The slide features a blue header and footer with a grid pattern and glowing blue circles. The IBM logo is in the top right. The main content is on a white background with the title and subtitle in bold black text. The footer contains the text '@business on demand software' and '© 2009 IBM Corporation' in white.

IBM

IBM z/OS Management Facility V1.11

Overview

@business on demand software

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Welcome to the overview of the IBM z/OS® Management Facility release 1.11, also called z/OSMF. My name is Anuja Deedwaniya from z/OS Simplification and Systems Management

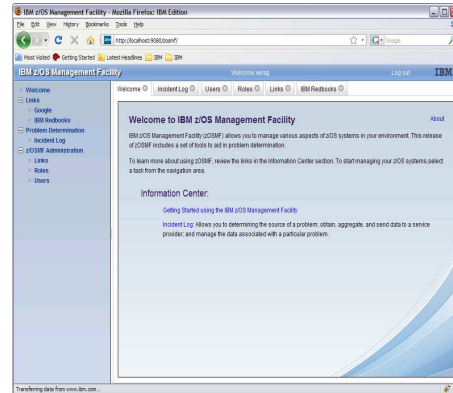
Agenda

- Overview
- Usage and invocation
- Interactions and dependencies
- Migration and coexistence considerations
- Session summary
- Appendix

This session will cover the overview of z/OS, the functions provided, and the interactions, dependencies and coexistence considerations.

IBM z/OS Management Facility V1.11

- The IBM z/OS Management Facility is a new product for z/OS that provides support for a modern Web-browser based management console for z/OS
- Helps system programmers to more easily manage and administer a mainframe system by simplifying day to day operations and administration of a z/OS system
- More than just a graphical user interface, the z/OS Management Facility is intelligent, addressing the needs of a diversified skilled workforce and maximizing their productivity
 - ▶ Automated tasks can help reduce the learning curve and improve productivity
 - ▶ Embedded active user assistance (such as wizards) guides you through tasks and helps provide simplified operations



IBM z/OS Management Facility (z/OSMF), is a new product for z/OS, that will simplify, optimize and modernize the z/OS **system programmer** experience starting with problem data management and TCP/IP Policy based configuration.

z/OSMF will deliver solutions in a task oriented, Web browser based user interface with integrated user assistance. The focus is to help improve system programmer productivity, and make the functions easier to understand and use.

z/OSMF will make the day to day operations and administration of the mainframe z/OS systems easier to manage for both new and experienced system programmers.

The focus is to get more simplified, intuitive task-based user interfaces, with guided or automated tasks.

You may ask why is it Version 1 Release 11 if it is the first release? Why not V1.1? The goal was to align z/OSMF very closely with z/OS itself. Since for its initial release z/OSMF will be made available at the same time as z/OS V1.11 we wanted to have the same naming convention.

Focus on system programming

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



The focus for z/OSMF is both new and experienced system programmers.

It is important to make system programmers more productive, as quickly as possible with the least amount of training. You want to automate tasks, reduce the learning curve and overall accomplish this through a modern task-based, browser based-interface.

The z/OSMF works with a mixed skills workforce -- that is to say it suited for professionals who are new to z/OS, or already skilled on z/OS. Each professional has its own needs and challenges. For example a novice system programmer may need to understand the 'big picture' and understand how procedures are done, they need to get documentation on certain procedures and tasks, and implement them according to the rules of the enterprise. The experienced system programmer has the knowledge on tasks and procedures, so the goal is to make their functions and easier, and to get them more productive and contributing more to their business.

Looking at the area that system programmers traditionally cover – it's installation, configuration, maintenance, disaster recovery, and enabling new functions, problem analysis and determination – essentially making sure the system is available and running correctly.

Challenges for novice system programmer

Problem analysis and management

Getting the "Big Picture"; Gaining organizational knowledge

Product documentation:

Getting enough of the right kind of experience

Unfamiliar concepts and tools: Tasks that require detailed knowledge of command syntax and formats:

Gaining the trust of more experienced colleagues

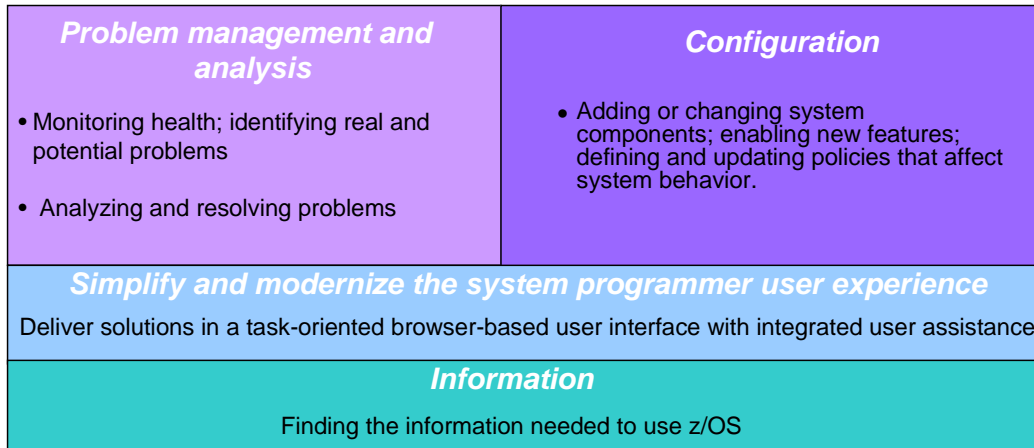
Challenges for experienced system programmer:

Too little time and too many tasks with fewer people – need to be more productive

Aging of the workforce – people retiring

Spanning across many products and platforms

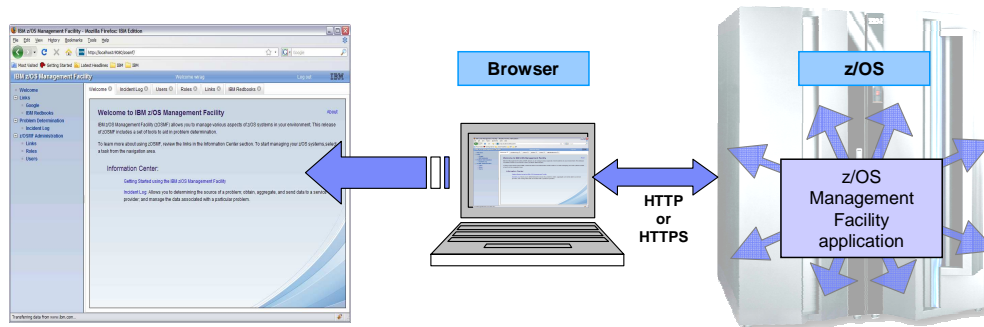
Focus areas for simplification



Focusing on z/OS system programming, and drawing on feedback from customers, it was determined that the initial focus for simplification for z/OSMF will be in the areas of Problem Management Analysis and Configuration, where z/OSMF will simplify and modernize the user experience, and help make pertinent information readily available and easily accessible.

While there are other areas like security administration, network administration, storage management, and workload management that also need focus, in this initial release, z/OS Management Facility V1.11 will focus on Problem data management and network Configuration.

z/OS application, browser access



- **z/OS Management Facility is an application on z/OS**
 - ▶ Manages z/OS from z/OS
 - ▶ Browser communicates with z/OSMF through a secure connection, anywhere, anytime

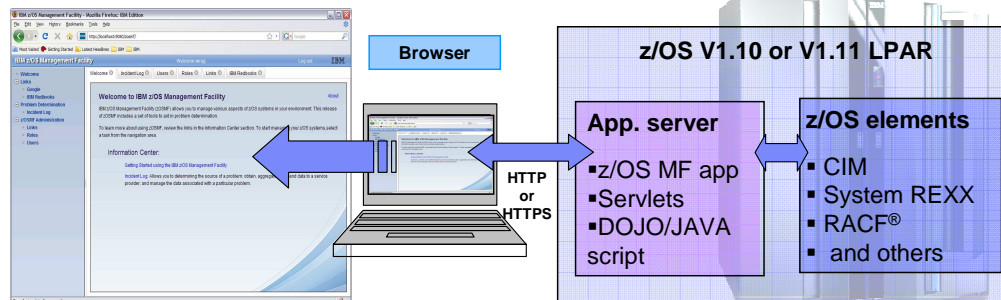
This chart explains the structure for z/OSMF and how it fits into the z/OS environment.

z/OSMF is running on the z/OS system on the right side and it manages z/OS from z/OS itself. z/OSMF is an application on z/OS with direct access to z/OS data and information, and it has a browser interface from the workstation. z/OSMF contains the GUIs and the application code. Everything is installed on the z/OS server and there are no client side installation requirements.

In the middle of the screen is a workstation with a browser and it communicates with z/OSMF over HTTPS. z/OSMF is a Web 2.0 based solution. It incorporates a browser interface that communicates with the z/OS system. The browser can be anywhere... in the data center or around the world. You just need a secure connection.

And on the left is a screen capture of the z/OSMF welcome page once you log into z/OSMF. This will be covered more in the follow on slides.

The application stack



- **z/OS Management Facility is based on industry standards**
 - ▶ Java™ and Dojo
 - Dojo is an Open Source DHTML toolkit written in JavaScript. Dojo allows you to build dynamic capabilities into Web pages and any other environment supporting JavaScript.

z/OSMF requires an application server and a runtime environment. The application server box you see on the right is really a special version of WebSphere® Application Server V7.0 known as Websphere Application server OEM Edition V7.0 for z/OS, which is packaged together with z/OSMF. Scripts and documentation make it easier to set up and configure this runtime on z/OS.

Once the Application Server has been set up and installed, the z/OS Management Facility application itself is deployed into this runtime and this is where the application servlets and GUIs reside. Portions of z/OSMF use the DOJO technology for GUIs, which uses JavaScript and that helps improve performance overall because the GUI can perform all the graphics rendering in the browser on the workstation.

This application stack communicates with z/OS components and the components can be whatever is applicable for that particular task there are not technical limitations. For this initial release the tasks and components that are added (in alphabetical order) are the Configuration Assistant for the z/OS Communications server – which performs network configuration, Links – which is a way for you to list links to documentation, information, and product information in an easily accessible location. Incident Log is our problem determination solution, which provides a consociated view of abend-related problems on your system or sysplex with details behind it and the ability to send the data collected as a result of a problem to a destination of choice IBM or ISVs. And we also provide some z/OSMF administration functions which enable you to use the tasks in z/OSMF.

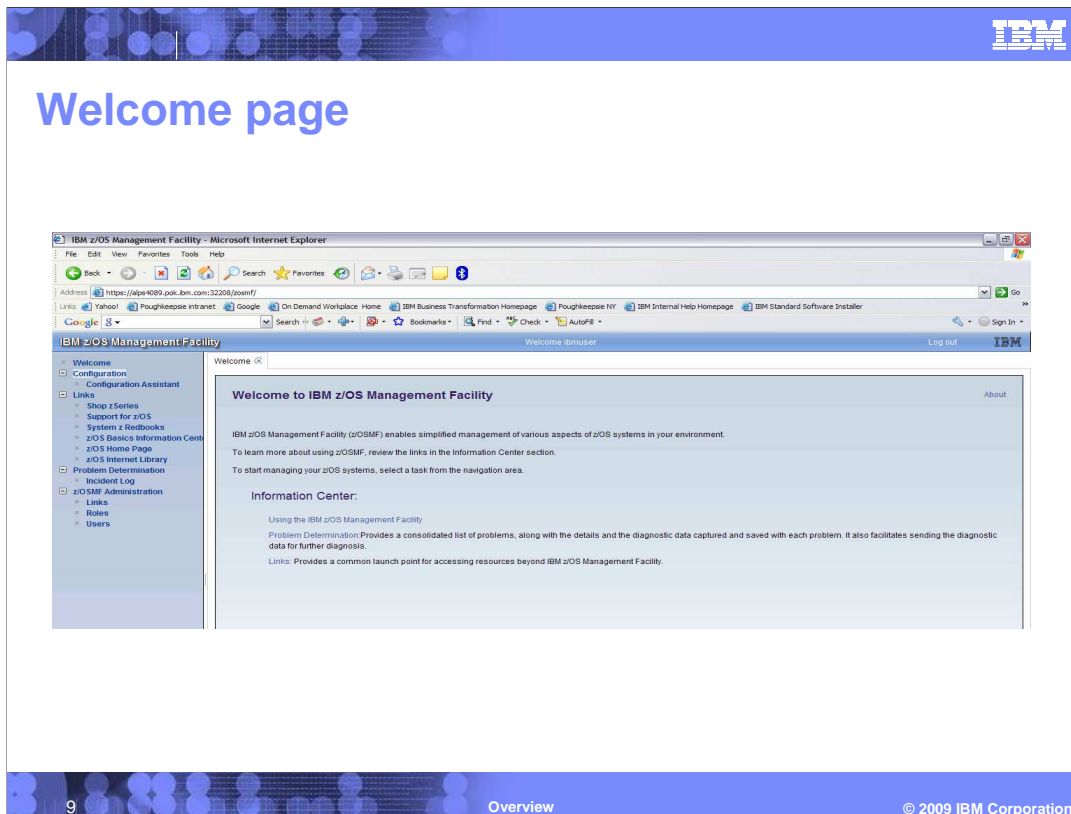
Guest view - Login

IBM z/OS Management Facility - Mozilla Firefox
 File Edit View History Bookmarks Tools Help
 https://alps4019.pok.ibm.com:32208/zosmf/
 Most Visited Getting Started
 IBM z/OS Management Facility IBM - United States
 IBM z/OS Management Facility Welcome guest
 User ID
 Password or pass phrase
 Log in
 Welcome
 Welcome to IBM z/OS Management Facility
 IBM z/OS Management Facility (z/OSMF) enables simplified management of various aspects of z/OS systems in your environment.
 Log in to utilize and learn more about z/OSMF.

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

8 Overview © 2009 IBM Corporation

Once z/OSMF has been set up and configured and started on a system you point your browser to the URL for the z/OSMF instance. The URL is basically the host name, the port name and the context root for z/OSMF. You can see the welcome screen for a guest. On the left side is the navigation pane with the login at the top and the large center pane is the work area where the tasks will open up. To log in a z/OS user ID is required that has been defined and enabled for z/OSMF and the WebSphere runtime environment. Guidance is provide on how to define all that.



After logging in this is the welcome screen and all the functions authorized for this user ID can be seen .

The first user that logs in is a z/OSMF administrator. When z/OSMF is initially set up, the first ID is always that of an administrator – that is a requirement for setup. And the reason is that it allows the first person to log in and to add and enable others.

The navigation pane on the left is populated with multiple categories with tasks under each category.

The Welcome page is now different and it lists and gives you access to documentation on what you can do with the various tasks in z/OSMF

On the top right of the screen (it is small) there is an 'About' selection which gives you information on the release and service level for z/OSMF.

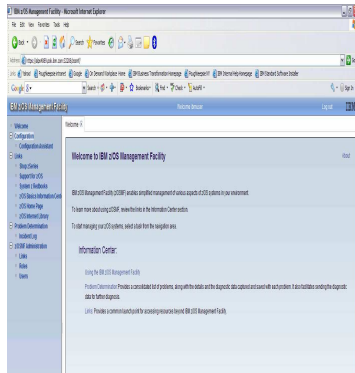
You have the configuration category with the Configuration Assistant , the Links category with a bunch of links, Problem Determination with incident log, and z/OSMF Administration.

Note: For all other users, after initial login, the user becomes an 'Authenticated Guest' and can access information about z/OSMF and some permitted tasks.

The z/OSMF administrator must define the user to z/OSMF and assign a role in order for the user to start working with z/OSMF tasks

Note: By default a z/OSMF user with a 'user' role will not see the z/OSMF Administration category.

Welcome page



- Configuration category with Configuration Assistant for z/OS Communication Server
 - Simplified configuration and setup of TCP/IP policy-based networking functions
- Links category:
 - Provides common launch point for accessing resources beyond the z/OSMF
 - Some links are pre-defined in the product.
- Problem determination category with the incident log task
 - The incident log provides a consolidated list of SVC dump related problems, along with details and diagnostic data captured with each incident. It also facilitates sending the data for further diagnostics.
- z/OSMF administration category for the administrator:
 - Authorization services for administrator to add z/OSMF users and roles
 - Allows the administrator to dynamically add links to non-z/OSMF resources like ISV products and commonly used installation Web sites

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Overview

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The initial functions include z/OSMF Administration, Incident Log, Configuration Assistant for z/OS Communication Server and Links

Configuration Assistant from Communication Server

Simplified configuration and setup of TCP/IP policy-based networking functions

Another category on the navigation bar is Links which:

Provides common launch point for accessing resources beyond the IBM z/OS Management Facility.

Some links are pre-defined in the product.

The administrators can define additional links to share commonly used resources for their installation.

Under the Problem Determination category on the navigation bar, you will find the Incident Log task.

This first release will help all system programmers with problem data management tasks, providing experienced teams with procedural advantages through an incident log summary and detail views of z/OS dump incidents. The Incident Log provides a consolidated list of SVC Dump related problems, along with details and diagnostic data captured with each incident. It also facilitates sending the data for further diagnostics.

z/OSMF Administration gives you a:

Display welcome page and deployed z/OSMF applications in Task list

Provides Authorization services for the administrator

Allows Dynamic addition of links to non-z/OSMF resources

z/OSMF Problem Determination

- **Pain points**
 - ▶ Need to troubleshoot a live system, recover from an apparent failure.
 - ▶ Need to reduce risk to the business, reduce risk of re-occurrence.
 - ▶ Complexity of performing the task (number of steps, jargon).
 - ▶ Data collection very time-consuming
 - ▶ Significant skill level needed to analyze problems, interact with IBM and ISVs to obtain additional diagnostic info (setting SLIP traps, traces, and so on.)
- **Initial focus on problem determination capability - Incident log :**
 - ▶ Troubleshoot your system easier, faster
 - ▶ The incident log and underlying z/OS diagnostic data gathering greatly improves the tasks related to:
 - Identifying system-detected problems (those related to SVC dumps taken by the system)
 - Collecting diagnostic materials related to a problem and sending materials to IBM or another company's support area
 - Telling the system to take the next dump for a previously-recognized problem

Focusing on problem determination, system programmers often spend a lot of time collecting and managing the right information and documentation. When a problem is encountered on a z/OS system today, the system programmer has to take many manual and time consuming steps to collect diagnostic data like dumps and appropriate excerpts from logs and then send those materials elsewhere, such as to IBM or ISV support, using FTP. Getting a consolidated list of the abend related problems across a sysplex that the system programmer can work with is also a challenging task right now.

The incident Log task delivers on improving first failure data capture and problem data management. When an abend dump and user initiated SVC dump is taken, the system also collects and creates snapshots of additional data from the system and ties them all together into what we call incidents. DAE interface is also simplified, so that you can enable the next dump for specific incident string.

The new problem management task in the z/OS Management Facility provides simple interfaces to get a consolidated list of problems in the sysplex, related to SVC dumps, the properties and the diagnostic data captured and saved with each SVC dump. It also provides easy to use interface to facilitate sending the diagnostic data for further diagnosis. This will require less time and skills to manage the problems and diagnostic data in a sysplex.

z/OSMF problem determination - Incident log - Benefits

	Without z/OSMF**	With z/OSMF**
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 one click. Greatly reduced skill required As little as five seconds
Collecting and sending diagnostic data	Requires 7 to 15 manual steps, plus skill to locate the right log files, build and run JCL 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 eight clicks: <ul style="list-style-type: none"> ▪ Select the incident materials ▪ Specify the FTP destination information ▪ Indicate send the material ▪ Check whether the information was FTP'd successfully As little as 30 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 three mouse clicks As little as 10 seconds

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

Here are examples of z/OS Management Facility ease of use. Many of the time taking and complex tasks are simplified so they can be accomplished in less time with just a few clicks and require less system knowledge.

z/OSMF problem determination – Incident log - Details

- **Auto-capture basic diagnostic materials, triggered when the dump is written to a data set, managed using parmlib member**
 - ▶ Initial focus is on Abend and user initiated SVC dumps
 - ▶ Improved FFDC for system-detected problems;
 - ▶ Diagnostic data “snapshots” for transient data;
 - Snapshots of 30 min Operlog,
 - 1 hr Logrec detail, and
 - 24-hour Logrec summary
 - ▶ Allow doc to be FTP'd to IBM (or ISV) without having to keep track of where logs are archived using an easy-to-use interface
 - ▶ Simplify informing DAE to take the next dump for the selected incident's symptom string
- **Functions include:**
 - ▶ Display list of incidents (Filter/sort/configure table)
 - ▶ Set properties (associate problem number and tracking id)
 - ▶ Display properties – view list of diagnostic data, logs
 - ▶ Send diagnostic data using FTP, define FTP Profiles (firewall)
 - ▶ Manage ftp jobs status –View, Cancel Job, Delete Status
 - ▶ Allow next dump
 - ▶ Delete incident

When an abend dump is taken, the system also collects 30 minutes of Operlog, one hour of Logrec detail, and 24 hours of Logrec summary. Through the new incident log task, not only can you review all the incidents on your sysplex, you can drill down on any of those to see further details and the data associated with each incident and FTP the data to IBM, ISV or elsewhere for further debugging.

This is a summary of all the functions in Incident Log

It can display lists of incidents, You can work with incidents, like filtering, sorting because they are in a table format.

You can display the properties, and can see the details behind each of these incidents including what data was collected for each.

You can add or change a few properties like a problem number or tracking ID associated with the incident The problem number may be an IBM or ISV problem number. The tracking ID is your internal tracking number for you enterprise.

You can define destinations that you commonly work with and even set firewall settings .. and once you've defined these and saved them, all you do is initiate the send action and it sends the data . It is standard FTP that comes with z/OS.

From an end user perspective – you are getting a few things that you do not have available today – you have a summary view of all the problems that are occurring – it is not easy today to find information on all the different abends that may be occurring on your sysplex across all the different components You can also aggregate the diagnostic data related to any of those problems, and easily send it to a destination of choice.

Incident log – Summary information

The screenshot displays the IBM z/OS Management Facility Incident Log. The interface includes a navigation pane on the left with options like 'Welcome', 'Links', 'Problem Determination', and 'Incident Log'. The main area shows a table of incidents with the following columns: Incident Type, Description, Date and Time, Sysplex, System, Problem Number, and Tracking ID. A context menu is open over an incident, listing actions such as 'Set Tracking ID...', 'Set Problem Number...', 'Delete Incident...', 'Send Diagnostic Data...', 'View Diagnostic Details', 'FTP Job Status', and 'Allow Next Dump'. Annotations highlight 'Many fields, set tracking IDs', 'Context menu with actions', and 'Set the duration'.

Incident Type	Description	Date and Time	Sysplex	System	Problem Number	Tracking ID
User Initiated	ABEND=04,RC=10,COMPONENT=...	Feb 23 2009 12:37:19 PM	CFMIGNE	DCEIMGNE	41336,180,000	V1R11
User Initiated	ABEND=04,RC=10,COMPONENT=...	Feb 23 2009 12:37:19 PM	CFMIGNE	DCEIMGNE	41336,180,000	V1R11
User Initiated	ABEND S0914,COMPON=COMPONENT,IC=ISSUER=ITTRREC	Feb 23 2009 12:37:10 PM	CFMIGNE	DCEIMGNE	12345	V1R11
User Initiated	ABEND S0003,COMPID=DF116,CSECT=HWQDEMS+2802,DATE=01,09,MAINTID=NONE,ABEND=04,RC=00000000,RSN=00000004	Feb 18 2009 10:28:56 AM	CFMIGNE	DCEIMGNE	40578,087,549	3456789
User Initiated	ABEND S0003,COMPID=DF116,CSECT=HWQDEMS+2802,DATE=01,09,MAINTID=NONE,ABEND=04,RC=00000000,RSN=00000004	Feb 18 2009 9:44:48 AM	CFMIGNE	DCEIMGNE	41336,180,000	ar12345
User Initiated	ABEND S0003,COMPID=DF116,CSECT=HWQDEMS+2802,DATE=01,09,MAINTID=NONE,ABEND=04,RC=00000000,RSN=00000004	Feb 18 2009 3:31:19 PM	CFMIGNE	DCEIMGNE	41336,180,000	V1R11
User Initiated	ABEND S0003,COMPID=DF116,CSECT=HWQDEMS+2802,DATE=01,09,MAINTID=NONE,ABEND=04,RC=00000000,RSN=00000004	Feb 18 2009 3:17:58 PM	CFMIGNE	DCEIMGNE	41336,180,000	V1R11
User Initiated	ABEND S0003,COMPID=DF116,CSECT=HWQDEMS+2802,DATE=01,09,MAINTID=NONE,ABEND=04,RC=00000000,RSN=00000004	Feb 18 2009 7:36:03 AM	CFMIGNE	DCEIMGNE	41336,180,000	V1R11
User Initiated	ABEND S0003,COMPID=DF116,CSECT=HWQDEMS+2802,DATE=01,09,MAINTID=NONE,ABEND=04,RC=00000000,RSN=00000004	Feb 18 2009 7:30:34 AM	CFMIGNE	DCEIMGNE	41336,180,000	ar12345
User Initiated	ABEND S0004,COMPID=DF116,CSECT=HWQDEMS+2802,DATE=01,09,MAINTID=NONE,ABEND=04,RC=00000000,RSN=00000004	Feb 18 2009 7:30:34 AM	CFMIGNE	DCEIMGNE	41336,180,000	V1R11
User Initiated	ABCD	Feb 18 2009 7:16:38 AM	CFMIGNE	DCEIMGNE	41336,180,000	V1R11
User Initiated	NEW DMP	Feb 17 2009 2:01:16 PM	CFMIGNE	DCEIMGNE	41336,180,000	V1R11

Total: 12, Filtered: 12, Selected: 1
Refresh Last Refresh: Feb 27 2009 11:15:10 AM

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Overview

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This is a screen capture of what the incident log task would look like. This is from a test system so you may see some variations you might not see in a real production system. This shows a combination of user initiated dumps through the dump command, and some abend dumps that have occurred in the system. You see the dump title and then the time. By default it displays three days worth of incidents – but you can change the duration to whatever you need it to be.

It shows a lot of fields related to that incident ... system, sysplex, z/OS release, component ... and you see two other fields the problem number and tracking ID – you can set these for individual incidents, most of the other fields are fixed and are really properties of that incident.

The problem number field – its intent is to enter an external problem number that is meaningful – maybe an IBM problem number or an ISV problem number. And you can update that from a number of areas – it can be an action pull down – you right click an incident, a box appears and you can set the problem number there, or from another panel.

The intent for tracking ID is to tie a particular incident with your internal tracking system.

Focusing on the dropdown/ popup box, these are the specific actions you can take with any incident. Setting the problem number was just covered. You can also delete an incident – it will ask you a few things like do you want to allow the next dump for this particular set of symptoms and it will interface with DAE to allow the next dump. Even without deleting, you can allow a next dump. When you do delete an incident, ALL information associated with that incident is deleted.

You can send the diagnostic data and view the diagnostic details. You can view FTP job status - So if you send the diagnostic data you can view the FTP status for that submitted job.

If you were to use the actions dropdown from the taskbar at the top, it allows you to do further things, like work with your tables, filtering, sorting, configuring columns. You can also sort within the table by clicking on the columns. You can filter using single or multiple filters for more complex sorts.

Context Menu brought up when you right click an incident. You could also select the incident, and then click the Actions button to get a similar menu.

The Diagnostic Details panel displays all available information about the incident including a reformatted version of the summary data in the Incidents table. If incident is an Abend there will be additional data listed: Abend code, Load Module, Symptom String

There is another tab that shows the list of diagnostic data that has been collected for that incident.

Here is a sample view on diagnostic details taken from the summary information. You see the details about the dump and you can see two editable fields – this the problem number and tracking number which were covered earlier. There is also a second tab – the Diagnostic data tab – and it will show you the lists of data - the logrec and error log - that has been captured for this incident. It will show you what those data sets are called in z/OS and it allows to selectively send diagnostic data if required. When you do send diagnostic data from the incident log panel, it sends ALL of the data associated with the incident, here you have to option to only send a subset.

Incident log – Send diagnostic data

The screenshot shows the IBM z/OS Management Facility web interface. The main content area displays the 'Send Diagnostic Data' wizard. The wizard includes a table of incident data and a table of diagnostic data to send. A callout box points to the 'Send Diagnostic Data...' menu item in the left sidebar.

Incident Type	Description	Date and Time
ABEND S0913	COMPON=COMPONENT TRACE.COMPID=SCTRC,ISSUER=ITRREC	Feb 23 2009 12:37:10 PM

Data Type	Sysplex	System
SVC dump	CFCIMGNE	DCEIMGNE
Error log	CFCIMGNE	DCEIMGNE
Operations log	CFCIMGNE	DCEIMGNE
Error log summary	CFCIMGNE	DCEIMGNE

* Problem number: 12345 If the problem number is an IBM PMR number, check this box to verify the syntax.

Wizard guides you through the send Back Next Finish Cancel

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Overview

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The send action is a beautifully guided wizard. It shows the data, allows you to select destination, associate that with a firewall profile, and allows to you edit the JCL that is built – specifically the job card information, because every customer has different requirement for the job card. And once you edit the job card, it will be persisted from that point on, until you edit it again. Then the complete JCL is built and away it goes.

The wizard guides you through the steps to send diagnostic data over to either IBM, an ISV, or any other destination.

It prepares (terses) the information needed to send the data to IBM (or other target) and initiates the ftp action

You can also later view the status of the FTP job.

z/OSMF Configuration

- **Pain points**
 - ▶ Configuration task is highly fragmented
 - Multiple tools, limited integration between tools
 - ▶ User interfaces not intuitive for new system programmers
 - ▶ Syntax is complicated and error-prone
 - ▶ Regression of dynamic changes not reflected in system control files
 - ▶ Difficult to assess impact of configuration changes
- **Initial focus on Configuration Assistant for the z/OS Comm. Server**
 - ▶ A GUI application that simplifies the configuration and setup of these TCP/IP policy-based networking functions:
 - Application Transparent TLS (AT-TLS)
 - IP Security (IPSec) including filters and VPNs
 - Network Security Server (NSS)
 - Intrusion Detection Services (IDS)
 - Policy-based Routing (PBR)
 - Quality of Service (QoS)

Next is the configuration category. Configuration is often not intuitive, many components and functions have their own way of doing things, and they may use different user interfaces and tasks. Sometimes you make dynamic changes and the next time you start up the system they are regressed. Configuration of functions also typically requires pouring over manuals and performing many steps to define configuration files, started procedures, and security policies. It is difficult to set it all of correctly in a short period of time. So the challenge is to make it better and easier and with a consolidated interface and user experience.

IBM Configuration Assistant for z/OS Communication server provides a configuration Graphical User Interface (GUI) that you can use to generate configuration files for Application Transparent-Transport Layer Security (AT-TLS), IP Security (IPSec), Network Security Services (NSS), Policy Based Routing (PBR), Quality of Service (QoS), and Intrusion Detection Services (IDS).

The Configuration Assistant reduces configuration complexity by providing a consistent and easily manageable interface to implement AT-TLS, IPSec, NSS, PBR, QoS, and IDS. It can dramatically reduce the amount of time required to generate and maintain policy files for these disciplines. The Configuration Assistant is intended to replace manual configuration of the policy disciplines, but it can also incorporate policy data directly from the Policy Agent.

Configuration Assistant for z/OS Communications Server

- **A GUI that you can use to generate configuration files for z/OS Application Transparent-Transport Layer Security (AT-TLS), IP Security (IPSec), Network Security Services (NSS), Policy Based Routing (PBR), Quality of Service (QoS), and Intrusion Detection Services (IDS).**
- **Originally available as a Microsoft® Windows® Web download since z/OS V1.7**
 - ▶ Functions have grown over time
 - ▶ Still available as a Windows download, but strategy is to provide it only with z/OSMF
 - ▶ All functions available with Windows are also provided with z/OSMF
 - ▶ If you are familiar with the Windows GUI, the Configuration Assistant on z/OSMF is essentially the same
- **Now available with z/OSMF V1.11 and z/OS V1.11**
 - ▶ Configuration files can now be saved to local disk storage that is accessible to your z/OS system where the Configuration Assistant is running so FTP (from Windows) is not required
 - ▶ Can also import configuration text files in cases where users have already defined policies and want to begin using the Configuration Assistant

The Configuration Assistant is also available as a stand-alone application that runs on the Windows operating system and requires no network connectivity or setup to begin using it. Through a series of wizards and on-line help panels, you can use the Configuration Assistant to create configuration files for any number of z/OS images with any number of TCP/IP stacks per image. It has been available since z/OS V1.7, but customers really wanted it to be running on z/OS. The Windows based Configuration Assistant requires that the tool and the z/OS network policies be downloaded onto the workstation. The policies are updated and maintained on the workstation, and then FTP'd back to z/OS in order to be enabled. So now the Configuration Assistant is being added to z/OSMF so users can have these configuration tasks running on the system, the policies are maintained in the file system on z/OS, and they can be deployed more easily. The Configuration Assistant itself can guide users through the tasks – from generation of the policies, making sure they are correct, and activating them as needed.

If you have been using the Configuration Assistant for z/OS Communications Server on Windows, you can begin using the Configuration Assistant on

z/OSMF by following the instructions in the IBM z/OS Management Facility User's Guide under the Configuration Assistant for z/OS Communications Server.

Configuration assistant value

- Do you need to protect your enterprise data over the network with IP Security or Application Transparent TLS?
- Have you considered protecting your system from misuse from the network with Intrusion Detection Services and then using the Defense Manager Daemon to apply defensive filters?
- If so, you know that these functions can be quite complex to understand and also to set up
- You can pour over manuals or you can use a great tool to help you configure your policies and set up the environment to run these important functions right on the z/OS systems your configuring!
- Use the Configuration Assistant for z/OS Communications Server application on z/OSMF
- Helps users build their networking policies and then generates configuration text files for installation
- Guides users through setup tasks for the policy-base environment, including generation of configuration files, sample started procedures, and RACF profiles

The Initial focus is on the network configuration and the Configuration Assistant for the z/OS Communications Server, because network configuration is one area that is complex and error prone and requires a lot of documentation to go through in order to do it manually.

Once you have decided that you want to extend your TCP/IP configuration beyond the basics, and you understand the technologies that you want to use, configuring these technologies can be challenging. z/OS Communications Server provides an extensive set of publications on line to help you configure your z/OS systems for the policy-based networking functions. Using the Communications Server Configuration Assistant for z/OS can save you a lot of time.

Here is more detail on the various policy-based functions that are available through the Configuration Assistant (and z/OSMF).

It helps users build their networking policies and then generates configuration text files for installation. It guides users through setup tasks for the policy-base environment, including generation of configuration files, sample started procedures, and RACF profiles.

The Configuration Assistant guides you through the configuration of these technologies:

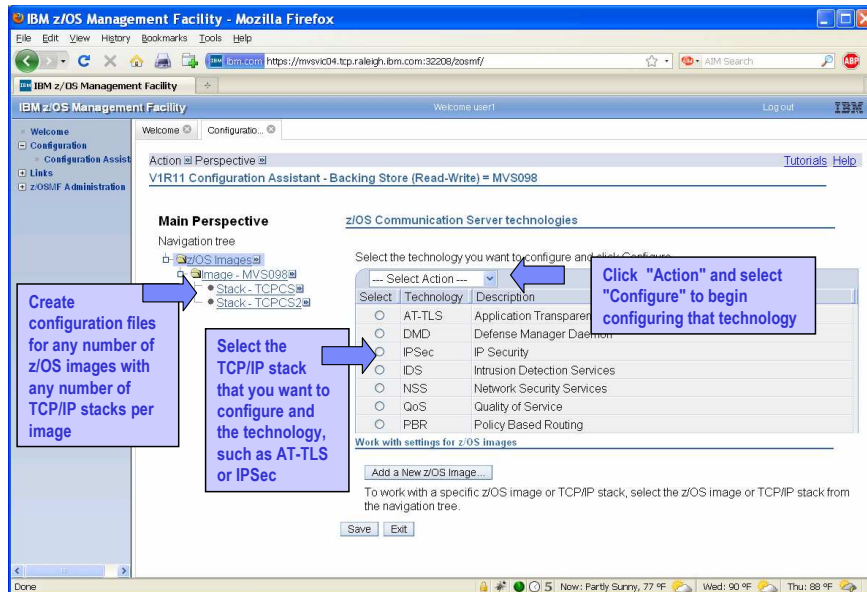
- IP Security – define policy rules to permit and deny TCP/IP traffic with IP filters and rules to protect your enterprise data with IP Security.
- AT-TLS - define policy to protect your applications using Transport Layer Security.
- Intrusion Detection Services – Protect your z/OS system from potential misuse of critical system resources.
- Policy Based Routing- define policy to route TCP/IP traffic outbound over selected interfaces.
- Quality of Service – define policy to ensure levels of service.

In addition to helping you to configure these functions, the Configuration Assistant can help you to set up the applications and tasks needed to run these functions. If you have already tackled configuring these functions and have policy configuration files, the Configuration Assistant can read your configuration text files and you can begin using it from then on.

Guides users through setup tasks for the policy-base environment, including generation of configuration files, sample started procedures, and RACF profiles for these applications:

- Policy Agent (Pagent)
- IKE Daemon (IKE)
- Network Security Server (NSS)
- Defense Manager Daemon (DMD)
- Syslogd

Configuration Assistant for z/OS Communications Server

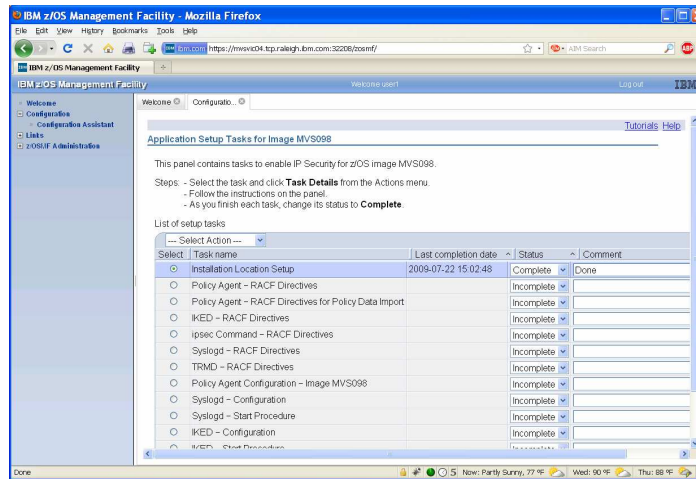


This is a screen capture of what the configuration assistant looks like on z/OSMF. As you can see it lists all the different technologies that the communications server can create and activate policies for.

When you enter the Configuration Assistant, this is the Main Perspective. From here you can create the z/OS Images and TCP/IP stacks for the systems that you want to configure for any of the supported technologies. Select the TCP/IP stack that you want to configure and the technology such as IP Sec or AT-TLS. Click "Action" and select "Configure" to begin configuring that technology.

Configuration assistant new application setup tasks

- Application setup task panel is a customized set of tasks (step-by-step) for each policy perspective to deploy the applications required for that function
- There are both image-level and stack-level setup tasks



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Overview

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Configuration Assistant delivered piece parts of the policy environment. This is very helpful, but not structured .

In R11, IBM provided an “Application Setup” task panel which is a customized set of tasks (step-by-step) for each policy perspective to deploy the applications required for that function:

- Target new policy users, but also good for experienced users
- Allows administrators to perform and check-off task completion. Tool allows user to specify task has been completed and remembers it
- Guides users to setup the required applications by generating needed configuration files and started procedures (ex: Pagent, TRMD, Syslogd). These can be modified after install if needed.
- Generates RACF commands in a job which can be modified and run. If using other security product then must be modified after generation
- Allows for the specification of a common installation location for all materials. Removes the need to individually modify install locations

A new “install all” feature allows all files that have been changed for a discipline to be installed across images

- Useful if a reusable object has been changed

Focus on z/OSMF administration

- **z/OSMF authorization – defining users and roles**
 - ▶ The z/OSMF administrator must define the user to z/OSMF and assign a role in order for the user to start working with z/OSMF tasks
 - ▶ The user must have a valid user ID on the z/OS system
- **Adding links**
 - ▶ Allows the administrator to dynamically add links to non-z/OSMF resources like ISV products and commonly used installation Web sites
- **There are four roles that z/OSMF supports:**
 - **Guest** – User is not logged into z/OSMF
 - **Authenticated Guest** – User is logged into z/OSMF but has no role assigned
 - **Administrator** – User can access all tasks in z/OSMF
 - **User** – User can access all tasks except Administrator tasks

Focusing on z/OSMF Administration

The primary purpose of the tasks provided is authorization functions for the administrator to authorize additional users. The administrator can add users (those with valid z/OS userIDs) and assign roles to them so these users can get access to different tasks. The roles are pre-defined roles and a user must be assigned a role to perform any tasks.

There is a Links task under Administration that allows the administrator to dynamically add links to non-z/OSMF resources like ISV products and commonly used installation Web sites. The purpose here is that as the system programmers work with different products, its a handy place to create a common list for frequently used information and is accessible to the whole team.

z/OSMF administration: Adding a z/OSMF user

For z/OS setup, scripts are provided. They encompass everything that is required to define additional users, end to end, to authorize them to z/OS resources
For example, use the sample scripts to generate and submit the RACF commands needed to connect you to Configuration Assistant or Incident Log

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Overview

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Here is how an Administrator can add a user. They go the users task, get a list of all currently defined users and the roles they have and what they are called .. there are certain actions they can perform. they can add a new user by selecting the new task from the Action drop down and a new panel will open up and they can add the userID of the user they want to add, specify a name, and then assign that user some roles.

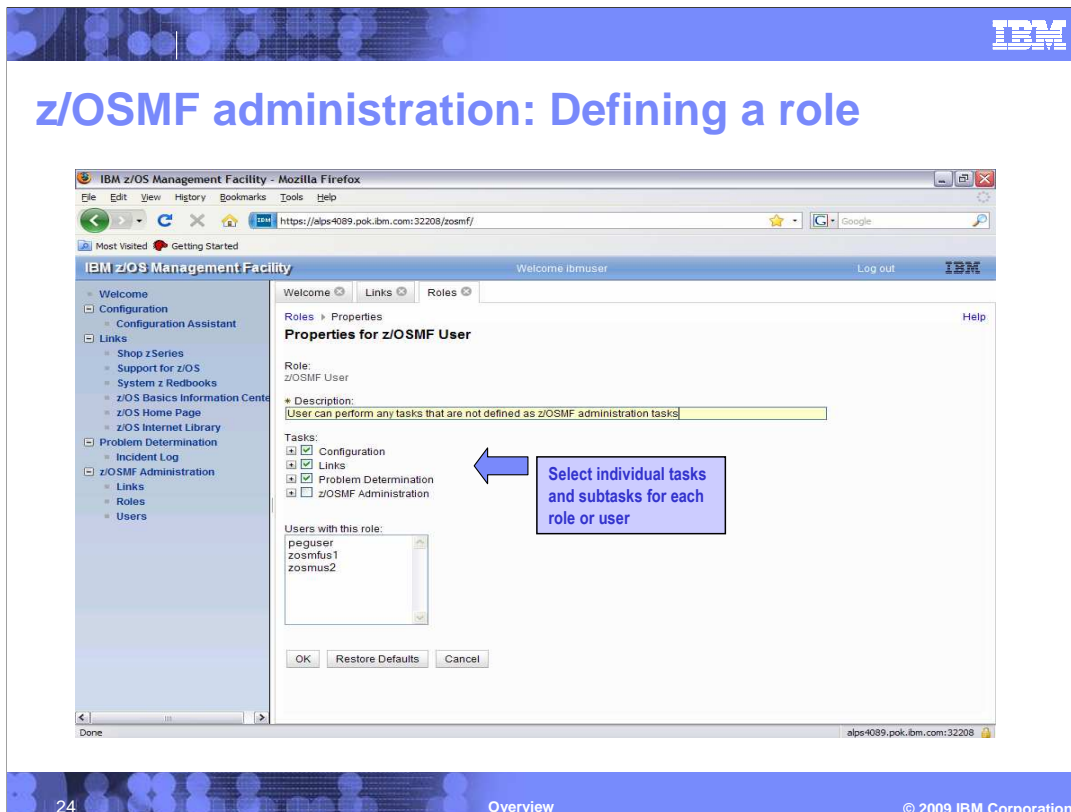
The administrator also needs to setup the RACF access to the z/OS resources using the sample scripts

Admin needs to click Users tasks under Administration and select "New" from Action menu

User ID is the RACF user setup on z/OS.

Name can be any string to identify the user

User gets assigned to either "User" or "Administrator" role



You can set which tasks are available to each of the roles and hence to each user based on the role that may have assigned to them.

Right now, there are only two roles, that of Administrator, and that of user. You can define what a user can see and set what a user can do. In the middle of the page you have the z/OSMF categories— and there are plus signs you can click on to expand those sections to show individual tasks. and then you can select individual tasks which that particular user can perform. By default the Administrator task are not enabled for users.

And on the bottom is an additional box that lists all the users who are assigned that particular role.

And this is how an administrator manages users and their roles.

z/OSMF administration: Adding a link

The screenshot displays the IBM z/OSMF administration interface in a Mozilla Firefox browser window. The main content area is titled "New Link" and contains the following elements:

- Input field for "Name (maximum 25 characters):"
- Input field for "URL (maximum 4096 characters):"
- Section "Roles authorized to use this link:" containing a table of roles.

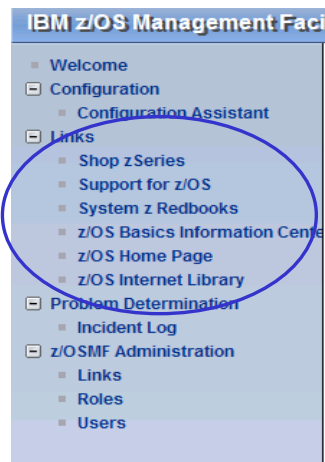
Role	Description
<input checked="" type="checkbox"/> z/OSMF Administrator	User can perform all tasks defined within z/OSMF
<input type="checkbox"/> z/OSMF User	User can perform any tasks that are not defined as z/OSMF administration tasks
<input type="checkbox"/> z/OSMF Authenticated Guest	User is logged into z/OSMF; however, no role is associated with the user's user ID
<input type="checkbox"/> z/OSMF Guest	User is not logged into z/OSMF

Annotations on the screenshot include:

- A blue arrow pointing to the "Name" field with the text "Define the documentation".
- A blue arrow pointing to the "Roles" table with the text "Select who can see it".
- A blue box in the left navigation menu labeled "Need to share sensitive information with a team?".

This screen shows how to add a link. In the main body it is fairly intuitive where you add the name and the fully qualified URL for the link and which roles can view or access that link. Now here you will notice it has more than one role ... there is the Administrator, the User, the Guest and an authenticated Guest. In many instances you want information and links to be made available to all users and guests... but there may be some instances where you are linking to internal documentation and you might not want to share that with just any guest. Authenticated guests are persons with valid user IDs, but who do not have roles assigned yet ... the administrator has the option to limit access to links to authenticated guests and you might use this type for role where teams might share information with each other

Focus on links



- This category contains the pre-defined links provided by IBM and 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

Now the Links category...

There is a Links task under the Administration category, and what that did was enable an administrator to define or update links for the z/OSMF users. The Links category is where all the links are visible to all authorized users. Some links to various IBM sites are predefined and the administrator can define more links and they will show up here.

This covers the main functions of z/OSMF 1.11.

Additional details on usage

▪ z/OSMF V1R11 operating environment

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

Here are some additional characteristics of z/OSMF V1.11 :

One instance of z/OSMF can manage only one local system or sysplex, based on the scope of the task to be performed. For example, problem determination collects information across all systems in a sysplex so you need one instance of z/OSMF at any time.

Multiple users can log into the same instance of z/OSMF from different workstations and browsers. While there is no hard-coded limit, we expect to support up to 15 concurrent users based on testing and feedback.

If you have multiple sysplexes, and sometime customer do, you will want to manage all those sysplexes. So, you will be required to have one z/OSMF instance setup on each sysplex, and you can manage all these sysplexes by opening a separate browser window or tab for each z/OSMF instance and logging into it.

At any given time only one active instance of z/OSMF is supported within a sysplex at any point in time. Additional instances can be created, for example for test or service update or backup, but it should not be actively managing the systems at the same time or using the same data repository. This is enforce by z/OS through a global enqueue to the data file system.

Prerequisites

- z/OS Management Facility requires z/OS V1 R10 and later
 - ▶ z/OS V1R10 requires additional service, as defined in the program directory
- The Configuration Assistant for z/OS Communications Server portion of z/OS Management Facility requires z/OS V1.11 or later.
- Client machine (no client machine install requirements)
 - ▶ Windows XP operating system and later
 - ▶ Supported browsers:
 - Mozilla Firefox 3.0.6 (recommended)
 - Mozilla Firefox 2
 - Internet Explorer® 7
 - Internet Explorer 6

Some requirements for z/OSMF. It is supported on z/OS V1.10 and above. On z/OS 1.10 additional service is required to enable the function in the base. There is no client install required. You can use the client/ browser machine, with Windows XP operating system and supported browsers: Mozilla Firefox 3.0.6 (recommended), Mozilla Firefox 2, Internet Explorer 7, Internet Explorer 6.

Note Additional service required on z/OSV1R10 system will be stated in the program directory.

Migration and coexistence considerations

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

In some instances a customer could have a mixed sysplex. Incident log is supported on z/OS 1.10. and 1.11. You can collect incidents, and as long as a dump occurs, it will get recorded. If there is a z/OS 1.9 system, the dump taken on that system will be recorded, but some fields are not recorded, but the function will work.

The Configuration assistant task is supported on z/OS V1.11 only. For other releases you can use the Windows based download. So if z/OSMF is installed on z/OS V1.10, Configuration Assistant will not show up.

z/OSMF is a fully enclosed stack and it will not affect other products and it will not affect other WebSphere Application Server installations either. It can coexist with regular WebSphere running on the same system with other products.

z/OSMF has end to end set up and installation instructions, including security set up for Administrator and other z/OS userIDs.

Mixed Release SYSPLEX Environment

The following information is not captured for the incident when the dump is taken on a system that is on a release before z/OS V1R10

- Snapshots of Operlog, Logrec detail, and Logrec summary

The following information will not be available in the GUI when the dump is taken on a system that is on a release before z/OS V1R10

ABENDCODE

CSECT

COMPONENTID

LOADMODULE

OSRELEASE

REASONCODE

Note: Hardcopy Log (Operlog) and Logrec must be written to System Logger streams to facilitate capturing diagnostic snapshots for Incidents.

- If not done, Incident Log will display incidents, but Send Data action will be limited to the SVC Dump

Summary

- IBM z/OS Management Facility (z/OSMF) V1R11 is a new product.
- z/OSMF makes the day to day operations and administration of the mainframe z/OS systems easier to manage for both new and experienced system programmers.
- z/OSMF delivers solutions in a task oriented, Web browser based user interface.
- The initial functions in z/OSMF 1.11 include z/OSMF Administration, Incident Log, Configuration Assistant for z/OS Communication Server, and Links

In Summary, z/OSMF is a new product for z/OS customers that will make the day to day management of z/OS system easier for both new and experience system programmers. It is task oriented, browser based solution. The initial functions are problem data management and TCP/IP policy management.

Additional information

- Program Directory for z/OS Management Facility
GI11-2886-00
- IBM z/OS Management Facility License
Information - GC52-1263-00
- IBM z/OS Management Facility User's Guide
SA38-0652-00
- IBM WebSphere Application Server OEM Edition
for z/OS Configuration Guide, Version 7.0,
GA32-0631-00

This is some additional reference information about z/OSMF. Thank You!

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RACF WebSphere z/OS

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