

z/OS 2.4 Education Assistant (IEA)

Solution Name: z/OSMF Lite and Security Assistant

Element(s)/Component(s): z/OSMF



Agenda

- Trademarks
- Session Objectives
- Overview
- Usage & Invocation
- Installation
- Session Summary
- Appendix

Trademarks

- See url <http://www.ibm.com/legal/copytrade.shtml> for a list of trademarks.
- Additional Trademarks:
 - None

Session Objectives

- An overview of z/OSMF configuration enhancements in V2R4
- z/OSMF Lite simplifies the first time configuration experience
 - It takes less than 90 minutes to configure z/OSMF Nucleus for the first time configuration.
 - You can expand your z/OSMF configuration by adding more services on top of z/OSMF Nucleus. The overall configuration work can still be much less than what was required for z/OSMF V2R3 or V2R4.
 - Traditional z/OSMF configuration (configuring all z/OSMF Core services at one time) continues to be supported.
- Security Assistant can programmatically detect and present z/OSMF security status
 - Security Assistant supports all ESMs (IBM tests on RACF)
 - Security Admin can delegate security validation to system programmers

Overview

- Who (Audience)
 - z/OSMF installer
 - Security Administrator
- What (Solution)
 - IBM provides a new way to configure z/OSMF and review security configurations on V2R4.
- Wow (Benefit / Value, Need Addressed)
 - It takes less than 90 minutes to bring up the minimal z/OSMF configuration – z/OSMF Nucleus.
 - It takes less than 5 minutes to validate and review z/OSMF security configuration results.

z/OSMF Lite Overview

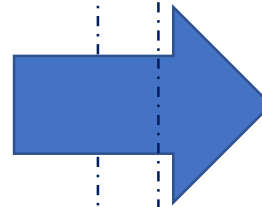
Before z/OSMF Lite

z/OSMF Core Services (Minimal configurations)

- Liberty Profile
- Core Navigation
- Online Help
- Notification
- Notification settings
- App linking
- Import Manager
- Links
- FTP Servers
- Usage Statistics
- System Status
- Workflow Editor
- API Discovery Swagger
- REST Job API
- REST File API
- REST TSO API
- Cloud Provisioning (Software Services)
- Workflows
- Console (UI and REST API)

z/OSMF Optional Services (Extension)

- Capacity Provisioning
- Configuration Assistant
- Incident Log
- ISPF
- Resource Monitoring
- Resource Management
- Software Management
- Sysplex Management
- Workload Management



After z/OSMF Lite

z/OSMF Nucleus (Minimal configuration)

- Liberty Profile
- Core Navigation
- Online Help

z/OSMF Core Services (Extension)

- Notification
- Notification settings
- App linking
- Import Manager
- Links
- FTP Servers
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- Capacity Provisioning
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- Workload Management

z/OSMF Lite Configuration – New Install

z/OSMF Nucleus (Minimal configuration)	
Liberty Profile	
Core Navigation	
Online Help	
z/OSMF Core Services (Extension)	
Notification	
Notification settings	
App linking	
Import Manager	
Links	
FTP Servers	
Usage Statistics	
System Status	
Workflow Editor	
API Discovery Swagger	
REST Job API	
REST File API	
REST TSO API	
Cloud Provisioning (Software Services)	
Workflows	
Console (UI and REST API)	

- You will not be asked to configure every service on the left
- You can free select any service you want to use, and configure what you need, which can reduce up to 70% of configuration work comparing with works required for a minimal configuration in previous release
- The legacy z/OSMF core configuration using IZUSEC job is still supported, if you want to enhance all the z/OSMF Core services on the left

z/OSMF Lite Configuration – Migration/Upgrade

z/OSMF Core Services (Minimal configurations)

Liberty Profile
Core Navigation
Online Help
Notification
Notification settings
App linking
Import Manager
Links
FTP Servers
Usage Statistics
System Status
Workflow Editor
API Discovery Swagger
REST Job API
REST File API
REST TSO API
Cloud Provisioning (Software Services)
Workflows
Console (UI and REST API)

- There's no migration actions for z/OSMF Lite
- For any existing z/OSMF Configuration, you should have already configured all z/OSMF Core services following IZUSEC sample.
- If any of the Core service was not properly configured, you can follow the new configuration guide designed for z/OSMF Lite.
- With the new book, z/OSMF provides a much concise configuration requirement for each service.

z/OSMF Lite Configuration Planning

The whole service will not run properly without configuring the service

Part of the service will not run properly without configuring the service

Row View shows list of services built on top of this service (Commonality)

Column View shows list of services required by this service (Complexity of configuration)

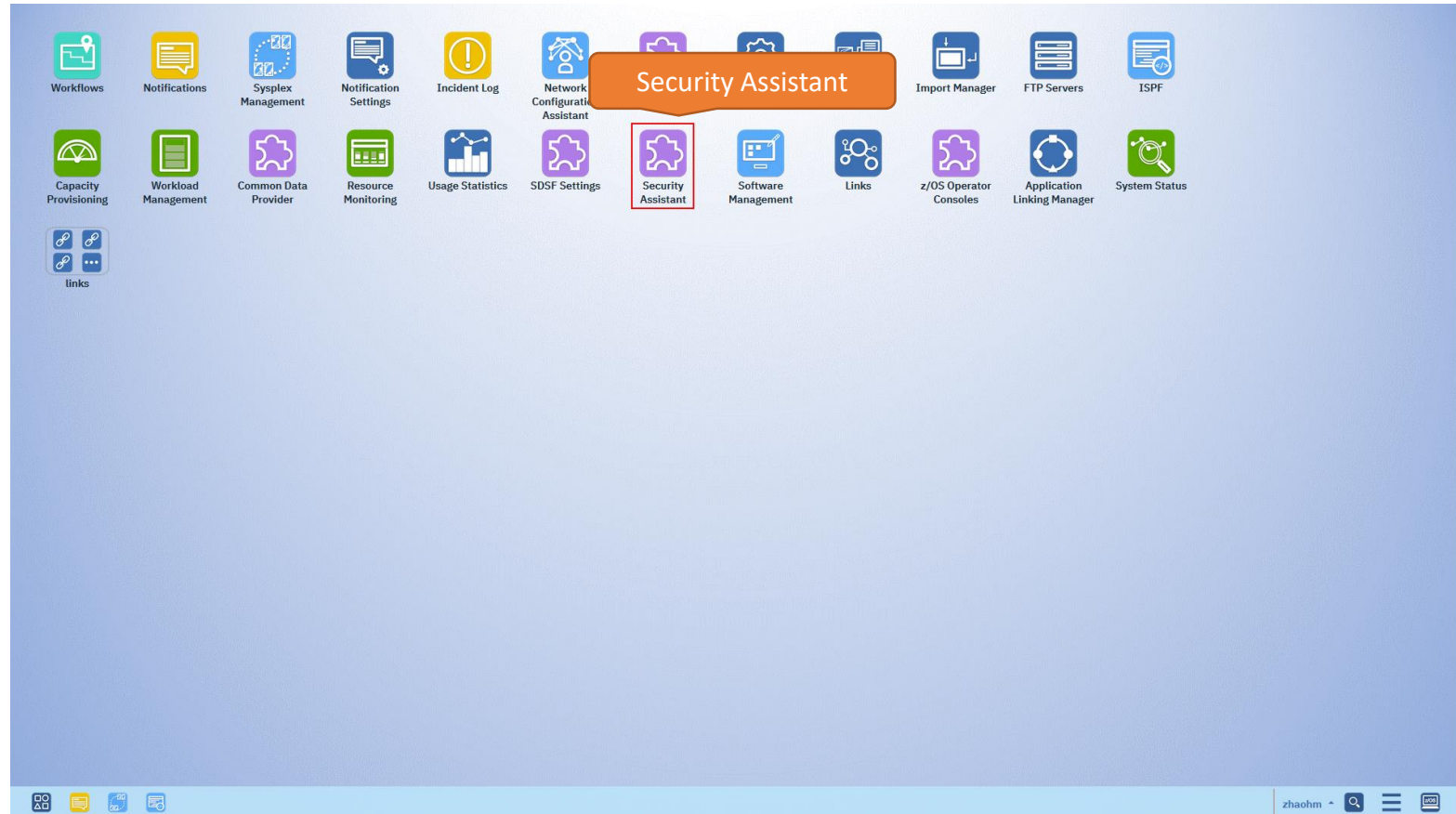
	Notification	z/OSMF Administrative tasks	z/OSMF Settings	Swagger support of REST API	REST Job API	REST File API	REST TSO API	Workflows	Console	Cloud Provisioning	Capacity Provisioning	Network Configuration Assistant	Incident Log	ISPF	Resource Monitoring	Software Management	Sysplex Management	Workload Management
CEA																		
CIM																		
Notification																		
z/OSMF Administrative tasks																		
z/OSMF Settings																		
API Discovery Swagger																		
REST Job API																		
REST File API																		
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Sysplex Management																		
Workload Management																		

z/OSMF Lite Security Samples

Service	Configurable in IZUPARMXX	Security Sample	
Nucleus	N	IZUNUSEC	IZUSEC
Security Assistant	N	IZUSASEC	
Notification	N	IZUNFSEC	
zOSMF Administrative Tasks	N	IZUATSEC	
z/OSMF Settings	N	IZUSTSEC	
API Discovery Swagger	N	IZUSWSEC	
REST Job API	N	IZURJSEC	
REST File API	N	IZURFSEC	
REST TSO API	N	IZUTSSEC	
Cloud Provisioning	N	IZUPRSEC	
Workflows	N	IZUWFSEC	
Console (UI and REST API)	N	IZUGCSEC	
Capacity Provisioning	Y	IZUCPSEC	
Configuration Assistant	Y	IZUCASEC	
Incident Log	Y	IZUILSEC	
ISPF	Y	IZUISSEC	
Resource Monitoring	Y	IZURMSEC	
Software Management	Y	IZUSMSEC	
Sysplex Management	Y	IZUSPSEC	
Workload Management	Y	IZUWMSEC	
zERT Network Analyzer	Y	IZUNASEC	

Security Assistant Task

- Requires IZUNUSEC (Nucleus) and IZUSASEC (SA)



Security Assistant Task

- First time loading page shows self check result for SA
- All results in Security Assistant Tab should be passed if IZUSASEC was submitted

The user ID to be validated

Pie chart of security status

Required security resources and status table

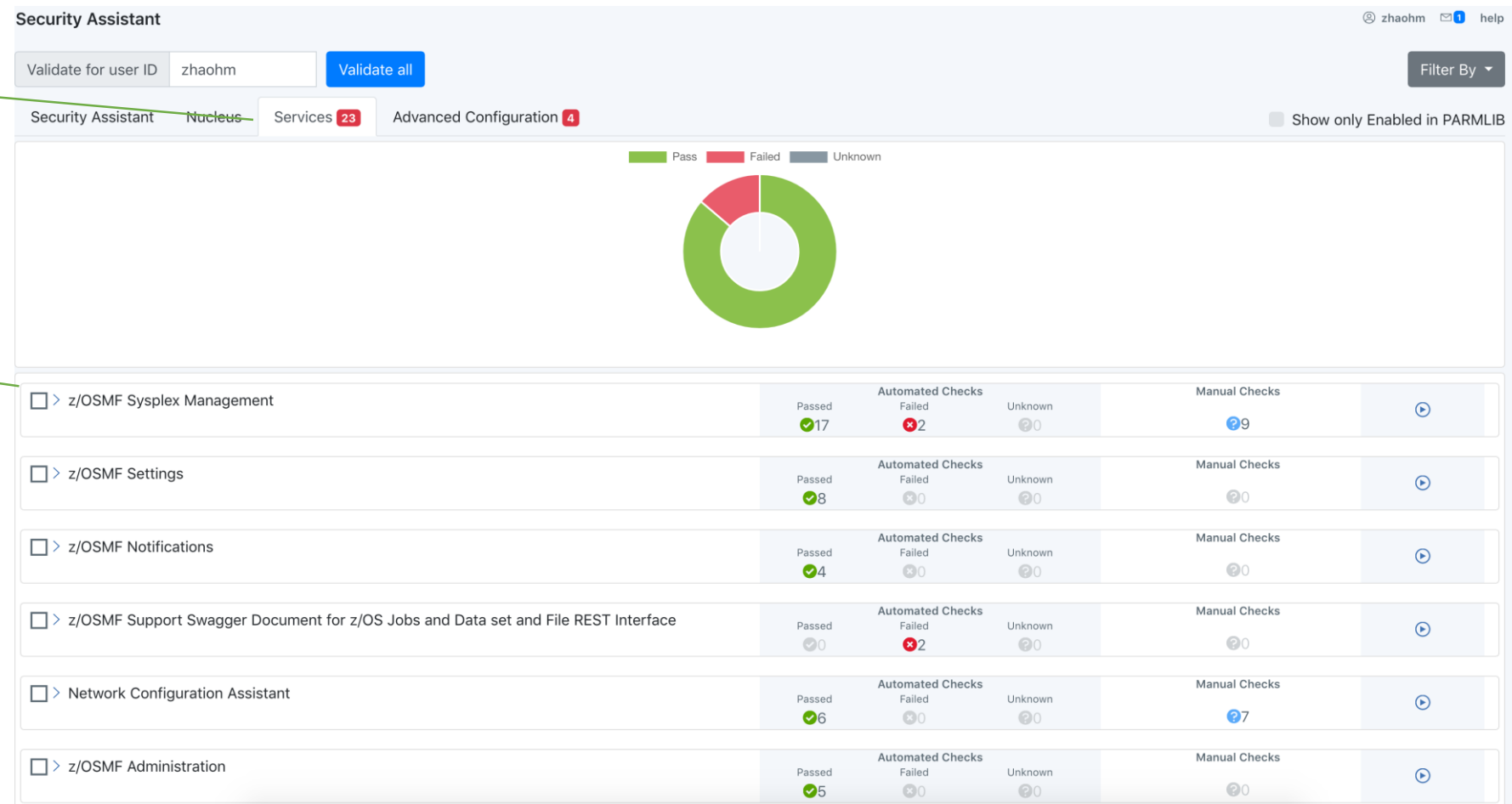
The screenshot displays the Security Assistant interface. At the top, there's a header with the user 'zhaohm' and a 'help' link. Below the header, a navigation bar shows tabs for 'Security Assistant', 'Nucleus', 'Services' (with a red badge '23'), and 'Advanced Configuration' (with a red badge '4'). The main content area features a 'Validate for user ID' section with a text input containing 'zhaohm' and a 'Validate all' button. To the right is a 'Filter By' dropdown. Below this is a large donut chart representing the security status, with a legend indicating 'Pass' (green), 'Failed' (red), and 'Unknown' (grey). The chart is almost entirely green, indicating a high pass rate. Underneath the chart is a section for 'z/OSMF Security Assistant' with a summary bar showing 'Passed 17', 'Automated Checks 0', 'Failed 0', 'Unknown 0', and 'Manual Checks 0'. A table titled 'Automated' lists various security resources and their validation status.

Resources for z/OSMF Security Assistant	Description	Class	Who needs the access	Required Access	Validated User ID	Validation Result	Action
BBG.SECCLASS.SERVER	Allow the user to perform verification of resources belonged to SERVER class.	SERVER	IZUSVR	READ	IZUSVR	Passed	ⓘ
BBG.SECCLASS.APPL	Allow the user to perform verification of resources belonged to APPL class.	SERVER	IZUSVR	READ	IZUSVR	Passed	ⓘ
BBG.SECCLASS.FACILITY	Allow the user to perform verification of resources belonged to FACILITY class.	SERVER	IZUSVR	READ	IZUSVR	Passed	ⓘ
BBG.SECCLASS.EJBROLE	Allow the user to perform verification of resources belonged to EJBROLE class.	SERVER	IZUSVR	READ	IZUSVR	Passed	ⓘ
BBG.SECCLASS.SERVAUTH	Allow the user to perform verification of resources belonged to SERVAUTH class.	SERVER	IZUSVR	READ	IZUSVR	Passed	ⓘ
BBG.SECCLASS.STARTED	Allow the user to perform verification of resources belonged to STARTED class.	SERVER	IZUSVR	READ	IZUSVR	Passed	ⓘ
BBG.SECCLASS.ZMFCLOUD	Allow the user to perform verification of resources belonged to ZMFCLOUD class.	SERVER	IZUSVR	READ	IZUSVR	Passed	ⓘ

Security Assistant Task

23 resources checks are failed in services category

Expand the table to see further details of failures



Security Assistant Task

- Check this filter will hide services not enabled in IZUPRMXX

Security Assistant

Validate for user ID: zhaohm Validate all

Security Assistant Nucleus Services 23 Advanced Configuration 4

☐ z/OSMF Sysplex Management Passed 17 Failed 2 Unknown 0 Manual Checks 9

Automated Manual

Resources for z/OSMF Sysplex Management service	Description	Class	Who needs the access	Required Access	Validated User ID	Validation Result	Action
IZUDFLT.ZOSMF.SYSplex	Allows the user to view Sysplex resources.	ZMFAPLA	IZUUSER ZOSMFGRP	READ	zhaohm	Passed	
IZUDFLT.ZOSMF.SYSplex.MODIFY	Allows the user to modify Sysplex resources.	ZMFAPLA	ZOSMFGRP	READ	zhaohm	Passed	
IZUDFLT.ZOSMF.SYSplex.LOG	Allows the user to cleanup Sysplex command log table and set cleanup settings.	ZMFAPLA	<User of the Service>	READ	zhaohm	Passed	
CEA.XCF.CF	Allows the user to access CEA for Sysplex CF resource.	SERVAUTH	IZUUSER ZOSMFGRP	READ	zhaohm	Passed	
CEA.XCF.CDS	Allows the user to access CEA for Sysplex CDS resource.	SERVAUTH	IZUUSER ZOSMFGRP	READ	zhaohm	Passed	
CEA.XCF.SYSplex	Allows the user to access CEA for Sysplex system resource.	SERVAUTH	IZUUSER ZOSMFGRP	READ	zhaohm	Passed	
CEA.XCF.STRUCTURE	Allows the user to access CEA for Sysplex structure resource.	SERVAUTH	IZUUSER ZOSMFGRP	READ	zhaohm	Passed	

Resources for z/OS Operator Consoles	Description	Class	Who needs the access	Required Access	Validated User ID	Validation Result	Action
CONSOLE	Allows the user to create an EMCS console through TSO Console command.	TSOAUTH	<User of the Service>	READ	zhaohm	Passed	
IZUDFLT.ZOSMF.CONSOLES.ZOSOPER	Allows the user to view and access the z/OS Operator Consoles task in the z/OSMF navigation tree.	ZMFAPLA	IZUUSER ZOSMFGRP	READ	zhaohm	Passed	
SYSplex.OPERLOG	Allows user to retrieve OPERLOG.	LOGSTRM	<User of the Service>	READ	zhaohm	Failed	

- Review the error and determine if the error needs to be fixed or not
- Rerun this single validation by clicking the revalidate action icon.

Usage & Invocation

- z/OSMF installer can validate security setup for another z/OSMF user

The screenshot displays the Security Assistant web interface. At the top, a blue header bar contains the title 'Security Assistant' and a user profile 'zhaohm'. Below the header, a navigation bar includes tabs for 'Security Assistant', 'Nucleus', 'Services' (with a red badge '20'), and 'Advanced Configuration' (with a red badge '4'). A 'Filter By' dropdown is also present. The main content area features a 'Specify user ID' orange callout box above a text input field containing 'zosmfad' and a 'Validate all' button. Below this, a donut chart shows the validation status: a large green segment for 'Pass', a small red segment for 'Failed', and a grey segment for 'Unknown'. A legend above the chart identifies these colors. Under the chart, a section titled 'z/OSMF Sysplex Management' shows a summary of checks: 'Automated Checks' with 18 Passed (green checkmark), 1 Failed (red X), and 0 Unknown (grey circle), and 'Manual Checks' with 9 (blue question mark). Below this summary are tabs for 'Automated' and 'Manual'. A table lists resources for the z/OSMF Sysplex Management service, including columns for 'Resources', 'Description', 'Class', 'Who needs the access', 'Required Access', 'Validated User ID', 'Validation Result', and 'Action'. The first row shows 'IZUDFLT.ZOSMF.SYSPLEX' with a description 'Allows the user to view Sysplex resources.', class 'ZMFAPL A', and a 'Passed' validation result for user 'zhaohm'.

Resources for z/OSMF Sysplex Management service	Description	Class	Who needs the access	Required Access	Validated User ID	Validation Result	Action
IZUDFLT.ZOSMF.SYSPLEX	Allows the user to view Sysplex resources.	ZMFAPL A	IZUUSE R ZOSMFG RP	READ	zhaohm	Passed	

Usage & Invocation

- The validation can be run by selection, by service or by resource.

The screenshot displays the 'Security Assistant' web interface. At the top, there's a header with the title 'Security Assistant' and a user profile 'zhaohm'. Below the header, a navigation bar includes tabs for 'Security Assistant', 'Nucleus', 'Services 20', and 'Advanced Configuration 4'. A search bar on the left contains 'Validate for user ID: zosmfad' and a 'Validate selected' button with a note '2 items selected'. A 'Filter By' dropdown is on the right. The main content area shows a list of services. The first service is 'z/OSMF Sysplex Management' with 'Automated Checks' (Passed: 18, Failed: 1, Unknown: 0) and 'Manual Checks' (9). The second service is 'z/OSMF Settings' with 'Automated Checks' (Passed: 8, Failed: 0, Unknown: 0) and 'Manual Checks' (0). Below the services, there's a table titled 'Resources for z/OSMF Settings'. The table has columns: 'Resources for z/OSMF Settings', 'Description', 'Class', 'Who needs the access', 'Require d Access', 'Validate d User ID', 'Validation Result', and 'Action'. The table lists four resources related to FTP settings, all with a 'Passed' validation result. Three orange callout boxes highlight different validation methods: 'By selection' points to the 'Validate selected' button; 'By service' points to a play button icon next to the 'z/OSMF Settings' service; 'By resource' points to a play button icon in the 'Action' column of the first resource row.

Security Assistant

By selection

Validate for user ID: zosmfad

Validate selected 2 items selected

Filter By

Security Assistant Nucleus Services 20 Advanced Configuration 4

Show only Enabled in PARMLIB

z/OSMF Sysplex Management

Automated Checks: Passed 18, Failed 1, Unknown 0

Manual Checks: 9

z/OSMF Settings

Automated Checks: Passed 8, Failed 0, Unknown 0

Manual Checks: 0

Automated

Resources for z/OSMF Settings	Description	Class	Who needs the access	Require d Access	Validate d User ID	Validation Result	Action
IZUDFLT.ZOSMF.SETTINGS.FTP_SERVERS	Allows the user to view the FTP setting.	ZMFAPL A	IZUUSE R ZOSMFG RP	READ	zhaohm	Passed	By resource
IZUDFLT.ZOSMF.SETTINGS.FTP_SERVERS.VIEW	Allows the user to view the FTP setting.	ZMFAPL A	IZUUSE R ZOSMFG RP	READ	zhaohm	Passed	
IZUDFLT.ZOSMF.SETTINGS.FTP_SERVERS.MODIFY	Allows the user to change the FTP setting.	ZMFAPL A	ZOSMFG RP	READ	zhaohm	Passed	
IZUDFLT.ZOSMF.GENERAL.SETTINGS	Allows the user to view the general setting.	ZMFAPL A	ZOSMFG RP	READ	zhaohm	Passed	

By service

By resource

Usage & Invocation

- Use the filter to display the results you concerned about

Security Assistant

Validate for user ID: Validate all

Security Assistant Nucleus Services **23** Advanced Configuration **4**

Show only E

Filter By

- ☒ Failed
- ☐ Unknown
- ☐ Manual

Resources for z/OS Operator Consoles	Description	Class	Who needs the access	Required Access	Validated User ID	Validation Result	Action
SYSplex.OPERLOG	Allows user to retrieve OPERLOG.	LOGSTRM	<User of the Service>	READ	zhaohm	Failed	

Resources for Discover CPC service	Description	Class	Who needs the access	Required Access	Validated User ID	Validation Result	Action
HWI.APPLNAME.HWISERV	Allows the administrator groups access to the BCPii services.	FACILITY	ZOSMFGRP	READ	zhaohm	Failed	

☐ z/OSMF Support Swagger Document for z/OS Jobs and Data set and File REST Interface

Passed 0 Failed 2 Unknown 0

Manual Checks 0

Automated

Resources for z/OSMF Support Swagger Document	Description	Class	Who needs the access	Required Access	Validated User ID	Validation Result	Action
IZUDFLT.com.ibm.ws.management.security.resource.allAuthenticatedUsers	Allows users and administrators to access Swagger.	EJBROLE	IZUUSER ZOSMFGRP	READ	zhaohm	Failed	

Usage & Invocation

- If a security requirement can not be programmatically validated, it will be listed under the “Manual” section.

The screenshot shows the 'Security Assistant' application window. The main content area displays a table of resources under the 'Manual' tab. An orange callout bubble with the text 'Resources in Manual tab cannot be validated automatically' points to the 'Manual' tab. The table has columns for 'Resources for Networking support for IBM Cloud Provisioning and Management for z/OS', 'Description', 'Class', 'Who needs the access', and 'Required Access'.

Resources for Networking support for IBM Cloud Provisioning and Management for z/OS	Description	Class	Who needs the access	Required Access
MVS.ROUTE.CMD.<sysname>	Allows the Network Configuration Assistant task to issue the ROUTE operator command for IBM Cloud Provisioning and Management for z/OS. This definition is applicable only if the installation uses this profile to restrict the use of the ROUTE command. If the ROUTE command is restricted, there must be one ResourceProfile for each system in each cloud domain with the system name substituted for <sysname>.	OPERCMDS	IZUSVR	READ
	Allows the Network Configuration Assistant task to issue the command NETSTAT CONFIG. This definition is applicable only when your installation uses the			

Installation - Security Assistant

- The following profiles must be defined. IZUSVR must have read access to these profiles.

Class	Resource
ZMFAPLA	IZUDFLT.ZOSMF.SA
SERVER	BBG.SECCLASS.SERVER
SERVER	BBG.SECCLASS.APPL
SERVER	SECCLASS.FACILITY
SERVER	BBG.SECCLASS.EJBROLE
SERVER	BBG.SECCLASS.SERVAUTH
SERVER	BBG.SECCLASS.STARTED
SERVER	BBG.SECCLASS.ZMFCLOUD
SERVER	BBG.SECCLASS.ACCTNUM
SERVER	BBG.SECCLASS.TSOPROC
SERVER	BBG.SECCLASS.TSOAUTH
SERVER	BBG.SECCLASS.OPERCMDS
SERVER	BBG.SECCLASS.CSFSERV
SERVER	BBG.SECCLASS.JESSPOOL
SERVER	BBG.SECCLASS.LOGSTRM
SERVER	BBG.SECCLASS.UNIXPRIV
SERVER	BBG.SECCLASS.RDATALIB

Session Summary

- z/OSMF Lite provides a more flexible configuration. You can create your own small configuration that configuration work is achievable in hours.
- z/OSMF Security Assistant can programmatically validate z/OSMF security requirements by users.
- Security administrator can delegate security validation to system programmers.