z/OS 1.12 User Experience at Aetna

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Agenda

- Background

- Testing Environment

- Implementation

- ISV Compatibility

- Validation Items

- z/OSMF topic

- Conclusions and ESP feedback

Background

- Seventh z/OS ESP experience

- Aetna's Environment:

  - Multiple SYSPLEXes ranging from one to many LPARs

  - All systems at z/OS 1.11 at start of project

  - All z10 processors located in 2 Data Centers

- Business schedule prevents implementation beyond high-risk environments

Testing Environment

- Test environment 2-way SYSPLEX

- Tested z/OS 1.11 with 1.12 in the SYSPLEX

- 2097(z10) processor & 2817(z196)

- 2097 int/ext Coupling Facilities @ CFCC 16 & 2817 internal Coupling Facilities @ CFCC 17

Testing Environment

- CICS/TS 4.1

- CICS Transaction Gateway 8.0

- CPSM 4.1

- DB2 V9.1 (RSU1006)

- WebSphere Application Server V6.1 & V7.0

- MQ V7.01

  - Message Broker V6.1 FP3

Testing Environment

- Enterprise COBOL for z/OS 4.2
- JAVA for z/OS JDK 1.4.2 (SR13 FP5)
- IBM Debug Tool 7.1 & 9.1
- XML Toolkit for z/OS V1.12
- JAVA for z/OS JDK V5.0 (SR11)
- JAVA for z/OS V6 (SR8)
- C/C++ for V1.12
- HLASM Rel6
- z/OS 1.12 Binder
- SA for z/OS 3.2, PUT 1005
- Tivoli Netview V5.4, PUT 1008
- 100+ ISVs

Implementation

- Prerequisite maintenance to z/OS 1.11

- Prerequisite maintenance to all IBM subproducts(CICS/DB2/MQ/Websphere/Tivoli Omegamons)

- Prereq/upgrade for ISVs (where available)

- SERVERPAC install

- All maintenance received/applied weekly

- SYSRES - (2) M27

Implementation

- 1st IPL successful but 2 products were not working as expected.

  – CA PDSMAN was experiencing 0c4 abends at startup and holding a table that MIMEDI needed. PDSMAN was removed from startup until the problem was resolved.

  – CA PDSMAN had to be upgraded to V7.7.0 and additional fixes(RO21883, RO22426 and RO22824) had to be installed.

Implementation

- A number of problems at the early stage:

  - TDMF failed

  - System logs not offloading

  - StandAlone Dump process not working

  - PFA – new feature not working

Implementation

- Problems Cont…

  - FTP process failing in z/OS 1.12 LPARS

  - Several storage management products failing

  - CA-TPX address space failing

  - DLA reporting incorrect

ISV Compatibility

- Overall excellent result

- One issue open as of Jan 24th: IEBGENER issue seen later during 1.12 testing. APAR OA35316 still open.

    ETA 4/30/2011

ISV Compatibility

- CA Top Secret V14
    - FTP issues with ids that had no OMVS Segment defined:
    - Fix RO25380 corrected
- CA Netspy V11.6
    - toleration fixes TZ51508, RO12216,TZ56664 & TZ56846
- Sycnsort V1.3 Pre-req SY67441, SY68580, SY68600 & SY68310
- Oracle/STK HSC V6.2 – all new maintenance up to Dec 01, 2010
- CA PDSMAN V7.7.0 & RO21883 RO22426 and RO22824
- CA DADSPLUS – current to V4.0 0507 SPO2 + fixes recommended
- CA TPX V5.2 & fix QO94365. TPX 5.3 validated.

ISV Compatibility

- TDMF V5.2   Pre-req ZAP WR45203

- Merrill Consultants MXG V28.05

    - Do NOT use MXG 28.04 with z/OS 1.12 RMF records(incompatible) IBM Maintenance(RSU1006, Apars OA30158 and OA30563) requires MXG 28.05.

- Tivoli Omegamon XE for CICS on z/OS V4.2.0

- Tivoli Omegamon XE for DB2 on z/OS V4.2.0

- Tivoli Omegamon XE on z/OS V4.2.0

- ATF V2.8.7a & fix OA33767 + OA30587

- DLA V2.3 & fix UA56778 or higher needed

ISV Compatibility

- Compuware products:
  - Abendaid/MVS and CICS rel 12.01
    - T43926A, T43926B, T41148A and T39415A and V43926A for the viewer
  - Shared Services V8.7
    - CXO0046 & CXO0108 to support non-VSAM EAV and HLASM6 on a z196
- DTS Software ACC/DIF/SRS V5.1.7 needed
- Tech Systems Tape Copy V2.71 PTF2 or higher needed
- CA DISK V12.5 SP0 needed
- CA PMO V4.3 SP07 & fix RO20128 (S0C4 abend @ startup)
- CA MIM 11.7 SP2 & ptfs

Validation Items

RSM Support of HyperSwap Resiliency

Health Check History Display in SDSF

Duplicate temporary data set name support

Validation Items

- DFSMS hsm – Dump Stacking Enhancements

- DFSMS dfp - VSAM CA_Reclaim Enablement

- DFSMS dss – SoD Support for removal of IMBED & Replication and warning/error msgs for Keyrange

- DFSMS dss – BSAM I/O for dump output, restore input and copydump

- DFSMS sms: HealthCheck enhancements

zOSMF… What is it?

z/OSMF is an interface of the z/OS operating system that was introduced since z/OS 1.11

- Web browser based

- Task Oriented

- The focus is management of z/OS

- Tooling improvements for system programmers

zOSMF Technology

Based on WEB 2.0 technologies

Javascript

DOJO

HTTP(s) to client

Server based on WAS OEM V7

A standalone WebSphere V7 server

z/OS data and services from

CIM Server

CEA

SYSREXX

DAE

Logger

Others…

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zOSMF V1R11 & V1R12 Functions

z/OSMF provides the following user interfaces (Plug-Ins)

Introduced with zOSMF R11

Configuration Assistant for z/OS Communication Server

Incident Log

z/OSMF Administration

Links

New with zOSMF R12

Monitoring Desktops

Sysplex Status

Workload Manager Policy Editor

z/OSMF V1R12 Components

z/OSMF V1.12 consists of six (6) FMIDs:

HBBN700 - IBM WebSphere Application Server OEM Edition for z/OS v7

HSMA120 - z/OS Management Facility core

HSMA122 - z/OSMF RMF

HSMA123 - z/OSMF WLM

HSMA125 - z/OSMF Incident Log

HSMA12A - z/OSMF Configuration Assistant

zOSMF V1R12 Dependency
(WAS OEM V7)

WAS OEM V7 is the runtime environment needed for zOSMF. This environment must be configured first in order to deploy the z/OSMF application.

WAS OEM V7 Installation is done via SMPE
- Allows for easier product installation
- Better management of fixes and maintenance packages

WAS OEM V7 Configuration is comprised of 3 sections
- Setup configuration (Response file) files via WASOEM.sh -config script
- Create RACF Security Definitions via 3 BBO* Batch Jobs. (OEM Security Product will need translation)
- Creation of the WASOEM Server "Instance" via WASOEM.sh –create script

WAS OEM V7 Instance configuration details can be found in:
IBM WebSphere® Application Server OEM Edition for z/OS Configuration Guide, Version 7.0, GA32-0631-02

zOSMF V1R12
Installation & configuration Overview

Installation:

 Choice of Server Pack or CBPDO ordering

 Done via SMPE

 Plug-Ins now have their own FMIDs

Configuration:

 Detailed worksheets ease configuration by reflecting Pre-requisites

 REXX scripts are customized for the selected plug-ins that are to be installed

 Upon successful deployment and verification a URL address is generated to access the zOSMF Welcome page. The predefined UID and PASS will be needed for logon.

 Internal and external security setup.

zOSMF V1R12
Configuration Enhancements

With zOSMF R12 the configuration Scripts and tools have come a long way! There were various enhancement that reduced time, simplified configuration, and provided error resolution tools. Below are some of the my favorites:

Consolidation of multiple configuration Logs into fewer.

Able to migrate zOSMF R11 configuration files to the zOSMF R12 format.

Minimum Security set up for the new Performance plug-in.

Ease of Service installation (SMPE PTFs) via the izusetup.sh -service option

Detailed IVP verification report "izuincidentlogverify.report" for Incident Log pre-requisites

Workstation environment checker identifies incompatibilities.

Add Link functionality via the zOSMF GUI .

zOSMF V1R12 Testing and validation

As part of the ESP we tested and validated various line Items. Most items functionality worked as design, but there were others for which we saw opportunities for improvements. Here are a few:

Multiple EAR support
Very satisfied with this support since Plug-in separation for FMID and EAR files allowed for better PTF tracking, Services Installation, and Redeployment.

Incident UI and Log data
Introduction of encryption and file transfer via MTFTPS works and the ability to append customer data and free form comments via the FTP wizard adds value to the tool. Improvements can be made to the FTP wizard by providing customers with an option to select an FTP.DATA file for the MTFPS program. IBM satisfied this via MR1006104523. In addition, the Incident Log should allow users to forward commands to a respective FTP Server. IBM took MR100610179 .

Navigator and Services
The Add link functionality via the GUI was very simple and intuitive, adding links where available with a simple browser refresh.

zOSMF V1R12 Testing and validation - continue

Browser and Operating system support
Successfully tested Windows XP and 7 as well as FireFox 3.5 and IE8 Browsers..
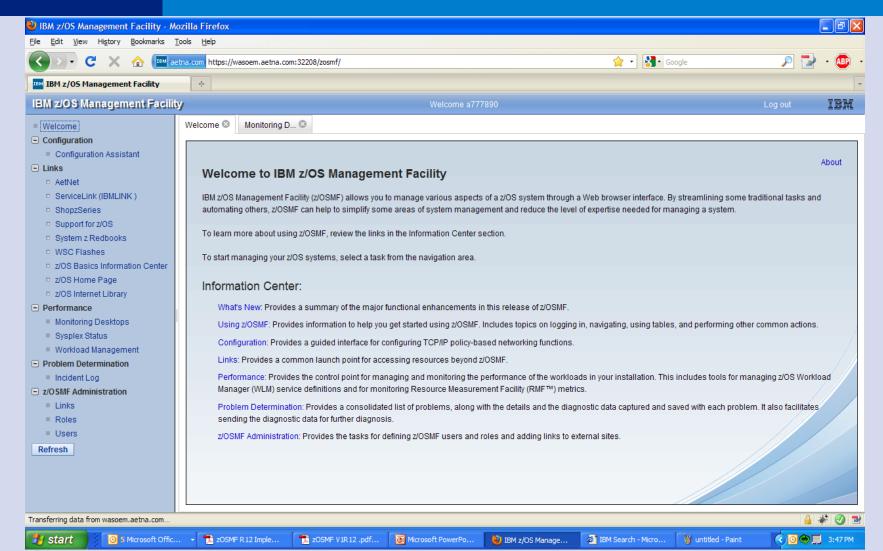There were no conflicts or Lag encountered.

Resource Monitoring
Satisfied with this plug-in , altering the metrics was a nice feature to control layout.
It's somewhat similar to the RMF portal that exists today.

z/OSMF WLM Policy editor
Over all satisfied, good functionality for copying, editing and implementing WLM
Policies and changes. Little slow moving thru screens/Small viewing area,
however. After making changes, screen view jumped away from working area.

zOSMF - Big Picture

z/OS and zOSMF - ESP feedback

The z/OS & z/OSMF V1.12 ESP was a great experience as it allowed us to:

- Get an early view for the new z/OSMF interfaces
- Access additional IBM support and other customer experiences via Customer Connect forums
- Provide a user's perspective for new functionalities
- Provide IBM development with feedback for product enhancement to benefit our

System Installation

Overall a very positive experience AND you should consider joining an ESP!

z/OSMF Reference Material:

z/OS Management Facility Web Page http://www.ibm.com/systems/z/os/zos/zosmf/
Program Directory for z/OS Management Facility GI11-2886-01
IBM z/OS Management Facility (R11) User's Guide SA38-0652-02
IBM z/OS Management Facility (R12) Configuration Guide SA38-0652-03
IBM WebSphere® Application Server OEM Edition for z/OS Configuration Guide, Version 7.0, GA32-0631-02