z/OSMF User Experience - Part 1

Share in Orlando
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Base Technologies Inc, A CA Technologies Company, for US Customs and Border Protection

User Experience Part 1

- 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

- 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

- 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…

- 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:

- DON'T Change the userids
- DON'T Change the ports
- DO use RACF.
- DO use the quickstart guide
- DO bring your tenacity, persistance, sticktoitiveness, or any other synonym you prefer.

- If you follow these five, 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

- 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

- 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)
- chown -R CIM:CIMGP /var/wbem if CIM is not UID(0)

What went wrong: CIM

- 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', not configure.
- 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.
  - chow n -R CIM:CIMGP /var/wbem
- Add /usr/lib to libpath in cimserver.env

A wild hair…

- 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…

- 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

- /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

- 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.

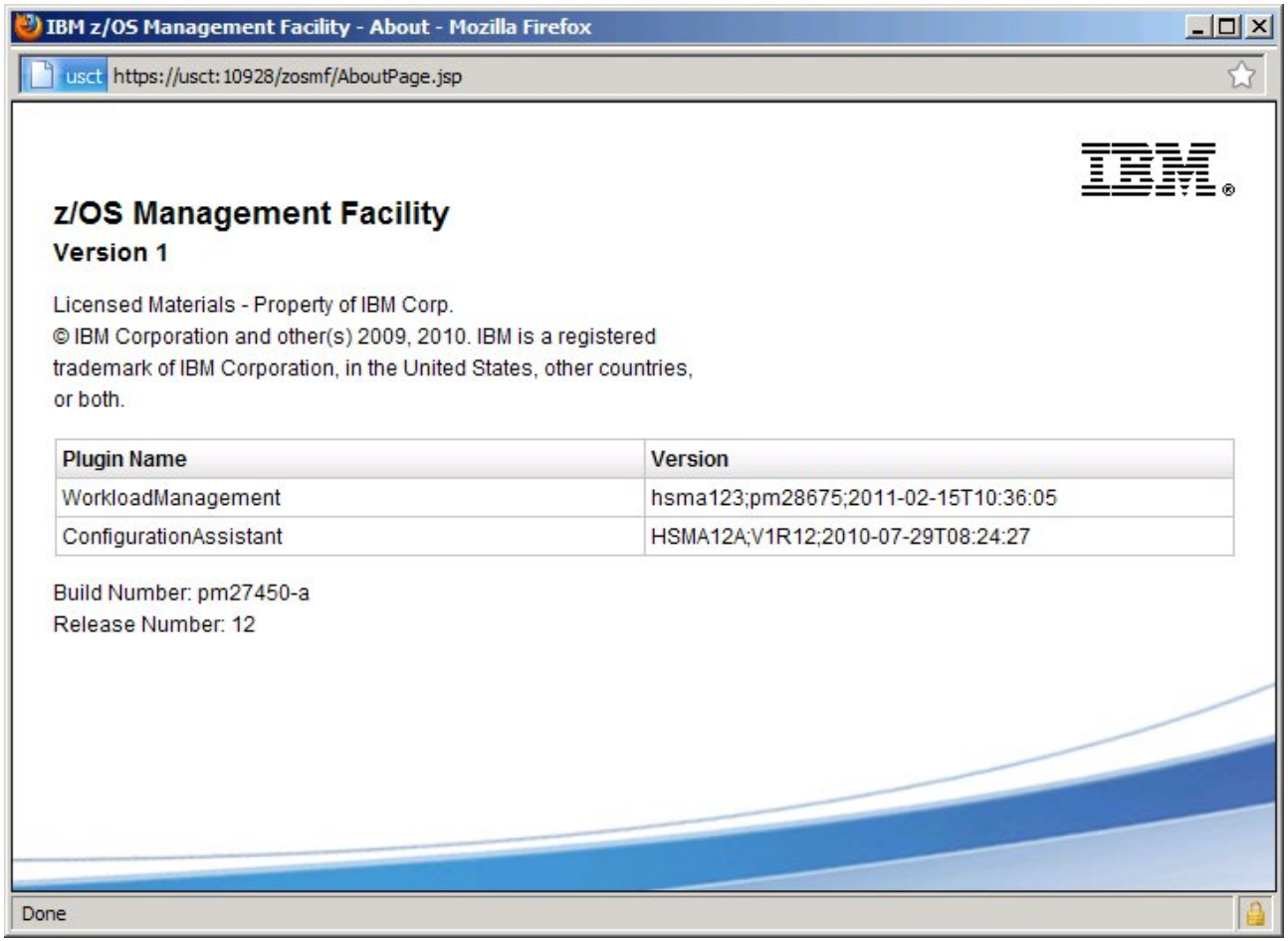
Upgrade to z/OS 1.12

- Went surprising smoothly!

Decided to put a PTF on…

- PM27450/UK65997 z/OSMF 1.13 toleration support for 1.12.
- Holddata action shows:
  - /usr/lpp/zosmf/V1R12/bin/izusetup.sh –file /etc/zosmf/izuconfig1.cfg –service
- Ran successfully the first time, brought the server back up, all is well.
- Subsequently applied PTFS Aug 3, same deal, holddata specified the redeploy command, issued it, worked like a charm.

After:


IBM z/OS Management Facility - About - Mozilla Firefox
usct
https://usct:10928/zosmf/AboutPage.jsp
IBM
z/OS Management Facility
Version 1
Licensed Materials - Property of IBM Corp.
© IBM Corporation and other(s) 2009, 2010. IBM is a registered trademark of IBM Corporation, in the United States, other countries, or both.
Plugin Name
Version
WorkloadManagement
hsma123;pm28675;2011-02-15T10:36:05
ConfigurationAssistant
HSMA12A;V1R12;2010-07-29T08:24:27
Build Number: pm27450-a
Release Number: 12
Done

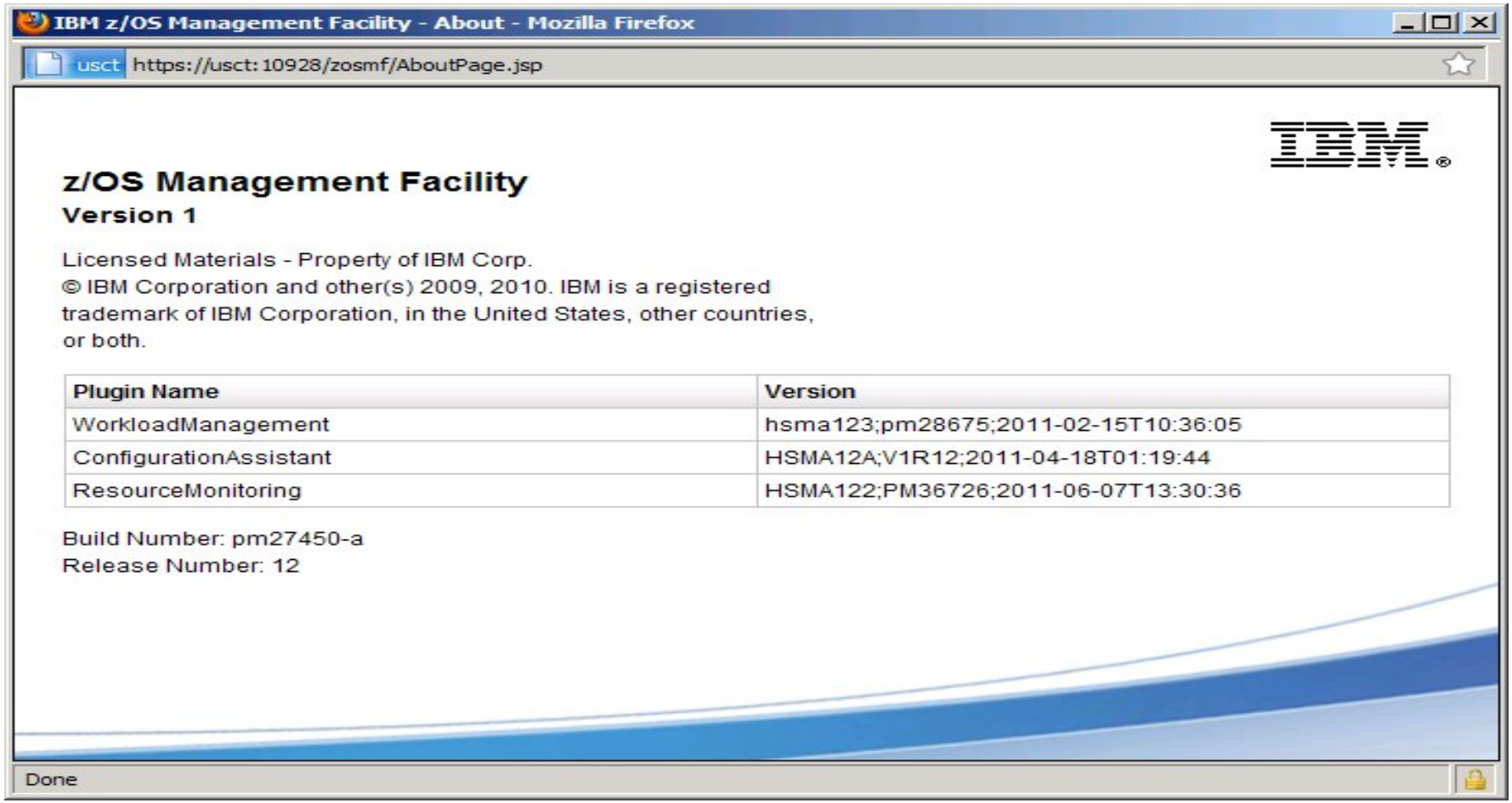
Adding RMF

- I decided to add the RMF part of z/OSMF. It came in by PTF so I hadn't 'deployed' it for z/OSMF.
- I'll make a long story short. After much bumbling around, and losing WLM…I found - izuaddplugin.sh

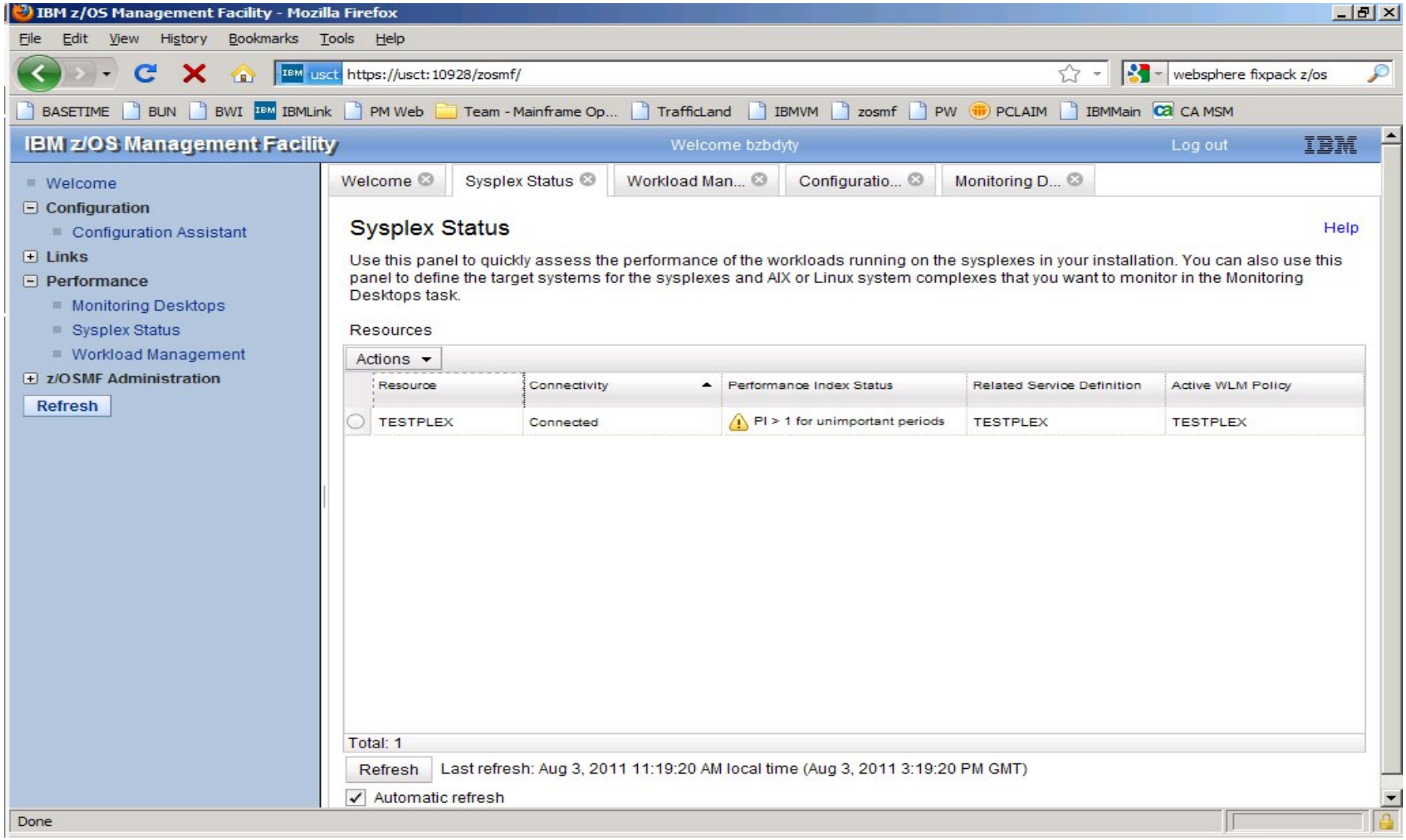
IZUADDPLUGIN

- IZUG146I: Invoking script "/usr/lpp/zosmf/V1R12/bin/izuaddplugin.sh -config /etc/zosmf/izuconfig1.cfg".
- IZUG215I: Starting z/OSMF "add plug-in" procedure.
- IZUG165I:,You have selected to configure Resource Monitoring.
- IZUG186I: You have selected to add the following plug-ins.
- IZUG187I: Plug-in: "Resource Monitoring".
- IZUG188I: To accept these plug-in selections, press Enter. To edit these IZUG243I: Accepted input:
- IZUG166I: No configuration prompts are required for the plug-in Resource Monitor
- IZUG224I: The configuration data was saved in file "/etc/zosmf/izuconfig1.cfg".
- IZUG191I: No security setup procedure is required for the specified plug-ins.
- IZUG210I: The script "/usr/lpp/zosmf/V1R12/bin/izuracf.sh" has completed.
- IZUG210I: The script "./izusetup.sh" has completed.
- IZUG146I: Invoking script "/usr/lpp/zosmf/V1R12/bin/izuadmin.sh -deployPlugins".

Adding RMF…After



RMF ‘Sysplex Status’ link



Every time I run IZUSETUP I get:

IZUG635E Path "/var/zosmf/data" exists, but it is read-only.

- EUID=0 /USCT/var/zosmf/

```
Type  Perm  Owner      ------Size  Filename
_Dir   777  MAM             320 .
_Dir   777  MAM             864 .
_Dir   755  MAM             288  configuration
_Dir   750  WTASCR          544  data
```

Chmod –R 777 /var/zosmf/data

Configuring Incident Log

- I’m hesitant to admit defeat, so last week, I took another shot at incident log.
- I used the ‘add’ like I did with RMF.
- izusetup.sh -file /etc/zosmf/izuconfig1.cfg -config -overridefile /etc/zosmf/izuil.ovr –add
  - IZUG165I: You have selected to configure Incident Log.
  - IZUG186I: You have selected to add the following plug-ins.
  - IZUG187I: Plug-in: "Incident Log".
  - IZUG188I: To accept these plug-in selections, press Enter. To edit these selections, enter E.
- Then ran izusetup with –prime and -finish

Problems

- **IZUG686E** An error occurred while priming the z/OSMF repository. Check the server log.
  - chmod –R 777 /var/zosmf/data/
- **IZUG123E**: An error occurred. The Common Event Adapter (CEA) parmlib member was not activated.
  - CIM Server crashed
  - IEF450I CFZCIM *OMVSEX CFZCIM - ABEND=SBE0 U0000 REASON=180F58F0
  - *IEF450I CFZCIM *OMVSEX CFZCIM - ABEND=S000 U4038 REASON=00000001
  - CEE3501S The module ceasapii.dll was not found. From entry point call_CEADoConsoleCommand at compile unit offset +00000 229DCF98.
  - Had to add /usr/lib to libpath in /etc/wbem/cimserver.env
  - Found: “Replace the environment file cimserver.env located in /etc/wbem with the new sample installed in directory /usr/lpp/wbem. However, if you prefer, instead of replacing cimserver.env with the new sample, make sure that the following directories are included in the LIBPATH defined in cimserver.env: /usr/lpp/wbem/lib:/usr/lpp/wbem/provider:/usr/lib.” in CIM user guide re 1.12 migration

More errors…

- **IZUG122E**: Verification failed for "Incident Log".
  - More chmods
- **IZUG417E** An error occurred when retrieving navigation area content
  - More chmods
- **IZUP635E** The request could not be completed. User “mam" is not authorized to issue requests to the common event adapter (CEA).
  - Add.il.rexx issues: RDEFINE SERVAUTH CEA.CEAPDWB***** UACC(NONE)
  - TopSecret trace shows:

    TSS-1 400000000000
    00000000 T/0000000000 **CEA.CEAPDWB.CEAGETINCIDENT**
  - We had to change it to CEA.CEAPDWB and it worked.

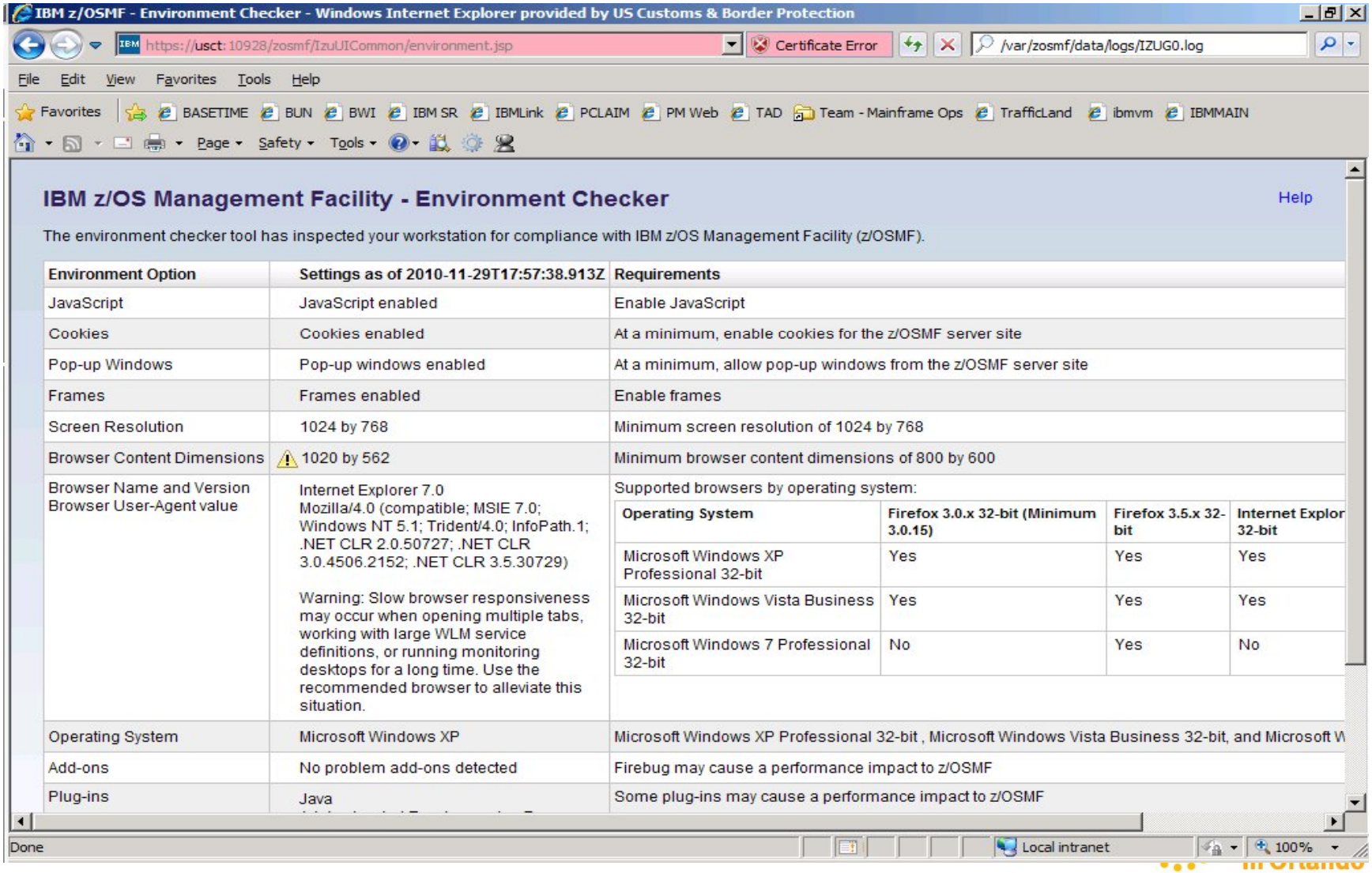
Maintenance

- **PM27450 / UK65997** - Toleration maintenance. If you install z/osmf in 1.13 and want to fallback to z/os 1.12, but continue to use the 1.13 files.

- **PM28518 / UK66119** - z/OSMF Message IZUG686E may be issued in exceptional circumstances where one or more files cannot be accessed during priming and initialization of the z/OSMF data repository.

- **PM35170 / FP 7.0.0.17** Users are unable to access the WLM application of z/OSMF
  The problem is that the user's id is being used to access the files. The expectation is that the servid would be used based on the sychToOSThread setting. Sent to WAS OEM and fixed in FP 7.0.0.17

Tip: Environment Checker



Environment Checker

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

It's Up…Now What?

- 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, and I really didn't care, 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.
- Incident log was not the impetus for z/OSMF for us, the TCP/IP guy wanted it for Config Asst.
- I like the new RMF Plugin

Miscellaney

- 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)
- There is now a script to authorize a user

izuauthuser.sh -file /etc/zosmf/izuconfig1.cfg -userid MAM

IZUG287I: z/OSMF RACF "authorize user" processing complete. Review and run "/etc/zosmf/izuconfig1.cfg.MAM.rexx" before proceeding with configuration.

My observations

- 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.

- **PM34596: Z/OS MANAGEMENT FACILITY TARGET SYSTEM MINIMUM REQUIREMENTS**
- 2G memory, and 120 PCI (mips)
- I have 10G and 400PCI on my lpar.

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:

Class	Profile	Users/groups	Access	Created by
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

- I'd like to see the WLM function run a 'classify' of a task. Not sure how this would work, but I'd like to be able to test what an STC is going to classify as.

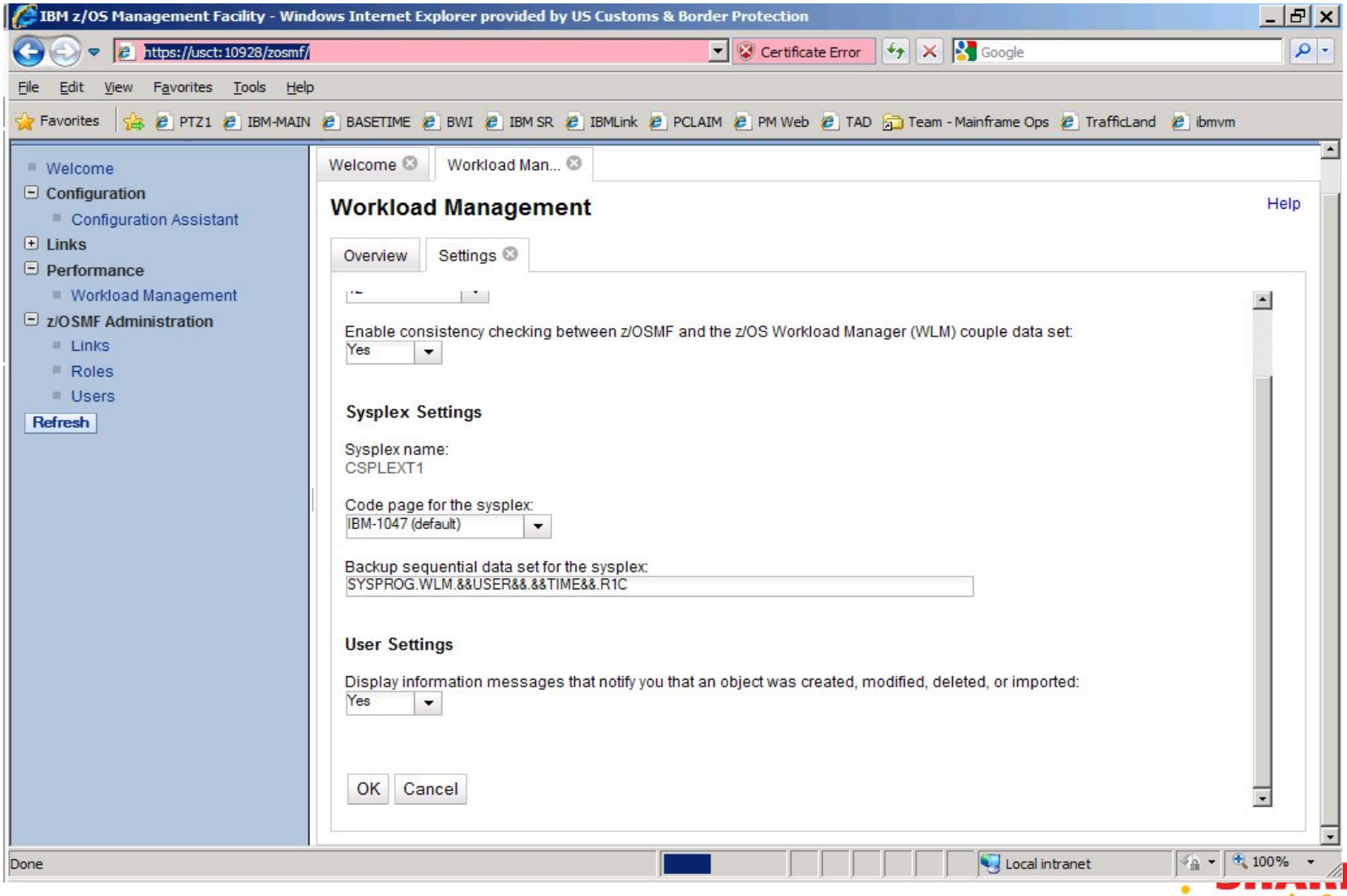
- My advice: Reset IZUG0.log every time z/osmf starts up, or give me a way to reset it, so I can get a fresh start.

- I very much miss ASKQ, or SIS. IBM doesn't seem to promote issues to Q&A anymore, so the types of errors I'm getting result in few google hits, and I have to open a PMR.

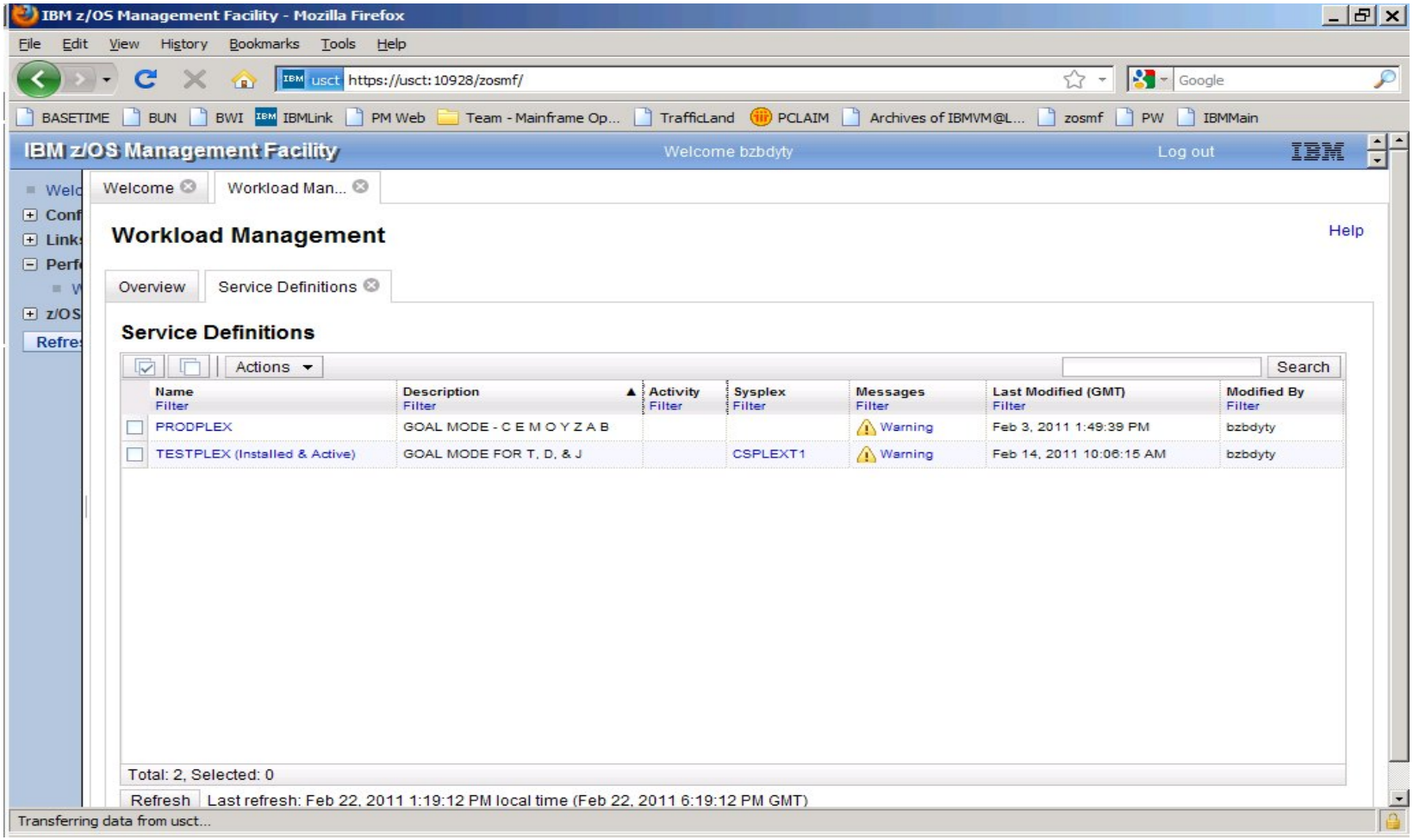
Questions?

- 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

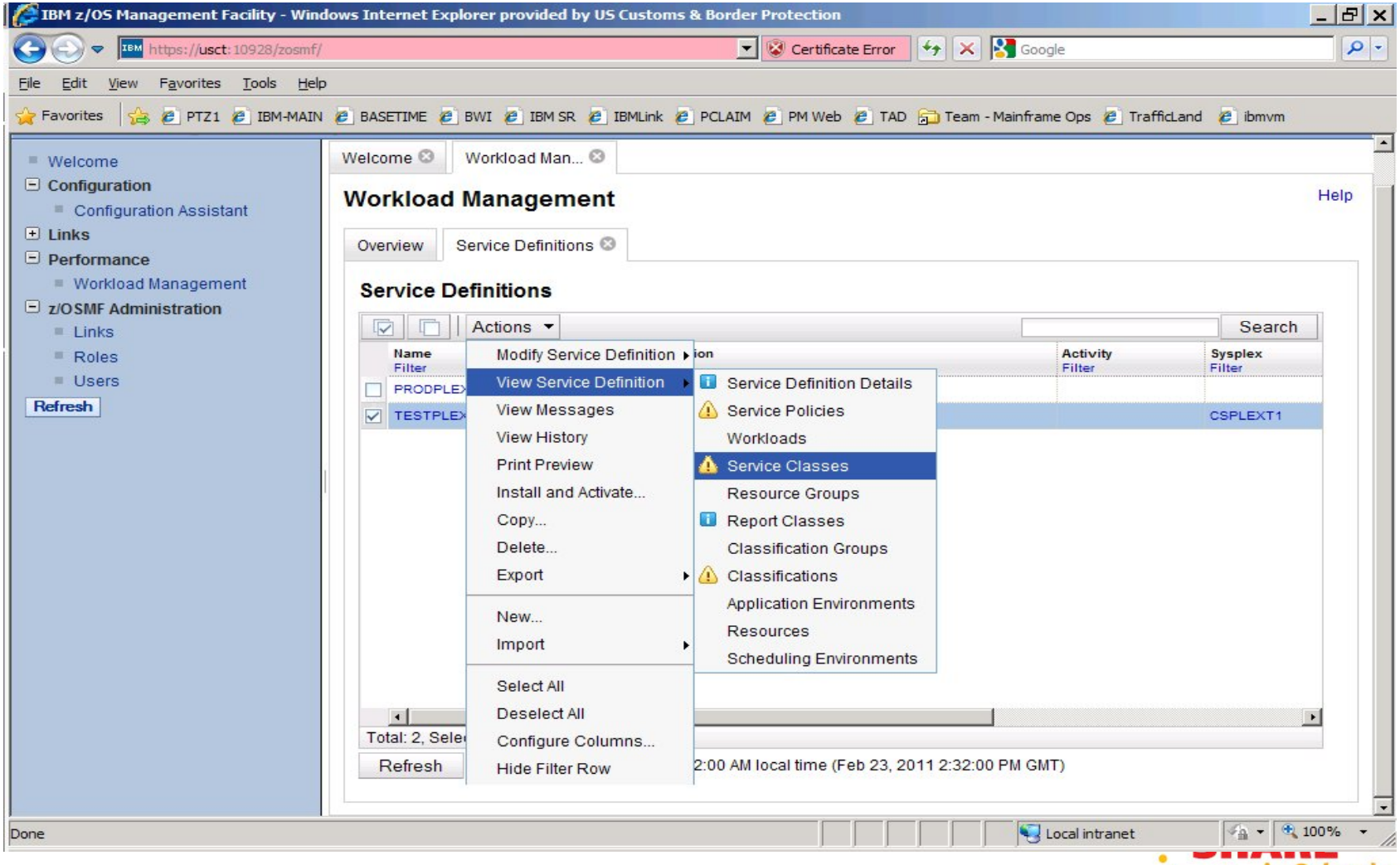
WLM Settings



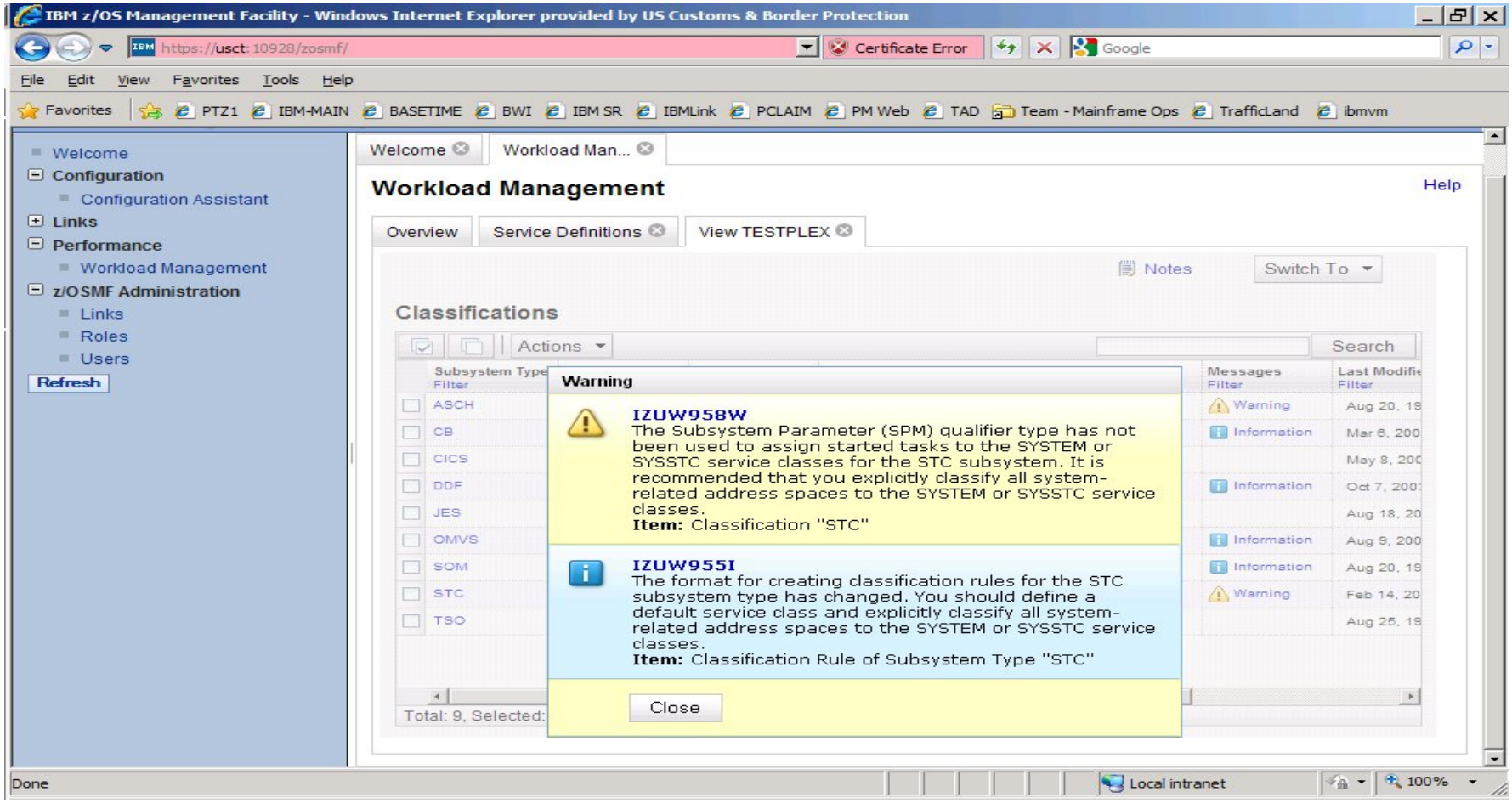
WLM – Service Definitions



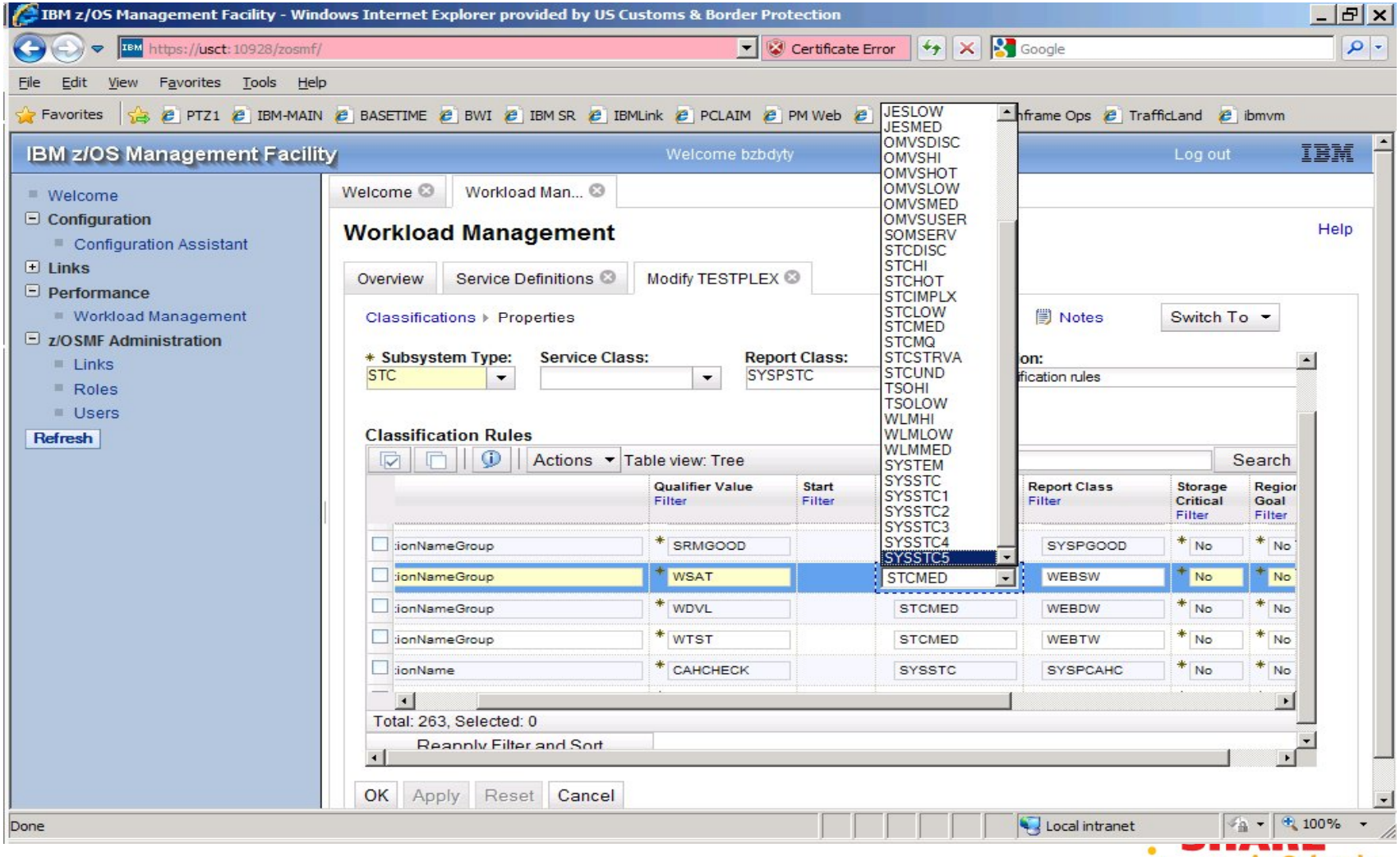
View Service Classes



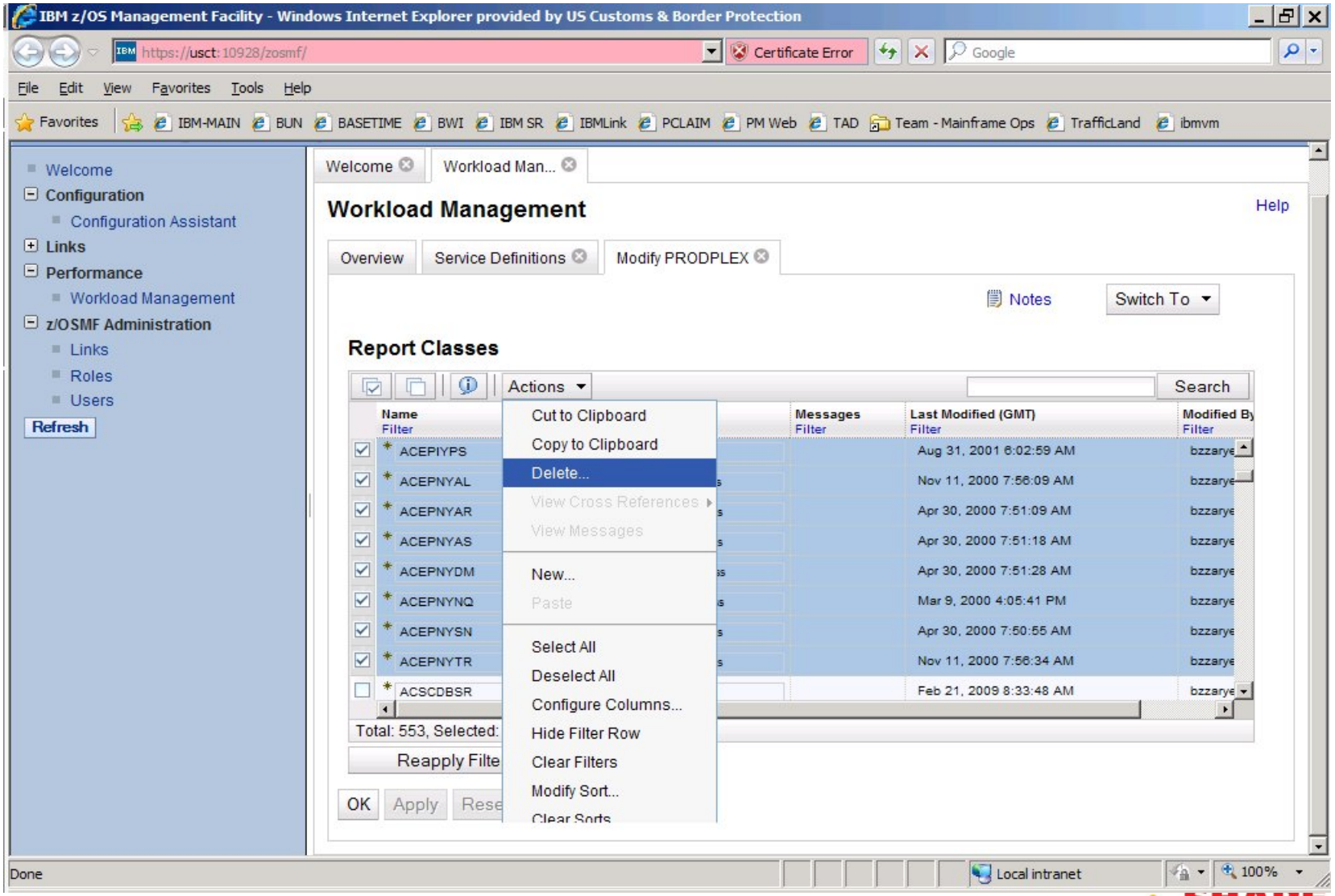
Click on ‘Warning’ !



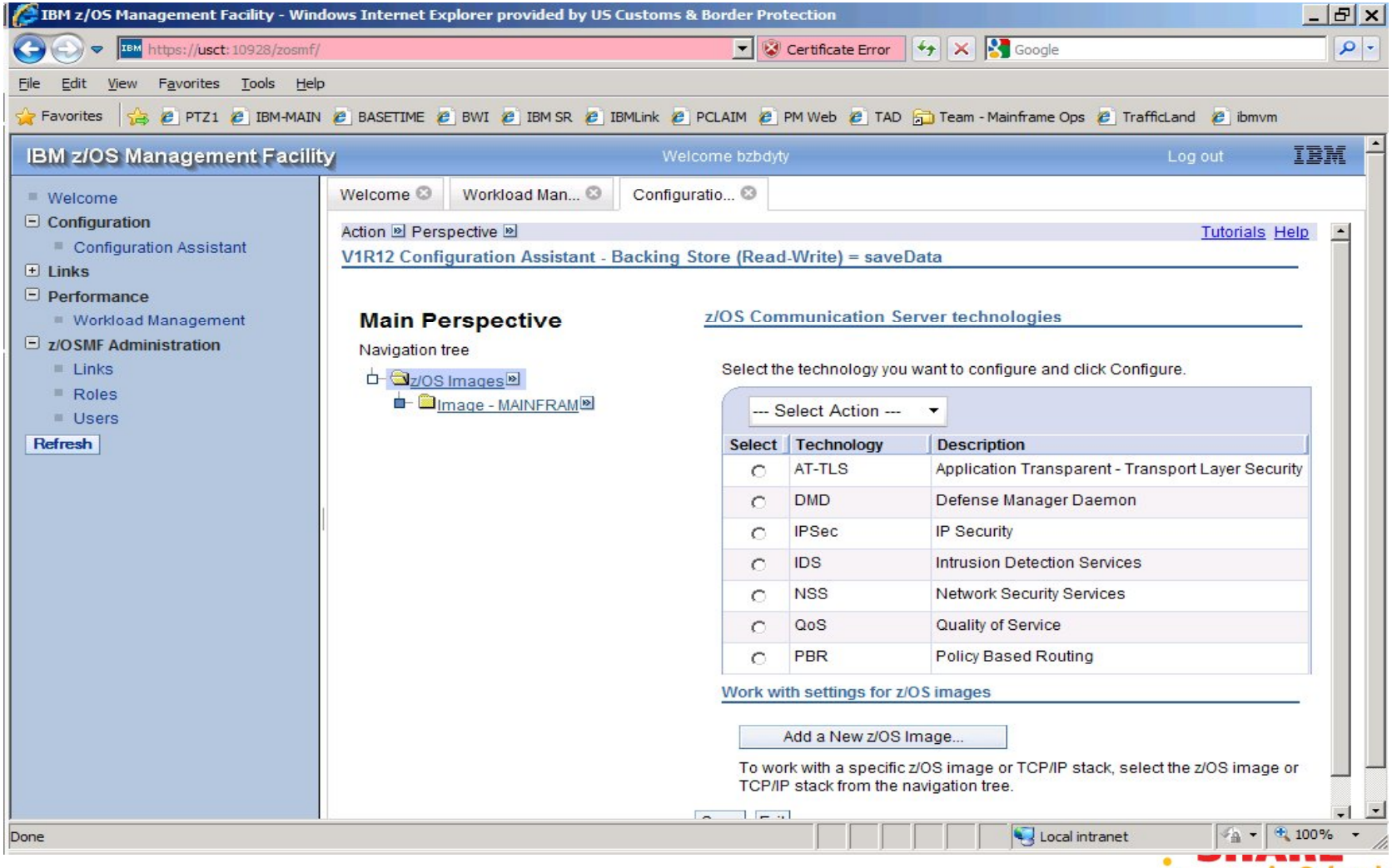
Switch To: Editable Version of Service Definition



WLM – Delete a report class



Configuration Assistant

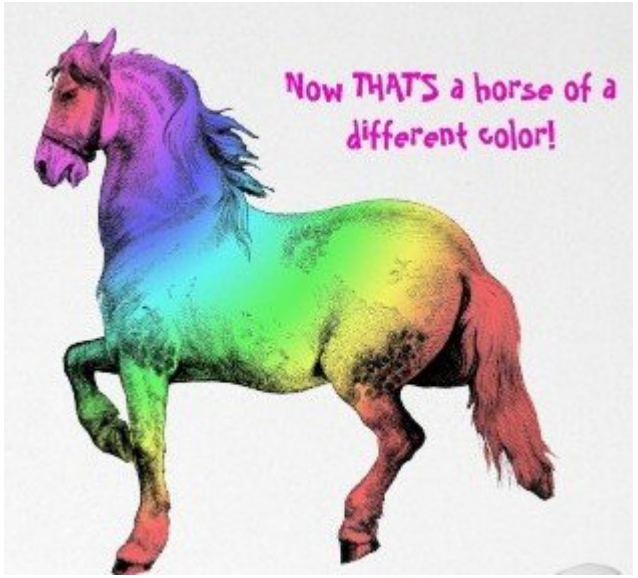


Helpful Info

- 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)
- New redbook: z/OS Management Facility
  - http://www.redbooks.ibm.com/redbooks/pdfs/sg247851.pdf
- PSP Bucket: Upgrade ZOSMF112

Final thoughts…

- WASOEM versus z/OSMF
- My biggest problem: Being a TopSecret shop, not a RACF shop
- My second biggest problem: CIM and CEA – These two are just… A horse of a different color
- My wounds were largely self inflicted.
- I'm going to start fresh in November with z/OS 1.13.



Thank You!

- Thanks for your time
- Have fun with z/OSMF!
- Try to keep a sense of humor.