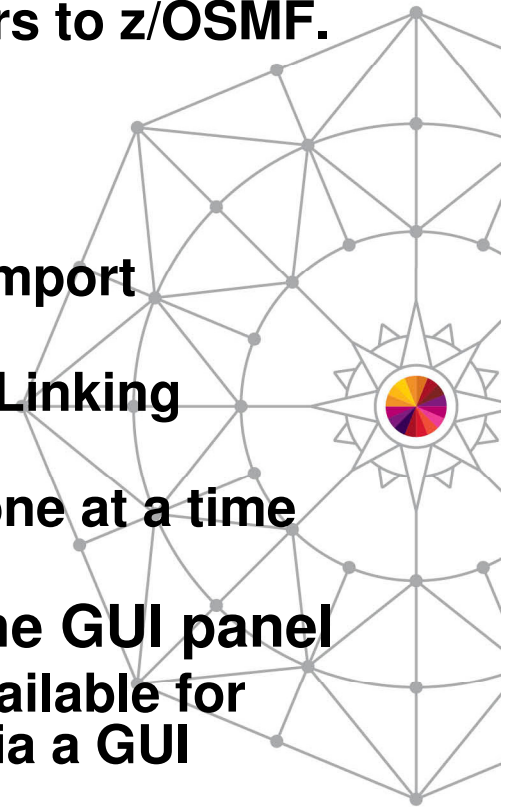
SDSF Plug-in** Overview

- The SDSF product provides a web interface through a z/OSMF SDSF Plug-in. The Javascript UI calls RESTful web services to retrieve data and perform actions.

- This Plug-in can
  - Show graphic/textual overview about Processors, Spool, Health Checker
  - Display a table of Job list in different status/queue. The property column, filters, sort can be customized, and the table can be exported and printed.
  - Enable users to select a Job, view detailed properties, and perform actions such as Cancel, Edit, Submit, ect.
  - Issue system command and display output.
  - Display the User Session Log. Users can search and take notes.

** available with SDSF PTF for APAR PM86303 and z/OSMF V2R1 with PTFs for APAR PM98630

SDSF Overview

SDSF (PLEX1)

Overview

Explore the summary data, or choose a task.

▼ System Activity Summary: SYS00001 (Local)

System: SYS00001 (Local) ▼   View text

System Activity Percent Busy

zAAP   50%
zIIP   84%
LPAR   25%
MVS / SRM   100%
Spool   65%

z/OS Health Checks by Severity

None   28
Low   59
Medium   65
High   82

Active checks: 110   Eligible checks: 200

Refresh Last refresh: 9 seconds ago   View icons

▼ Jobs

	Active Jobs	Work with active jobs
	All Jobs	Work with jobs in any phase of processing
	Input Queue	Work with jobs on the input queue
	Output Queue	Work with jobs on the output queue
	Held Output Queue	Work with jobs on the held output queue

▼ z/OS Health Checks

| | z/OS Health Checks | Manage z/OS Health Checks |

▼ z/OS Commands and Logs

System command line: SYS00001 (Local)   Command reference

Type command here (Maximum 128 characters) ▼   Submit

User Session Log   Display and search the User Session Log

Common Filters   ⑦

Job name: Owner:
ZMFDEV1 ▼   ZMFDEV1 ▼   Apply Reset
System: Destinations (1-4):
* ▼   * ▼
                                                  Less –

Different Common Filters can apply to different views : Active Jobs, All Jobs, Held Output Queue, Input Queue, Output Queue, Health Checks

View text can change the graphics to text view. **System** drop list or **Refresh** button can update the System Activity Summary. **Common Filters** don't apply to this view.

This link can change to more abbreviated icon view. Clicking each view link can open new tab

This link opens help related to starting words typed by users.
A command history of 30 commands will be saved in the combo box . Command responses are displayed in a pop-up window. The results also go to the User Session Log and can be seen there.

All Jobs View

Return Code Counts (28) — Common and table filters applied

Abends (9)

- Abends
- System Failure
- JCL Error
- CC12 / CC16
- CC4 / CC8
- CC0
- Other
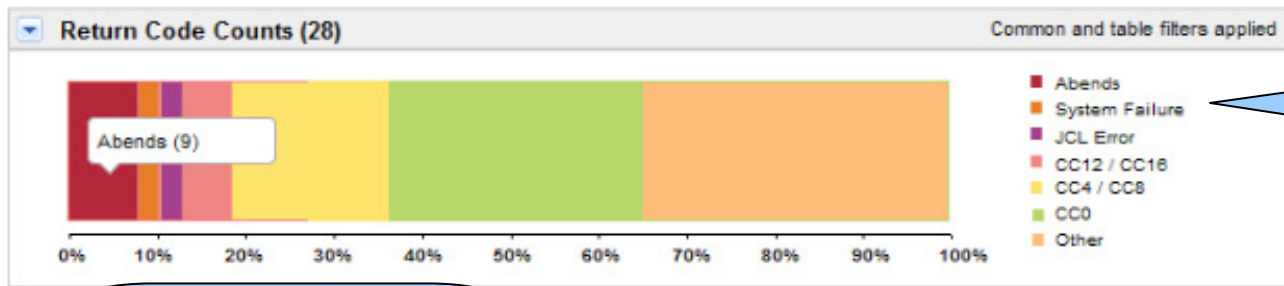
The Job result distribution based on return code. Hover text is provided

This link brings out **Common Filters** combo box too. The common filter is applied first, and then the table filter is applied.

Users can specify table filters in the input box

All Jobs — Common filters — **Properties of**

Actions ▾ | View ▾ | Match: All filters | Find | Edit properties

	Job Name		Job ID	Owner	
☐	ZFS	⊖	STC00005	DFS	
☐	VTAM44	⊖	STC00007	++++++++	
☐	GRSSTMON	⊖	STC00008	++++++++	
☐	ZCFTLMON		STC00012	IBMUSER	
☐	HWWORKL	⊖	STC00062	IBMUSER	
☐	INIT		STC00019	IBMUSER	
☐	HZSPROC	⊖	STC00060	IBMUSER	
☐	ZFSCLONE		STC00012	DFS	
☐	VTAM48	⊖	STC00014	++++++++	
☐	GRSSTMO2	⊖	STC00016	++++++++	
☐	ZCFTLMO2		STC00024	IBMUSER	
☐	PAYROLL9		STC00124	IBMUSER	
☐	BACKUPLB		STC00038	IBMUSER	
☐	OFFPEAK2		STC00089	IBMUSER	
☐	ZOSMFAD		TSU00160	ZOSMFAD	
☐	ZOSMFAD		TSU00161	ZOSMFAD	
☐	ZOSMFAD		TSU00162	ZOSMFAD	

Properties of — ⊞ ⊟

⊟ General
 Job ID:
 Job name:
 Type:
⊟ Accounting
 Account number:
 End date:
 End time:
 Notify ID:
 Programmer name:
 Read date:
 Read time:
 Room number:
 Start date:
 Start time:
⊞ Advanced
⊞ Printing
⊞ Runtime
⊟ Scheduling
 Class: A

Job properties are displayed in a collapsible section. When no Jobs are selected, nothing is displayed.

3

z/OS Health Checks View
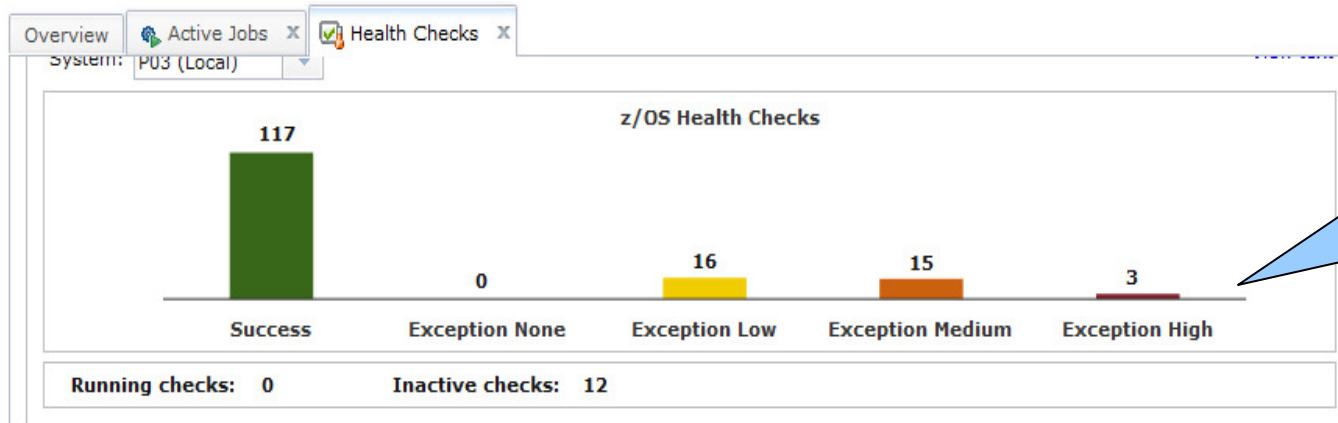
Shows counts for checks by status, with exceptions grouped by severity, followed by counts of running checks and inactive checks.

To browse a check and see its history, click the check name, or use the **Browse** and **Display History** action. A new tab will popup. Users can perform other operations under **Actions** menu.

Agenda

- z/OSMF V2.1 highlights
- New functions
  - z/OSMF Workflow
  - Support for External Applications
    - Exploitation by SDSF
  - New Dataset and files REST Api
- Enhancements to existing plugins
- Other enhancements
  - JOBs REST Apis
- Looking ahead

Complete your session evaluations online at www.SHARE.org/Anaheim-Eval
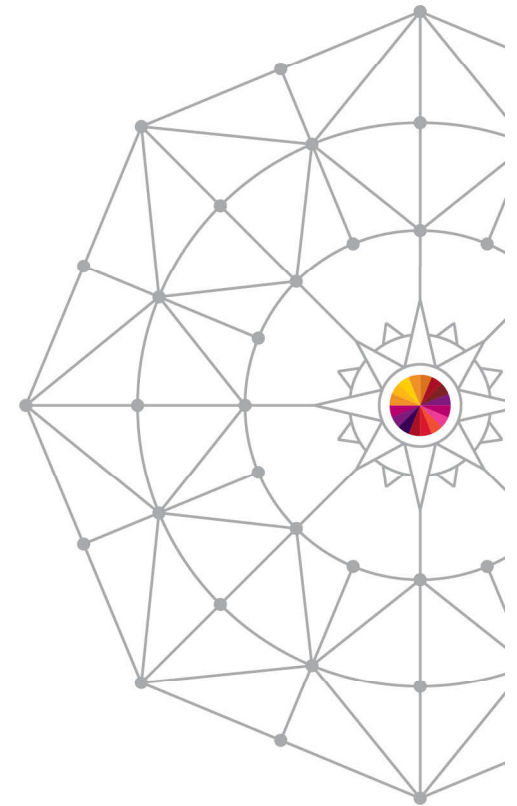
RESTful File API**

- The RESTful File API allows a client application to list the data sets or UNIX files and directories on a z/OS system.

- Today z/OS supports an interface via FTP. The ability to drive remote requests similar to FTP from HTTP(s) provides a secure and functionally rich interface to retrieve or manipulate file or Data Set information

- The URLs of RESTful File API have the format:

  https://{host}:{port}/zosmf/restfiles/ds/{resource}?{parm}

  or

  https://{host}:{port}/zosmf/restfiles/fs/{resource}

- "https://{host}:{port}" specifies the target system address and port.
- "zosmf/restfiles" identifies the z/OS data set and file REST interface.
  - "/ds" identifies a data set request
  - "/fs" identifies a UNIX file path request
- "{resource}?{parm}" represents the resource, such as a data set name or file path name, and optionally one or more parameters, to qualify the request.
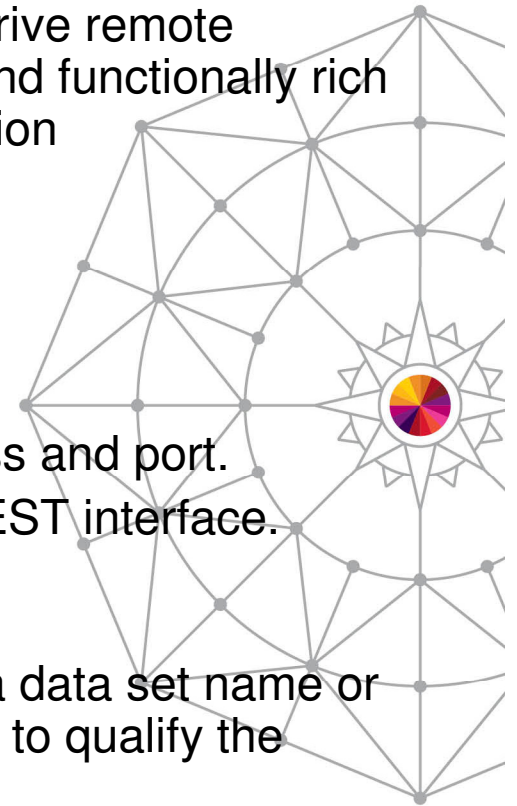
33

Agenda

- z/OSMF V2.1 highlights
- **New functions**
  - z/OSMF Workflow
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    - Exploitation by SDSF
  - New Dataset and files REST Api
- Enhancements to existing plugins
  - Configuration Assistant to Communication server
  - Capacity provisioning
  - Resource Monitoring
  - WLM
  - Incident Log
  - Software Management
  - ISPF
- Other enhancements
  - JOBs REST Apis
- Looking ahead

Configuration Assistant for Communication server

- This function is redesigned for new and improved web user experience and performance
  - Redesigned panels have a new look and feel that tightly integrates with z/OSMF plug-ins
  - Improved performance due to execution of more function in the browser rather than on the host
- With V2R1, Windows download will no longer be provided and users must migrate to z/OSMF
  - Backing stores from prior releases will be migrated to current release.
- Allows you to configure z/OS V1R12, V1R13, and V2R1 policies.
- Exploits the z/OSMF workflow function for setting up Policy agent and other daemons.
- New function provided in support of V2R1 z/OS Communications Server functions
  - AT-TLS support of TLS V1.2 for the following RFCs:
    - Renegotiation options (RFC 5746)
    - Elliptic Curve Cryptography (RFC 4492 and RFC 5480)
    - TLSv1.2 (RFC 5246)
    - AES GCM Cipher Suites (RFC 5288)
    - Suite B Profile (RFC 5430)
    - ECC and AES GCM with SHA-256/384 (RFC 5289)
  - Policy-based Routing (PBR) support for IPv6
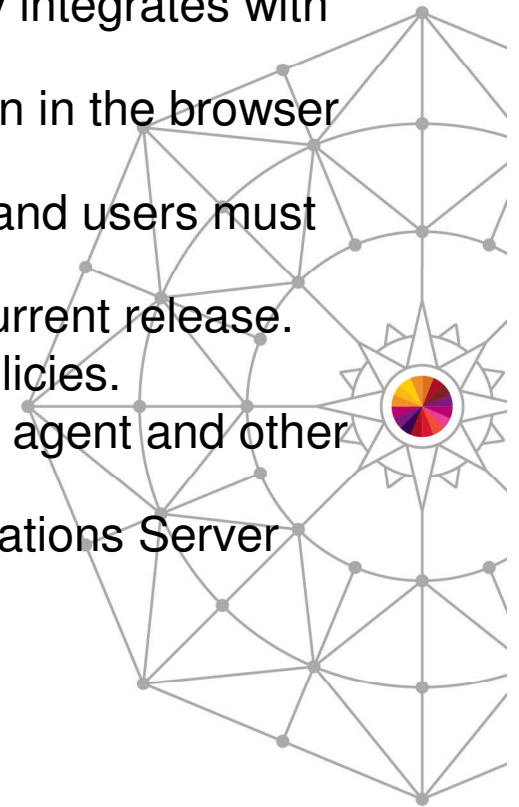
Configuration Assistant z/OSMF V2R1 Welcome Panel

Main Panel

Capacity Provisioning

- With z/OS 2.1 and z/OSMF 2.1 you can install and activate your policies on the Capacity Provisioning Manager, monitor the status of your Capacity Provisioning Manager and display reports about your current configuration and active policy.

- The z/OSMF Capacity Provisioning application is enhanced to allow you to create, edit, install and activate domain configurations and capacity provisioning policies. (Also available with APAR PM74519 on R13)

- In V2R1, you will require the z/OSMF Capacity Provisioning task for managing the z/OS Capacity Provisioning Manager (CPM)

  - The Microsoft Windows-based Capacity Provisioning Control Center (CPCC) is no longer being enhanced.

- z/OSMF V2R1 also supports the latest enhancements in the capacity provisioning manager
  - Defined Capacity and Group Capacity management capabilities
  - can be increased and decreased via z/OSMF based on your schedules or the workload running on your system.
  - allows you to define additional scopes and limits to reflect your business needs for additional Defined Capacity or Group Capacity.

Resource Monitoring

- With z/OS 2.1 support has been added for system x, windows 2008 server.
- Retrieve Historical Data**: New feature can retrieve historical performance data from Resource Monitoring DDS before a RM dashboard was started.
  - Timeframe
    - Past: To specify the interval by the number of units (Minutes/Hours/Days)
    - Date from: To specify Start Date/Time, ending at now
    - Date between: To specify Start Date/Time and End Date/Time
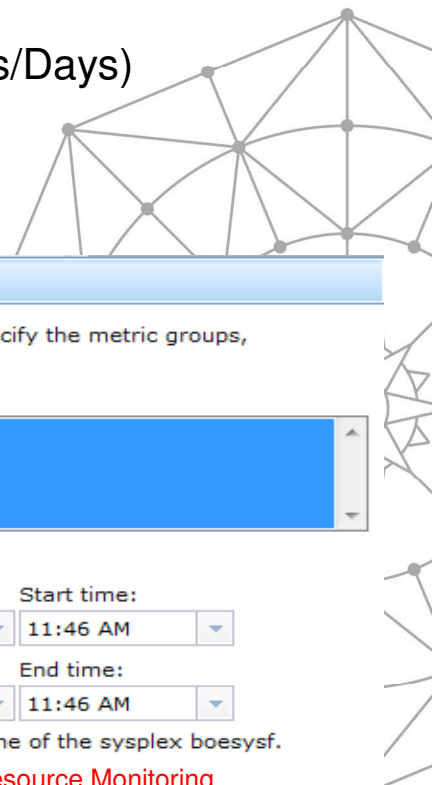
** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

Resource Monitoring – Spreadsheet Export (1)

- In Resource Monitoring task, Open a dashboard, click "Actions -> Export" can bring up Export Wizard.
- User can choose a metric group or the entire dashboard, and select a range of intervals to export. Specific metrics and resources can also be sorted out.

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

Resource Monitoring – Spreadsheet Export (2)

- One CSV file is created for each metric group in the dashboard. Multiple metric groups data will generate a compressed zip file.
- If the CSV file covers multiple metrics and resources (list value), the resulting table sorts the table columns: 1) by metric and 2) by resource.
- The user can view the performance data in table/chart and analyze the performance of the systems

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

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Workload Management – Add Comments

- When users create, modify, import, export, install and activate service policy, they can add comments to describe the intention of each action.
- Comments are saved along with each action in history data, and the user can also add comments to specific history record later.

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

Incident Log

- The allowable length for Log snapshot data set name high-level qualifier (HLQ) has increased from four- to eight-characters via a setting in CEAPRMxx.
- When using the z/OS Problem Documentation Upload Utility (PDUU) transfer method, support has been added for a total of 256 characters for the FTP server host, FTP server port, and FTP.DATA file name.

- ** PMR number formats: Besides "nnnnn,bbb,ccc", user can input "nnnnn bbb ccc" or "nnnnn.bbb.ccc"
- ** Provide the new naming convention for dumps and logs being sent by Incident Log, which can avoid key information missing due to dataset name length limitation(44 characters).
  - ppppp.bbb.ccc.ssssssss.Dyymmdd.ttt.Thhmmss.TRS
    - ssssssss - system name (up to 8 characters)
    - yymmdd - date in YYMMDD format
    - ttt - a simplified file type (DUM for dumps, OPE for Oper Log, ERR for Error Log, and SUM for Error Log Summary)
    - hhmmss - time in HHMMSS format
  - Old Convention: 45387.035.724.SVC.E4E4.2011.08.19T18.47.06.331Z.TRS
  - New Convention: 45387.035.724.E4E4TEST.D111230.DUM.T234537.TRS
  - In case the client send it to the FTP Server at the VS1 system, It hits the limit from 44 characters, but the key information is not removed. the support team will receive the file in dataset:
    - ONTOP.GS035.P45387.C724.E4E4TEST.D111230.DUM

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

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Software Management

Products view

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

Software Management

- New in z/OSMF V2.1 you can print and export reports about your software and installed products.

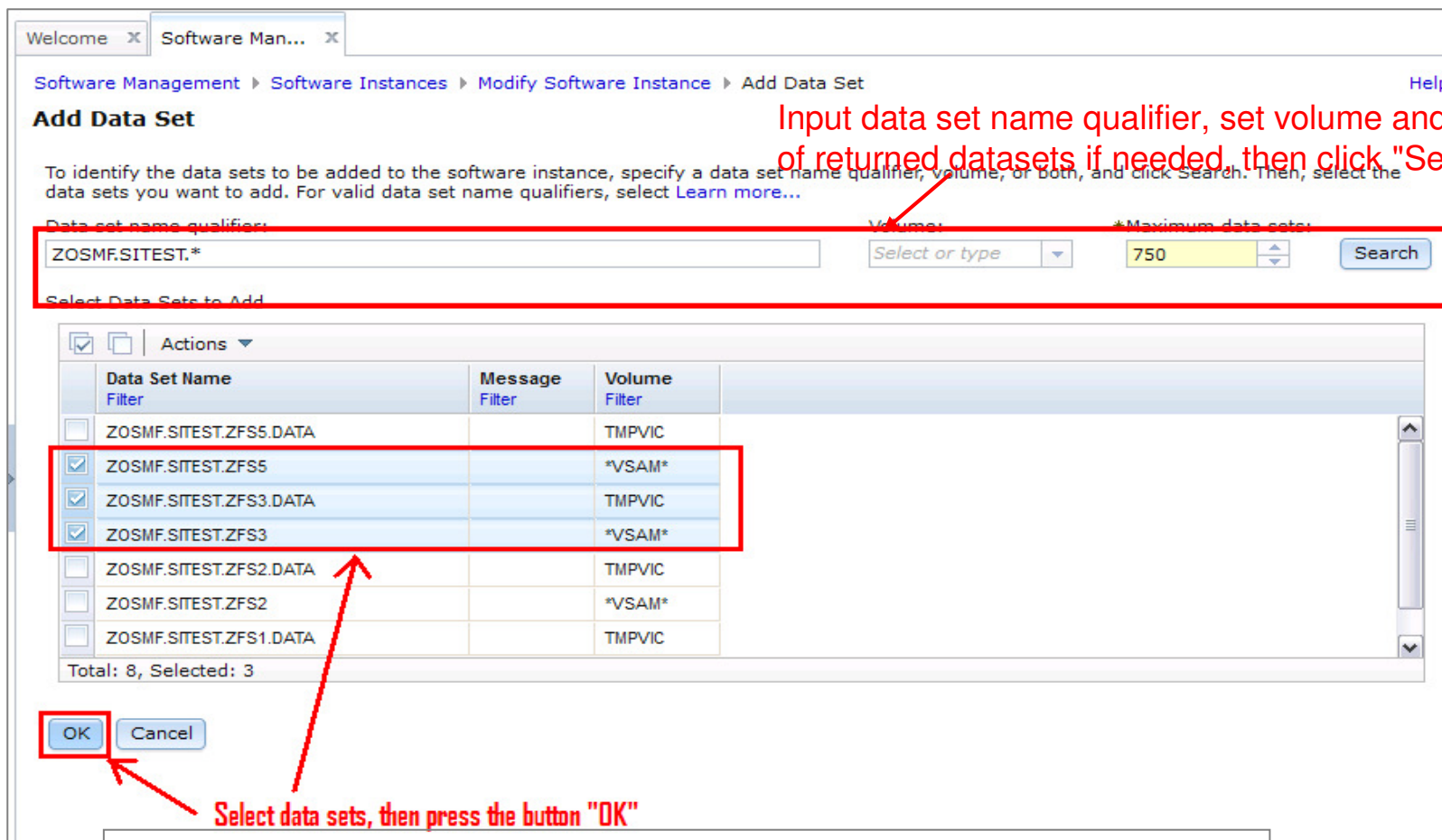**Recent new capabilities in the Software Management application :
- Make it easier to add non-SMP/E-managed data sets to a software instance.
  - It will utilize the new File API to search for data sets and add the selected Non-SMP/E data sets to the instance.
  - This is designed to make it easier to associate many data sets that are not managed by SMP/E zones with a software instance .
- Offer a more convenient way to edit mount points for the z/OS UNIX System Services file system. This capability is designed to make it easier for you to manage multiple mount points for z/OS UNIX file system data sets during a deployment operation.
- The "Software Instance → View → Data Sets" action can bring out a separate view. SMP/E managed UNIX file system data sets and related UNIX directories can be viewed easily.
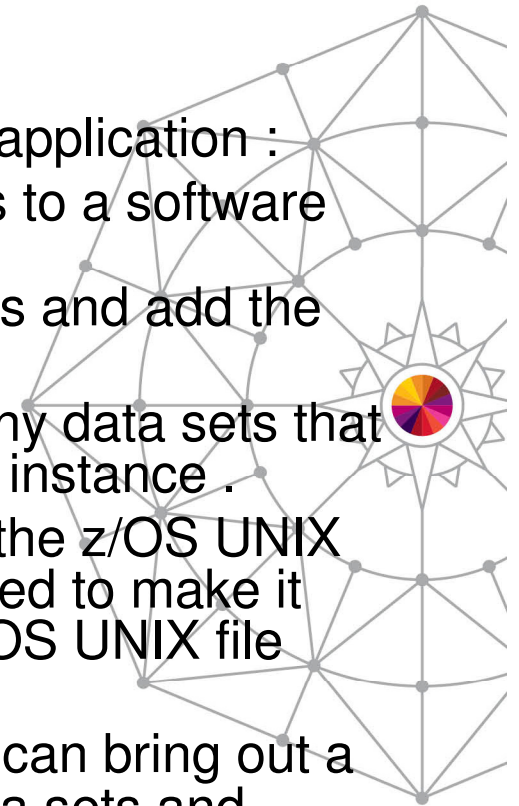
** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

Software Management – Search & Add Non-SMP/E Data Set**

- **Utilizes the File API to search for data sets and add the selected Non-SMP/E data sets to the instance.**

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

Software Management – Mass Edit of Multiple Mount Points**

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

Software Management – View UNIX data sets and directories**

- The "Software Instance → View → Data Sets" action can bring out a separate view. SMP/E managed UNIX file system data sets and related UNIX directories can be viewed easily.

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

z/OSMF ISPF - Enable Ctrl key**

- User can use z/OSMF WebISPF Ctrl key as Enter key; This allows the user to submit requests in a way similar to 3270 z/OS ISPF.

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

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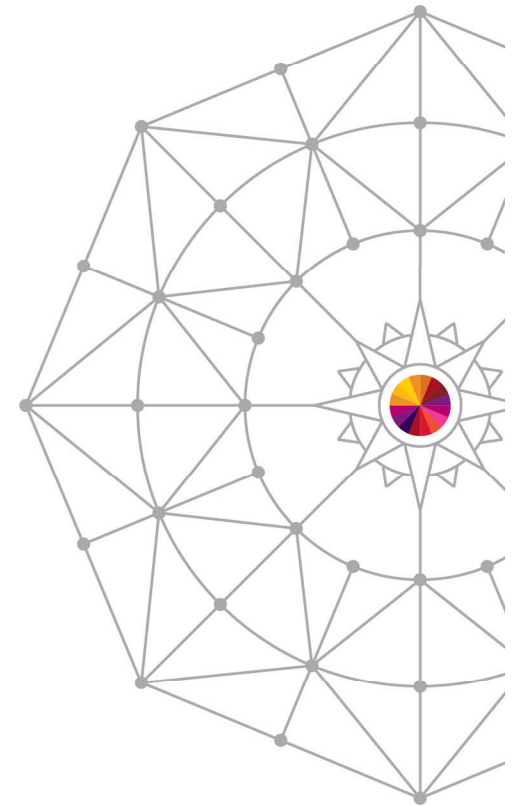
Jobs REST APIs enhancements

- **z/OSMF R13 introduces RESTful API interface to z/OS for submitting and accessing batch job**

- **Enhancement in V2.1:**
  - **Support for JCL symbolics, use correlator instead of jobname/jobid, asynchronous notification on job completion**
  - **Support for submit job to secondary JES subsystem ****
    - **The Jobs API already supports submitting a job to secondary JES2. The request format is updated to allow the user to specify the JES2 subsystem name on which the job is going to be processed.**
  - **Support for hold & release a job ****
    - **Jobs being processed, or waiting to be processed, are kept on a job queue in priority sequence.**
    - **You can issue** hold job **http request via the Jobs API which will issue JES2 commands to hold specified jobs or all jobs currently in a system.**
    - **You can also keep jobs in specified job queues or all job queues from being executed until you issue** release **request via the Jobs API to release them.**

  ** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

Statement Of Directions for z/OSMF 2.1 (Feb 2014)

- ## New function for z/OSMF: New function is planned for z/OSMF V2.1 to include support for the Microsoft Internet Explorer 10 browser, OpenSSH SFTP support for the Incident Log, integrated management of generated jobs in the Software Management application, workflow improvements, and z/OSMF REST services support for editing and browsing files and data sets.

- **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.**
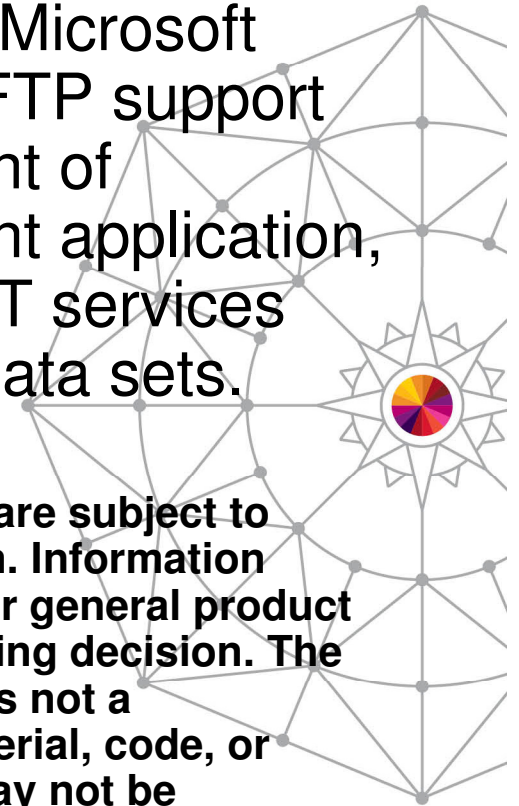
Summary

- **z/OSMF V2.1 uses the WebSphere Application Server Liberty profile**
  - **Runs on smaller configurations**
  - **Simplified configuration**
  - **Initializes faster**
  - **Uses less CPU**
  - **Uses less memory**
  - **Installation of service is easier**
    - **You no longer have to run a script (izusetup –service)**
- **z/OSMF V2.1 provides a new Workflow Application and Notifications**
- **Many other z/OSMF functions were enhanced**
- **Additional details in backup.**
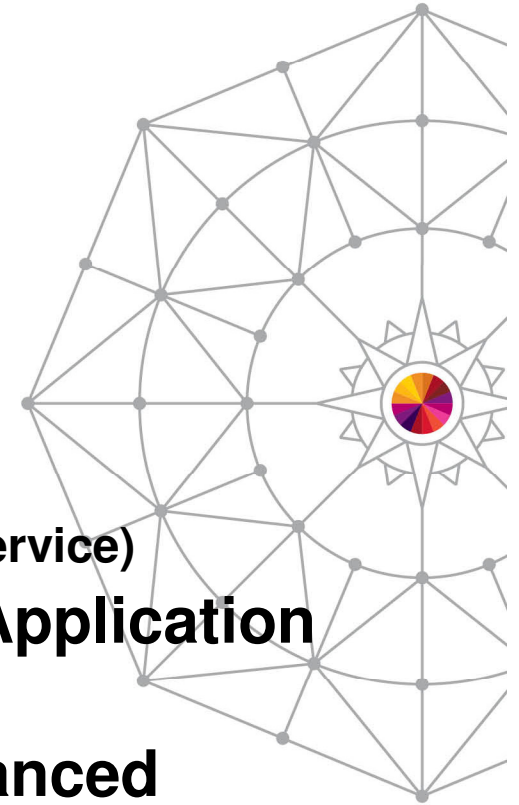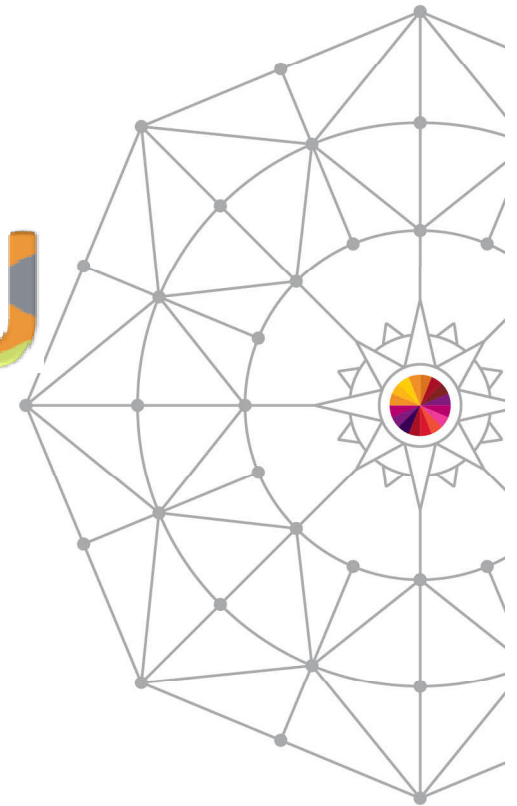
Additional information

- z/OS Management Facility website
  - **http://ibm.com/systems/z/os/zos/zosmf/**
  - **Provides links to all documentation and publications**
- 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 (GI11-9847)
  - **http://www-03.ibm.com/systems/z/os/zos/zosmf/moreinfo/index.html**
- IBM z/OS Management Facility Configuration Guide (SA38-0657)
  - **http://www-03.ibm.com/systems/z/os/zos/zosmf/moreinfo/index.html**
- IBM z/OS Management Facility Programming (SA32-1066)
  - **http://www-03.ibm.com/systems/z/os/zos/zosmf/moreinfo/index.html**
- IBM z/OS Management Facility Information center
  - **http://publib.boulder.ibm.com/infocenter/zosmf/v2r1/index.jsp**
- z/OS Management Facility V2.1 Resource Requirements
  - **http://www-.ibm.com/support/techdocs/atsmastr.nsf/Web/WhitePapers**
- z/OS Management Facility 2.1 Redbook
  - **http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg247851.html?Open**

THANK YOU

Session 15115

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BACKUP
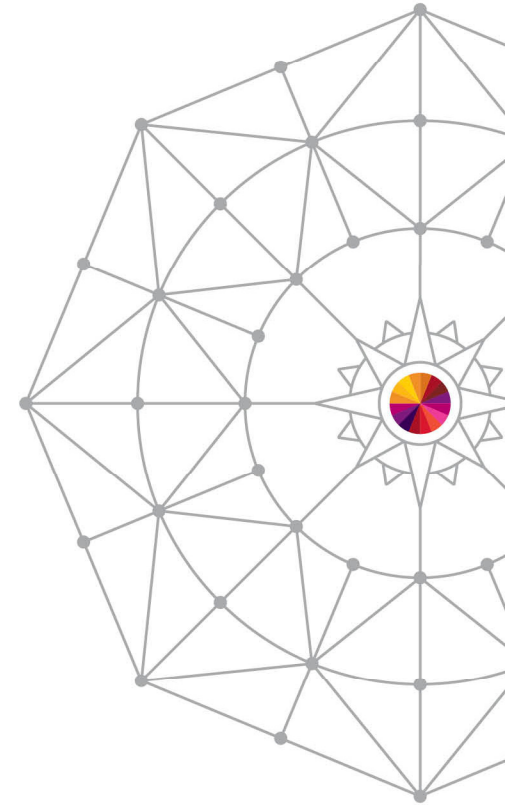
New…..

Draft Document for Review November 1, 2013 1:48 pm   SG24-7851-01

IBM z/OS Management Facility V2R1

Installation and configuration

Usage examples

API exploitation examples
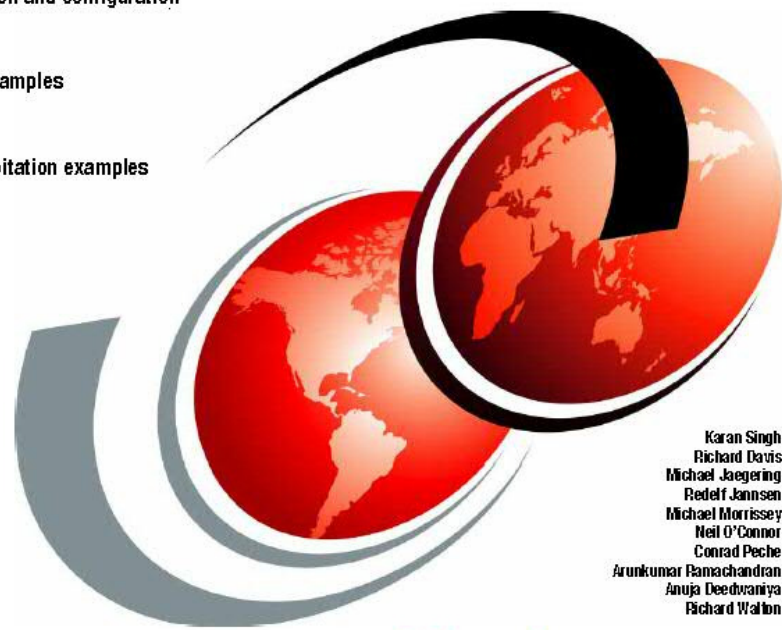
Karan Singh
Richard Davis
Michael Jaegering
Redelf Jannsen
Michael Morrissey
Neil O'Connor
Conrad Peche
Arunkumar Ramachandran
Anuja Deedwaniya
Richard Walton

Redbooks

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z/OSMF enhancements also available in R13

- Incident Log application
  - allows you to modify its default JCL to meet the needs of your organization (APAR PM74518)
  - Handle migrated datasets (PTFs for APARs PM46302 and OA37149)
  - Manage the deletion of incidents using a batch job (CEATOOL) (PTFs for APARs OA38812 and UA65835
- 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)
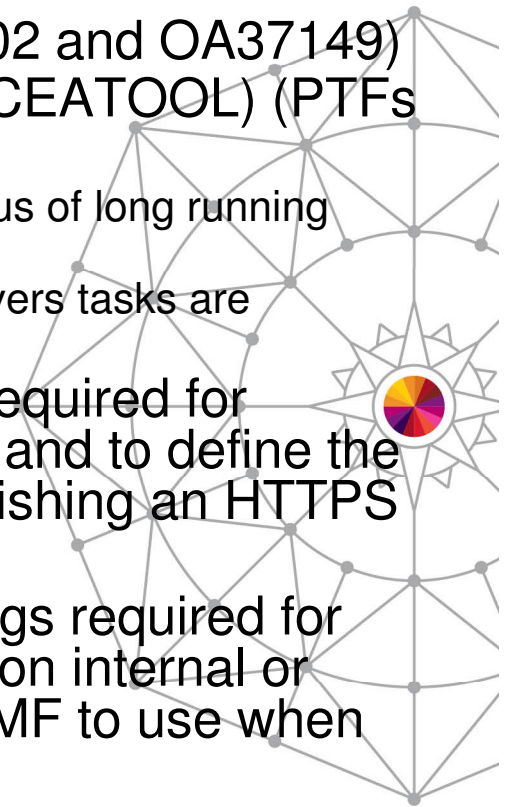
Software Management

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.
- New in z/OSMF V2.1 **you can print and export reports about your software and installed products.**
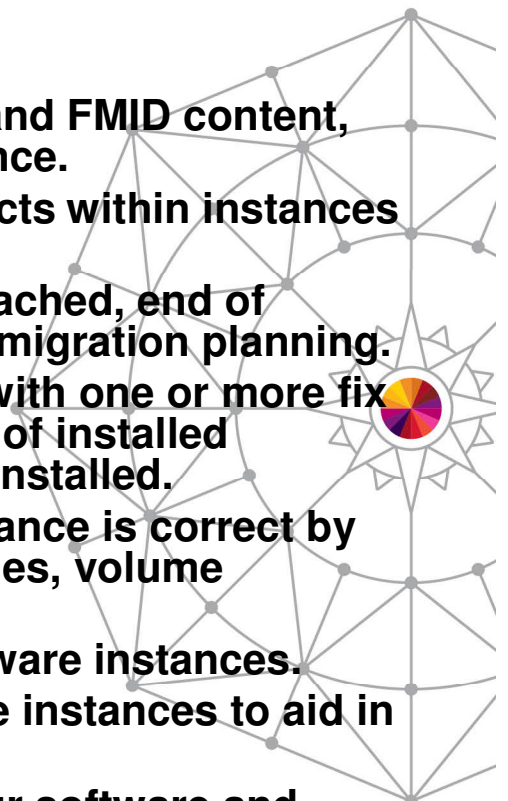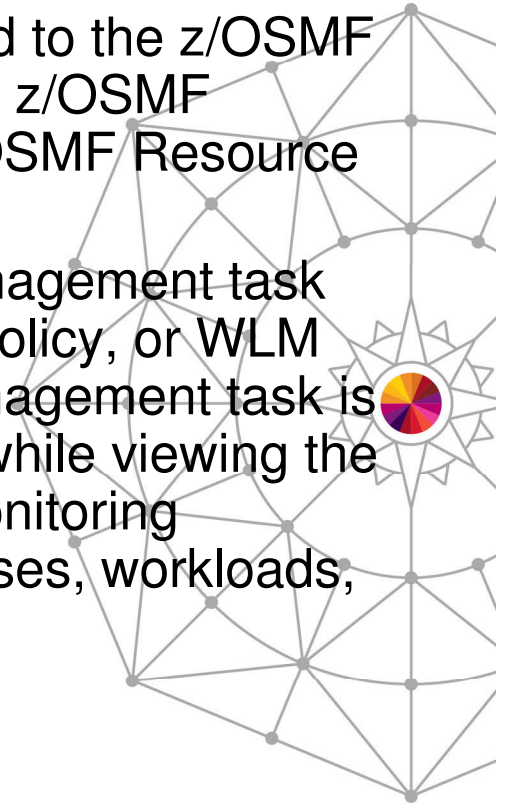
R13 application linking exploitation

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.

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View performance of Active policy

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

View active service definition

| Welcome ✕ | System Status ✕ | Resource Mon... ✕ | Workload Man... ✕ |

System Status

Use this page to quickly assess the performance of the workloads running on the sysplexes in your installation. You can also use this page to define the target systems for the sysplexes and AIX or Linux system c that you want to monitor in the Resource Monitoring task.

Resources

☑ ▢ | Actions ▼

Resource	System Type	Connectivity	Performance Index Status	Related Service Definition	Active WLM Policy
Filter	Filter	Filter	Filter	Filter	Filter
☐ LOCALPLEX	z/OS	Connected	✅ PI <= 1 for all periods	SHARPLEX	SHAREPOL

Total: 1, Selected: 0

Refresh   Last refresh: Feb 6, 2013 12:14:10 AM local ti

☑ Automatic refresh

| Welcome ✕ | System Status ✕ | Resource Mon... ✕ | Workload Man... ✕ |

Workload Management   Help

| Overview | WLM Status ✕ | View SHARPLEX ✕ |

This service definition is installed and policy SHAREPOL is active   📄 Notes   [Switch To ▼]

Service Definition Details

Service definition name:
SHARPLEX

Description:
WLM Policy for Share Systems

Functionality level:
008

Service Coefficients
Central processing unit (CPU):
1.0
Input and output channel (IOC):
0.1
Main storage occupancy (MSO):
0.0000
Service request block (SRB):
1.0

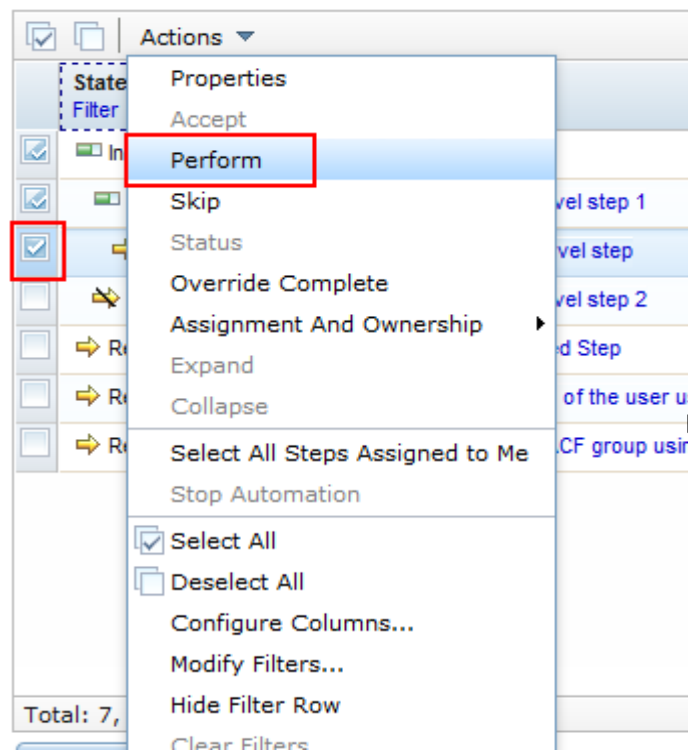**Service Options**
Enable I/O priority management:
No ℹ️
Enable dynamic alias management:
Yes ⚠️

Guest Platform Management Provider (GPMP) Settings
Enable dynamic GPMP management on each system in the host sysplex:
No
Excluded systems:
N/A

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Workflow – Perform Step Automatically

** available for z/OSMF V2R1 with PTFs for APAR PM98630 and its corequisite APARs

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Notice Regarding Specialty Engines (e.g., zIIPs, zAAPs and IFLs):

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