



# z/OSMF User Experience Part 1



Share in Anaheim  
Session 8757 - March 3, 2011  
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Protection

# Applicable Movie Quotes:

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- Now I'm not gonna sit here and blow sunshine up your a\$\$, Lieutenant --Viper, Top Gun
- If my answers frighten you then you should cease asking scary questions.  
--Jules Winnfield, Pulp Fiction
- *I'm not gonna sugarcoat this for you*  
--Mission Control Engineer, Apollo 13
- *That which does not kill us, makes us stronger*  
--Clairee, Steel Magnolias

# User Experience Part 1

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- Mary Anne Matyaz, Senior MVS Systems Programmer, Base Technologies, Inc.
- Under contract at United States Customs and Border Protection for two years.
- Specializes in MVS, JES2, SMP/E, WLM, IPCS, Sysplex
- Vaguely familiar with Top Secret, WAS
- CBP is a large site, multiple z196's, 20-ish Webspheres, 100's of CICS, DB2, Datacom

# U.S. Customs and Border Protection

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- In 2010:
- CBP seized 4.1 million pounds of narcotics
- CBP seized \$147 million dollars in currency
- CBP officers at ports of entry apprehended more than 8,400 people
- CBP officers at more than 330 ports of entry inspected 352 million travelers and more than 105.8 million cars, trucks, buses, trains, vessels and aircraft.
- CBP processed \$1.99 trillion in import value and collected \$32.3 billion in duties, taxes, and fees

# May 2010 – Start

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- Ordered a z/OSMF CBPDO, received it on May 5, RSU1003.
- Install was relatively quick and painless
- Started configuring WASOEM the same day I installed.
- I took mostly defaults, and changed obvious stuff, sysname, dnsname, etc.

# So far so good...

- Customization definition successfully written to /etc/zWebSphereOEM/V7R0/conf/CONFIG1/zpmt
- Copying CNTL files to BBN.V7R0.CONFIG1.ZPMTJOBS.CNTL...
- Copy successful.
- Copying DATA files to BBN.V7R0.CONFIG1.ZPMTJOBS.DATA...
- Copy successful.
- Success: customization jobs have been created successfully.
  
- Submit the following jobs before running WASOEM.sh -create
- First, submit BBN.V7R0.CONFIG1.ZPMTJOBS.CNTL(BBOSBRAK) - Make sure that you select BBOSBRAK.
  
- After BBN.V7R0.CONFIG1.ZPMTJOBS.CNTL(BBOSBRAK) completes, submit the following:  
BBN.V7R0.CONFIG1.ZPMTJOBS.CNTL(BBOSBRAM)  
BBN.V7R0.CONFIG1.ZPMTJOBS.CNTL(BBOCBRAK)
- WASOEM.sh has completed

# The fun begins...

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- Being a Top Secret shop, we can't run the rexx execs as they are, we need to convert them to Top Secret commands.
- I enlisted the help of the TopSecret guy, who also happens to be the Websphere guy, who also happens to be a former marine. (Think: A Few Good Men--Col Jessup, not Dawson and Downey)
- It turns out, he KNOWS TOO MUCH. He knows what the WAS ID's do, and how to name them to fit our rigid standards.

# Tips for Success:

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- DON'T Change the userids
  - DON'T Change the ports
  - DO use RACF.
  - DO use the quickstart guide
- 
- If you follow these four, can define your own ID's in RACF, and have no port issues, you should be able to have z/OSMF up in a day.
  - Luckily for me, said Marine is next door. The TCPIP guys are not.



# What went wrong: WASOEM

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- BPXSHAREAS to No
- OMVS(ASSIZE) to 12000000
- Don't use a proclib that someone else may be browsing. I created a new proclib for these members then copied them later, because WASOEM.sh – create needs EXCL and will fail
- Admin console didn't start up. Opened PMR, took a Friday off, and the marine jumped in while I was gone and got it working, not sure how. He said he ran some jobs in .cntl file (BBOWCFS,HFSA,PFA), and played with the key ring cert. Then changed the key ring cert and did the config again, and it started up.

# What went wrong: Ports in CIM and WASOEM

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- BBOO0269E BIND FOR CF PORT FAILED BECAUSE PORT 1025 WAS ALREADY IN USE
- BBOO0269E BIND FOR CF PORT FAILED BECAUSE PORT 1026 WAS ALREADY IN USE
- CIM uses port 5988, with no obvious way to change that, and a note in the manual saying they recommend NOT to change it.
- INADDRANYPORT(5755) to (5990) to open port 5988 for the new CIM Server (CFZCIM)

# What went wrong: CIM

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The CIM stuff hadn't been configured in the serverpac. /var/wbem/ filesystem wasn't there. Had to run the serverpac job.

- IZUG095I: The Common Information Model (CIM) server must be configured and started before proceeding with configuration.
- There's a question in the Script that asks if you want to configure CIM, I said yes, thinking that would take care of this, but the serverpac jobs are part of 'install'.
- CIM gets his own nonzero uid, but I am uid 0 and I created the file systems, so CIM can't access his own filesystems.
- `chown -R CIM:CIMGP /var/wbem`

# A wild hair...

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- The marine changed `/zWebSphereOEM/V7R0/conf/` to `/websphere/v70/oem` one day, for whatever reason. Didn't tell me.
- The `izusetup` script didn't work.

Had to change

`/etc/zWebSphereOEM/V7R0/conf/CONFIG1/CONFIG1/CONFIG1.responseFile` because `izusetup` checks that the path is there.

# The good news...

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- IBM Support Center was **fabulous!**

Patient. Persistent. Not condescending. Not telling me to read the manual.  
Knowledgeable.

Special thanks to Walter, Katie, Becky, Mike Y. at IBM Support, and Anuja Deedwaniya.

I still like Marines.

# A few months later...

## z/OS 1.12 upgrade – Migrate

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- `/usr/lpp/zosmf/V1R12/bin: >izumigrate.sh -file /etc/zosmf/izuconfig1.cfg`
- `/usr/lpp/zosmf/V1R12/bin: >izumigrate.sh -file /etc/zosmf/izuconfig1.cfg`
- IZUG178I: The input configuration file `"/etc/zosmf/izuconfig1.cfg"` was saved to a backup file `"/etc/zosmf/izuconfig1.cfg.V1R11"`.
- IZUG177I: The configuration file `"/etc/zosmf/izuconfig1.cfg"` has been migrated to the format: `"V1R12"`.
- IZUG210I: The script `"/.izumigrate.sh"` has completed.

# Upgrade to z/OS 1.12 - Deploy

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- IZUG146I: Invoking script  
"/usr/lpp/zosmf/V1R12/bin/izuadmin.sh -deployBase".
- IZUG146I: Invoking script  
"/usr/lpp/zosmf/V1R12/bin/izuadmin.sh -verifyBase".
- IZUG083I: The verification of "core" has completed successfully.
- IZUG349I: The "z/OSMF Welcome panel" can be accessed at  
"https://NOTALLOWED.TOPUBLISH.THIS:10908/zosmf" after the application server is started on your system.
- IZUG210I: The script "./izusetup.sh" has completed.

# Tip: Environment Checker

IBM z/OSMF - Environment Checker - Windows Internet Explorer provided by US Customs & Border Protection

https://usct:10928/zosmf/izuUICommon/environment.jsp

Certificate Error

/var/zosmf/data/logs/IZUG0.log

File Edit View Favorites Tools Help

Favorites Basetime BUN BWI IBM SR IBLink PCLAIM PM Web TAD Team - Mainframe Ops TrafficLand ibvm IBMMAIN

Page Safety Tools

## IBM z/OS Management Facility - Environment Checker Help

The environment checker tool has inspected your workstation for compliance with IBM z/OS Management Facility (z/OSMF).

Environment Option	Settings as of 2010-11-29T17:57:38.913Z	Requirements																
JavaScript	JavaScript enabled	Enable JavaScript																
Cookies	Cookies enabled	At a minimum, enable cookies for the z/OSMF server site																
Pop-up Windows	Pop-up windows enabled	At a minimum, allow pop-up windows from the z/OSMF server site																
Frames	Frames enabled	Enable frames																
Screen Resolution	1024 by 768	Minimum screen resolution of 1024 by 768																
Browser Content Dimensions	1020 by 562	Minimum browser content dimensions of 800 by 600																
Browser Name and Version Browser User-Agent value	Internet Explorer 7.0 Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.1; Trident/4.0; InfoPath.1; .NET CLR 2.0.50727; .NET CLR 3.0.4506.2152; .NET CLR 3.5.30729)  Warning: Slow browser responsiveness may occur when opening multiple tabs, working with large WLM service definitions, or running monitoring desktops for a long time. Use the recommended browser to alleviate this situation.	Supported browsers by operating system: <table border="1"> <thead> <tr> <th>Operating System</th> <th>Firefox 3.0.x 32-bit (Minimum 3.0.15)</th> <th>Firefox 3.5.x 32-bit</th> <th>Internet Explorer 32-bit</th> </tr> </thead> <tbody> <tr> <td>Microsoft Windows XP Professional 32-bit</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Microsoft Windows Vista Business 32-bit</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Microsoft Windows 7 Professional 32-bit</td> <td>No</td> <td>Yes</td> <td>No</td> </tr> </tbody> </table>	Operating System	Firefox 3.0.x 32-bit (Minimum 3.0.15)	Firefox 3.5.x 32-bit	Internet Explorer 32-bit	Microsoft Windows XP Professional 32-bit	Yes	Yes	Yes	Microsoft Windows Vista Business 32-bit	Yes	Yes	Yes	Microsoft Windows 7 Professional 32-bit	No	Yes	No
Operating System	Firefox 3.0.x 32-bit (Minimum 3.0.15)	Firefox 3.5.x 32-bit	Internet Explorer 32-bit															
Microsoft Windows XP Professional 32-bit	Yes	Yes	Yes															
Microsoft Windows Vista Business 32-bit	Yes	Yes	Yes															
Microsoft Windows 7 Professional 32-bit	No	Yes	No															
Operating System	Microsoft Windows XP	Microsoft Windows XP Professional 32-bit, Microsoft Windows Vista Business 32-bit, and Microsoft Windows 7 Professional 32-bit																
Add-ons	No problem add-ons detected	Firebug may cause a performance impact to z/OSMF																
Plug-ins	Java	Some plug-ins may cause a performance impact to z/OSMF																

Done

Local intranet 100%



# Environment Checker

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- <https://hostname:port/zosmf/IzuUICommon/environment.jsp>
- Documented in the z/OSMF User Guide

# It's Up...Now What?

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- The TCPIP guy is happily using it for Policy Agent.
- I use its reporting capabilities for WLM, which are very nice. It's easy to query, search, etc.
- Even though z/osmf runs in the testplex, I was able to 'import the prodplex policy in so I could report on it, and used that info for a cleanup effort.
- I couldn't get the Incident Log portion to configure, for several reasons:
  - We don't use sysplex-wide DAE (Our lpars are all very different)
  - We don't really use operlog, and don't care for logger either.
  - We have a homegrown system to manage dumps and we love it.

# Miscellaney

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- BBOO0222I: SECJ6222I: Thread identity synchronization of user "" was not authorized by the z/OS security product
- TSS ADD(OMVSDEPT) SURROGAT(BBO.)
- TSS PER(WOEMP)  
SURROGAT(BBO.SYNC.) ACC(READ)
- This was while attempting to add a user who is not a sysprog...the performance guy, so he could look at WLM info. We still have to make him UID(0)

# My observations

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- I initially set z/osmf up on our little sysprog lpar. Not a lot of juice, and so...z/OSMF is **SLOW**. 30 second screen flips
- Right now, not using the incident log function, I can't really see the bang for the buck. Not the cost of software but the cost of running it.
- The z/OS 1.13 enhancements sound promising, and my plan is to redo this with z/OS 1.13 and attempt incident log then.

# New Stuff

- IBM is putting together a 'Security Requirements' document/white paper. I saw it, and commented on it.
- It should be very helpful to Top Secret and ACF2 shops
- It looks something like this:

<u>Class</u>	<u>Profile</u>	<u>Users/groups</u>	<u>Access</u>	<u>Created by</u>
Surrogat	BPX.SRV.**	CFZADM;CFSSRV	READ	izuconfig1.cfg.rexx
	BBO.SYNC.ZOSMFAD	installer	ALTER	izuconfig1.cfg.rexx
	BBO.SYNC.ZOSMFAD	WSSRU1	READ	izuconfig1.cfg.rexx
	BBO.SYNC.userid	WSSRU1	READ	izuconfig1.cfg.rexx

# Things I hope they improve

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- IZUG0.log can't be viewed in ishell. Vi doesn't work for me in OMVS. So I have to cat it, and it's big, it doesn't get reset till it's 1M.
- My advice: Reset IZUG0.log every time z/osmf starts up, or give me a way to reset it, so I can get a fresh start.
- Hopefully the redbook will contain a diagnostics chapter. The one in the guide is better than most, but can be improved

# Questions?

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- The next several slides are simply screen shots of z/OSMF FYI.
- I'll go through them quickly....but I do want to point out stuff I liked

# WLM Settings

The screenshot shows a web browser window titled "IBM z/OS Management Facility - Windows Internet Explorer provided by US Customs & Border Protection". The address bar shows the URL "https://usct:10928/zosmf/". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The Favorites bar contains several icons, including "PTZ1", "IBM-MAIN", "BASETIME", "BWI", "IBM SR", "IBMLink", "PCLAIM", "PM Web", "TAD", "Team - Mainframe Ops", "TrafficLand", and "ibmvm".

The main content area is titled "Workload Management" and has a "Help" link in the top right. It features two tabs: "Overview" and "Settings", with "Settings" currently selected. The settings are organized into sections:

- Enable consistency checking between z/OSMF and the z/OS Workload Manager (WLM) couple data set:** A dropdown menu is set to "Yes".
- Sysplex Settings:**
  - Sysplex name:** CSPLEXT1
  - Code page for the sysplex:** IBM-1047 (default)
  - Backup sequential data set for the sysplex:** SYSPROG.WLM.&&USER&&.&&TIME&&.R1C
- User Settings:**
  - Display information messages that notify you that an object was created, modified, deleted, or imported:** A dropdown menu is set to "Yes".

At the bottom of the settings area are "OK" and "Cancel" buttons. The browser's status bar at the bottom shows "Done", "Local intranet", and "100%".



# WLM – Service Definitions

The screenshot shows the IBM z/OS Management Facility interface in a Mozilla Firefox browser. The page title is "Workload Management" and the user is logged in as "bzbdyty". The "Service Definitions" tab is active, displaying a table of service definitions.

Name	Description	Activity	Sysplex	Messages	Last Modified (GMT)	Modified By
<input type="checkbox"/> PRODPLEX	GOAL MODE - C E M O Y Z A B			Warning	Feb 3, 2011 1:49:39 PM	bzbdyty
<input type="checkbox"/> TESTPLEX (Installed & Active)	GOAL MODE FOR T, D, & J		CSPLEXT1	Warning	Feb 14, 2011 10:06:15 AM	bzbdyty

Total: 2, Selected: 0  
Refresh Last refresh: Feb 22, 2011 1:19:12 PM local time (Feb 22, 2011 6:19:12 PM GMT)

# View Service Classes

The screenshot shows the IBM z/OS Management Facility web interface in Internet Explorer. The browser title is "IBM z/OS Management Facility - Windows Internet Explorer provided by US Customs & Border Protection". The address bar shows "https://usct:10928/zosmf/". The interface includes a navigation sidebar on the left with sections like "Welcome", "Configuration", "Links", "Performance", and "z/OSMF Administration". The main content area is titled "Workload Management" and has tabs for "Overview" and "Service Definitions". A table of "Service Definitions" is displayed with columns for "Name", "Activity", and "Sysplex". The "TESTPLEX" entry is selected, and a context menu is open over it, showing options like "View Service Definition", "View Messages", "View History", "Print Preview", "Install and Activate...", "Copy...", "Delete...", "Export", "New...", "Import", "Select All", "Deselect All", "Configure Columns...", and "Hide Filter Row". A sub-menu is also visible, listing "Service Definition Details", "Service Policies", "Workloads", "Service Classes", "Resource Groups", "Report Classes", "Classification Groups", "Classifications", "Application Environments", "Resources", and "Scheduling Environments". The status bar at the bottom shows "Done" and "Local intranet".

IBM z/OS Management Facility - Windows Internet Explorer provided by US Customs & Border Protection

https://usct:10928/zosmf/ Certificate Error Google

File Edit View Favorites Tools Help

PTZ1 IBM-MAIN BASETIME BWI IBM SR IBMLink PCLAIM PM Web TAD Team - Mainframe Ops TrafficLand ibvm

Welcome Workload Man...

### Workload Management

Help

Overview Service Definitions

#### Service Definitions

Name	Activity	Sysplex
PRODPLEX		
TESTPLEX		CSPLEXT1

Total: 2, Selected: 1

Refresh

2:00 AM local time (Feb 23, 2011 2:32:00 PM GMT)

Local intranet 100%

# Click on 'Warning' !

The screenshot shows the IBM z/OS Management Facility interface in a Windows Internet Explorer browser. The browser title is "IBM z/OS Management Facility - Windows Internet Explorer provided by US Customs & Border Protection". The address bar shows "https://usct:10928/zosmf/". The browser has a "Certificate Error" warning. The interface includes a navigation menu on the left with sections like "Welcome", "Configuration", "Links", "Performance", and "z/OSMF Administration". The main content area is titled "Workload Management" and has tabs for "Overview", "Service Definitions", and "View TESTPLEX". A "Warning" dialog box is open, displaying two messages:

- IZUW958W**: The Subsystem Parameter (SPM) qualifier type has not been used to assign started tasks to the SYSTEM or SYSSTC service classes for the STC subsystem. It is recommended that you explicitly classify all system-related address spaces to the SYSTEM or SYSSTC service classes. **Item:** Classification "STC"
- IZUW955I**: The format for creating classification rules for the STC subsystem type has changed. You should define a default service class and explicitly classify all system-related address spaces to the SYSTEM or SYSSTC service classes. **Item:** Classification Rule of Subsystem Type "STC"

The dialog box has a "Close" button at the bottom. In the background, a table lists subsystem types with checkboxes and a "Messages" table with columns for "Messages Filter" and "Last Modified Filter".

# Switch To: Editable Version of Service Definition

The screenshot shows the IBM z/OS Management Facility interface in a browser window. The main content area is titled 'Workload Management' and includes a 'Service Definitions' tab. A 'Switch To' dropdown menu is open, showing a list of service classes. The 'STCMED' option is highlighted in the dropdown. Below the dropdown, a table displays classification rules with columns for 'ionNameGroup', 'Qualifier Value', 'Start Filter', 'Report Class', 'Storage Critical Filter', and 'Region Goal Filter'.

**Classification Rules Table:**

ionNameGroup	Qualifier Value	Start Filter	Report Class	Storage Critical Filter	Region Goal Filter
<input type="checkbox"/> ionNameGroup	* SRMGOOD		SYSSTC	* No	* No
<input type="checkbox"/> ionNameGroup	* WSAT		WEBSW	* No	* No
<input type="checkbox"/> ionNameGroup	* WDVL		STCMED	* No	* No
<input type="checkbox"/> ionNameGroup	* WTST		STCMED	* No	* No
<input type="checkbox"/> ionName	* CAHCHECK		SYSSTC	* No	* No

At the bottom of the interface, there are buttons for 'OK', 'Apply', 'Reset', and 'Cancel'. The status bar at the very bottom shows 'Done' and 'Local intranet'.

# WLM – Delete a report class

The screenshot shows the IBM z/OS Management Facility interface in a Windows Internet Explorer browser. The browser address bar shows the URL <https://usct:10928/zosmf/>. The page title is "Workload Management". The left sidebar contains a navigation menu with sections: Welcome, Configuration (Configuration Assistant), Links, Performance (Workload Management), and z/OSMF Administration (Links, Roles, Users). A "Refresh" button is located below the menu.

The main content area is titled "Workload Management" and has tabs for "Overview", "Service Definitions", and "Modify PRODPLEX". Below the tabs are "Notes" and a "Switch To" dropdown.

The "Report Classes" section features a table with columns: Name, Messages, Last Modified (GMT), and Modified By. A context menu is open over the table, with "Delete..." selected. The table contains the following data:

Name	Messages	Last Modified (GMT)	Modified By
* ACEPIYPS		Aug 31, 2001 6:02:59 AM	bzzarye
* ACEPNYAL		Nov 11, 2000 7:56:09 AM	bzzarye
* ACEPNYAR		Apr 30, 2000 7:51:09 AM	bzzarye
* ACEPNYAS		Apr 30, 2000 7:51:18 AM	bzzarye
* ACEPNYDM		Apr 30, 2000 7:51:28 AM	bzzarye
* ACEPNYNQ		Mar 9, 2000 4:05:41 PM	bzzarye
* ACEPNYSN		Apr 30, 2000 7:50:55 AM	bzzarye
* ACEPNYTR		Nov 11, 2000 7:56:34 AM	bzzarye
* ACSCDBSR		Feb 21, 2009 8:33:48 AM	bzzarye

At the bottom of the table, it says "Total: 553, Selected: 0". Below the table are buttons for "OK", "Apply", and "Reset".

# Configuration Assistant

The screenshot shows the IBM z/OS Management Facility Configuration Assistant web interface. The browser window title is "IBM z/OS Management Facility - Windows Internet Explorer provided by US Customs & Border Protection". The address bar shows "https://usct:10928/zosmf/". The page header includes "Welcome bzbdyt" and "Log out". The left navigation pane shows a tree structure: Welcome, Configuration (with sub-item Configuration Assistant), Links, Performance (with sub-item Workload Management), and z/OSMF Administration (with sub-items Links, Roles, and Users). A "Refresh" button is located below the navigation pane. The main content area is titled "Main Perspective" and shows a "Navigation tree" with "z/OS Images" selected, containing a sub-item "Image - MAINFRAM". Below the navigation tree, there is a section titled "z/OS Communication Server technologies" with the instruction "Select the technology you want to configure and click Configure." This section contains a table with a "Select" column (radio buttons), a "Technology" column, and a "Description" column. Below the table is a "Work with settings for z/OS images" section with an "Add a New z/OS Image..." button and a paragraph of instructions.

IBM z/OS Management Facility - Windows Internet Explorer provided by US Customs & Border Protection

https://usct:10928/zosmf/ Certificate Error Google

File Edit View Favorites Tools Help

Favorites PTZ1 IBM-MAIN BASETIME BWI IBM SR IBMLink PCLAIM PM Web TAD Team - Mainframe Ops TrafficLand ibmvm

IBM z/OS Management Facility Welcome bzbdyt Log out IBM

Welcome x Workload Man... x Configuratio... x

Action Perspective Tutorials Help

V1R12 Configuration Assistant - Backing Store (Read-Write) = saveData

**Main Perspective**

Navigation tree

- z/OS Images
  - Image - MAINFRAM

**z/OS Communication Server technologies**

Select the technology you want to configure and click Configure.

--- Select Action ---

Select	Technology	Description
<input type="radio"/>	AT-TLS	Application Transparent - Transport Layer Security
<input type="radio"/>	DMD	Defense Manager Daemon
<input type="radio"/>	IPSec	IP Security
<input type="radio"/>	IDS	Intrusion Detection Services
<input type="radio"/>	NSS	Network Security Services
<input type="radio"/>	QoS	Quality of Service
<input type="radio"/>	PBR	Policy Based Routing

**Work with settings for z/OS images**

Add a New z/OS Image...

To work with a specific z/OS image or TCP/IP stack, select the z/OS image or TCP/IP stack from the navigation tree.

Done Local intranet 100%

# Helpful Info

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- The HELP links on the screens are pretty good
- Google IBM z/OSMF brings up the IBM z/OSMF page at <http://www-03.ibm.com/systems/z/os/zos/zosmf/>
- Chapter 40 in z/OS 1.12 Implementation Redbook. (Nice info on customizing the welcome page)
- Upcoming Redbook will have the Security Requirements section in it
- PSP Bucket: Upgrade ZOSMF112

# Thank You!

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- Thanks for your time
- Have fun with z/OSMF!