

SHARE 2023 Atlanta Notes #1

Items of Interest

01Mar2023 SHARE Individual membership (New!)

New Individual Membership

\$149 in 2023, auto-renew in 2024 for \$199

New education platform only available to Individual Members

Voting requirements

Be more active

Access to SHARE'd Intelligence newsletter and other digital communications

Affiliate membership

[event platform link](#) for RDmobile just in case

SHARE 2023 Atlanta is also SHARE 140

Handouts at <https://www.share.org/Events/SHARE-Atlanta-2023/Technical-Agenda>

01Mar2023 Wednesday Online

SHARE 2023 Atlanta Attendee Orientation

SHARE Overview

Atlanta Overview

Technical Sessions

STE Monday and Tuesday

Lunch and Learn on Monday and Wednesday

3 livestream rooms for sessions

PSP Tuesday 1:15-2:15p

SHARE Association Mobile App

see e-mail for attendee links to Event platform

Activities

Digital Badges - Security Warrior and DevOps

Tuesday lunch sponsored by Broadcom
Sunday reception at Hyatt
Monday and Tuesday STE (SHARE Tech Exchange) evening
reception

SHARE Resources

check-in and ribbons for Volunteers

SHARE Tips

plan ahead

go to sessions

feedback for all sessions

dress wisely - rooms cold or warm

backup plans for sessions

SHARE New Orleans Aug 13-18, 2023 at Hyatt Regency

05Mar2023 Sunday

Hitchhiker's Guide to Using IBM Redbooks and Documentation

By Caroline Turner, Content Designer, IBM (including z/OS Catalog Services Management)

Colton Cox, Manager, IBM Z AI and OS Design

Makenzie Manna, IBM Redbooks Project Leader

See presentation at SHARE

IBM approach to technical content

Navigating tech content can feel like hitchhiking

IBM technical content "destinations"

Expert perspectives for use of IBM technology

Based on residencies for IBM and users to plan content

Redbooks - Book-length, thorough detail on product

Redpapers - short and mid-length into to use case or
technical topic

Digestible gateway to product

Point-of-Views with short-form industry expertise
Residency is a collaboration of IBMers and other industry

users

Project leader
Earn digital credentials

Your technical content journey

IBM training website
Courses, learning paths, and collections
Range of materials
150 exam-based certification programs for IBM

technology

1400 digital badges
IBM Z and LinuxONE content solutions
Single destination to get started with IBM Z/LinuxONE

product or use case

Directs towards deeper technical resources
Common structure and navigation across pages
Brief intro to product
High-level visual steps for configuration and getting

started

How to get started
Detailed steps for starting with pre-requisites,
planning, installation, and configuration
Technical resources surfaced

IBM Documentation

Reflect recent updates
Comprehensive Content Collections
Pull relevant disparate parts of library to together for
topics, or etc.

Access downloads, downloaded PDFs
Filter content within a library by keyword
Access downloads and tools from the library
Download the entire library as a PDF for offline viewing

06Mar2023 Monday

SHARE Opening and Keynote

By Phil Buckellew, Rocket Software Infrastructure VP

Today's enterprise realities

Customer competition economy staffing technology

Replacing 25%

Modernizing 55%

As-is 20%

A British bank abandoned mainframe, and over 10 months, lost lot's of money, CEO fired, company fined by British government

Mainframe strengths are RAS and ability to scale up

Mainframe weaknesses are lack of scale out, lack of agility, skills diminishing

Mainframe can sustain high volume transactions

Mainframe is the system of record

Cloud analytics machine learning

Mainframe inferences rates are hard to beat

Rocket Software has 1800 employees globally

Rocket has acquired 60+ companies

Just acquired Key Resource Inc. security management company

Long partnership with IBM including work on Db2, RMF, and SDSF

97% satisfaction rates

High retention rate

Significantly improved problem resolution

Modernize without disruption

Across the stack, agile fashion, automation, content management, data management, storage and disaster recovery

Security and performance management

Involved with open source including Zowe and GitHub on mainframe

AIOps embedding AI across solutions

Root cause analysis with AI
Hyperautomation
Across infrastructure, data, and applications

M&T Bank large northeast and mid-Atlantic U.S.
Derek Powe, SVP and zPlatform Manager
Modernizing Mainframe
Infrastructure asset management , application API, new
talent
Internships and apprenticeships

Modernizing without disruption
Rocket can help and be a reliable partner

**Ed Jaffe won Best of the Best session for z/OS 2.5 User
Experience at Columbus in August 2022**

MVS Program Opening and Spotlight Speaker

By Ed Jaffe, Phoenix Software, and John Shebey, IBM, and Jeff
Henry, Broadcom

Check out [SHARE.org](https://www.share.org) for About to see history

Community Organization of SHARE today
22 projects in 6 programs

MVS is core of z/OS operating system per z/OS 2.5
documentation (a.k.a. it is the Base Control Program)

New organization - programs become Focus Areas and projects
into Tracks

Core Platform, New and Innovative Technologies, Service
Delivery, Application Development

Provide feedback to SHARE about new structure

z/OS Service and APARs

By John Shebey, IBM

OA63943 JES2 PE fixing APAR

All 2.5 users with checkpoint on Coupling Facility
exposed to HIPER RSM APAR OA64077

Possible RSM loop in JES2 address space, restart JES2
to break loop

Feb. 22, 2023 PTFs available

OA64083 RSM still Open (as of 06Mar2023)

z/OS 2.4 with PTF UJ04601 or z/OS 2.5 who exploit
SDUMP OPTIMIZE=YES

64-bit virtual memory may be missing even if Dump
Complete message

Leave PTF applied and turn off OPTIMIZE=YES until fix
is available

IBM z/OS Academy resumes later this year

Check out earlier online recordings

The Future is Now: the Critical Role of Mainframe in Hybrid Infrastructures

By Jeff Henry, VP of Strategy and Design at Broadcom

New Value

Investing and growing in the Mainframe

2025 35 billion IoT devices feeding data back to IT
infrastructure

Bring on more data and higher transaction volumes for
Mainframe processing

72% of worldwide transactions run on IBM Z at 8% of overall
IT spend

Mainframers make this happen

It's not about the box, it's bigger on the outside - hidden
secret in the data center

Hybrid world - more value from your data, holistic Zero Trust
Security, ...

Top performers (companies) have 32% Mainframe, 18%
cloud, 51% distributed; 10% more than average for Mainframe, 10%

more than average for Cloud, 20% less than average in distributed
Strategy: Embrace Open, Enhance Your Hybrid Cloud,
Partner for Success

Use Cases of Modernization in place for Value Creation
DevOps - invest in apps to speed implementation of new
features

Ensuring people are more efficient and Ops runs smoother
Zero-trust environment to ensure trusted modern
experiences

MFA, privilege access, be sure Chief Security Officers
know about Z

Extend the value of mission-critical data
Operate at highest levels of efficiency and reliability- be more
data driven

Challenges:
More ...
Essential to improve self-service and reduce mean-time to
resolution

End-to-end awareness, correlation across domains, reduce
knowledge loss

Proactive
Reduce complexity and noise

Machine learning anomaly detection
Flexible Mainframe data storage - store anywhere, protect
against ransomware, reduce batch processing, save millions....

Partnerships are powerful for your digital journey
Build new Mainframers, planning and workshopping,
educating leadership, licensing, optimizing software

MVS Core Technologies Project Opening and Spotlight Speaker

By Art Gutowski, Huntington Bank

Mainframes and the Moon

By Mark Nelson, IBM

The Role Played by IBM Mainframes in the Greatest Technical Achievement in the History of Mankind

NASA Apollo Project to land humans on the moon

SHARE MVSE & MVSS Requirements

By Mike Shorkend and Barbara McDonald

On SHARE site, use Vote for submission to more easily view text of requirement

<https://www.share.org/Connect/Advocacy-Requirements-System>

Priority is 1-10, 10 is highest

Pain, time saved, what problem bothers you?

IBM Ideas does not show voting from SHARE to public but does to IBMers

What's New in z/OS: The Big Peach Edition

By Gary Puckhoff, IBM

AI-Infusion, modernization and simplification, security and resiliency

z/OS Education Assistant

z/OS 3.1 not supported on z13

Z16 3931 A01

IBM z/OS Platform for Apache Spark

Python AI Toolkit for z/OS

Watson ML for z/OS

zCX runs Linux workloads on z/OS with 98% in ZIIP

z/OS Containers SOD

z/OS 3.1 requires Java 11, Java 8 still works on 3.1 but z/OS needs Java 11

Java 17 SOD

25 years of Java on z/OS

SCA (Security Configuration Assistant) line mode support for use before z/OSMF starts first time

z/OS Release Upgrade enhancements

Workflows, FIXCAT,

Portable Software Instance being signed with intro of 3.1

z/OS memory limit raised to 16TB

RMF - new browser-based UI for monitor 3 and reports

No function removal

New DDS server with 64bit support

Availability

z/OS anomaly

PFA and RTD

Detection of active SLIP/PER events enabled

SRB enhancements via Continuous Delivery (CD) for z16

Systems Management

AI-infused z/OS

IBM SMF Explorer with Python (CD)

JES2 enhancements

With JES system symbol SYS_JOB_NOTIFYX job notification extended to submission and start of execution (CD)

JES2 Job Input policy editor is new for 3.1

JES3 is dead

SDSF (priced) enhanced

Module Fetch Monitoring

Significant Event logging

z/OSMF UI for SDSF being updated as well

z/OS Change Tracker (priced)

90-day self-service trial

z/OSMF plug-in

ZWIC - Workload Interaction Correlator (priced)

Entitled with RMF and ...

Networking

Data Serving and Storage

Cloud Data Access (via TCP/IP to cloud provider)

Used in Transparent Cloud Sharing
DFSMShsm support for CDA

OAM Cloud Access for z/OS

Addressed several RFEs and Ideas

NFS Server enhancements (CD)

Union File System (CD)

Native z/OS implementation

Heavily used by upcoming z/OS File System

DSFS (CD)

Security

RACF database encryption (CD)

Enforced no RACF DB sharing with z/VM

ICSF Enhancements

Read-only archive key support (CD)

GSKKMAN supports Stash file

TLS 1.3 Sysplex Session Ticket caching

HMC 2.16 on new z16 features including Remote Code Load

by Brian Valentine

26 attendees including B.V.

HMC 2.16 can be loaded on z16 or z15 or any standalone

HMC

HMC Dashboard

Replaces Home Screen

Resource links

Widget dashboards >>HMC>Dashboard>Widgets>What's

New

>Widgets>Systems Health

>Widgets>Frequently used tasks

HMC Data Replication Enhancements

Exchange config info between linked HMCs

Roles primary, replica, peers

Prevent accidental change to replica in HMC 2.16

Choose source HMC for your data

Select what info you want to replicate
z14 major HMC update and laid base for z15 and z16
System Time Wizard
Z16 usability enhancements

Hardware Management Appliance

HCM and SE in one server with redundant server
New z16 means new HMC must be ordered as HMA
existing standalone HMC still supported
zNext processors will not support standalone HMC
HMA should be limited to 2 CPCs per data center location
Run other CECs with SE only

Report a Problem for HMC/CPC/LPAR

Order IBM z16 HMC code prior to IBM z16 CPC

Tech service program (TSP415) will update standalone or z15 HMA to 2.16 code

If preferred and backup time servers are z16, provide UPS to hold power for 60 seconds so time server switch can complete

BCPii suspend/resume for SE reboot

BCPii z16 performance is much better

SOD (Statement of Direction) of Firmware Update Process

Remote Code Load (RCL)

Monitor by human at IBM from beginning to end

Requested by client via Resourcelink, IBM does not

initiate

Z16 is last IBM onsite code load without additional support contract \$\$\$

not many customers exploiting RCL yet

YouTube videos about how to use HMC features and functions

What's New in z/OSMF?

By Gary Puckhoff, IBM

V2R5 and Continuous Delivery (CD) provided benefits

PH44157 upload or download data set or USS file with a few

clicks

PH39605 Compare and Merge files or data sets

z/OSMF plugins starting to use UX

Sysplex CFRM policy editing in 2.5

Graphical interface to reduce the learning curve

Bulk editing to increase efficiency

Built-in best proactive to avoid errors

Coupling Facility (CF) sizing is a planned change

Simplify security configuration and trouble shooting

Security Configuration Assistant

SDSF in 3.1 will update their process, SCA enhanced to support more functionality

Storage Management REST API

Future base for ISMF via z/OSMF

OPERLOG and SYSLOG message REST API

All REST API are securable as are z/OSMF applications

Enhanced Workflow Engine

WorkFlow supports signing a step and run step as different user id (PH43962)

RunASUser:

Hash of WF definition+step content+signer

Signatures are different between sysplexes

Deep search to find values in many steps

Security Configuration Assistant can now run Standalone without z/OSMF

IZUSEJCL in SAMPLIB for initial z/OSMF Setup

New trial for z/OSMF configuration setup

See One Stop Hub ibm.github.io/zosmf

07Mar2023 Tuesday

ISPF Recent and Upcoming Changes

By Sam Reynolds, IBM RTP

Changes in ISPF V2R5

Removed ISPF Workstation Agent

SUBSYS parameter on ISPF Submit

PDSE v2 member generations enhancements (Part 1)

Relative and absolute generations

Requires explicit selection in ISPF before 2.5

ISPF Edit SAVE NEWGEN or NOGEN parameters

NEWGEN is default for gen 0 but NOGEN for other

generations

Added ISPF Config option to change defaults for

SAVE

In ISPF 2.5, show more info about member generations

SAVE long messages are improved

Member generation information panel added to DSinfo

Changes in ISPF 3.1 available

External IE HILITE values to IBM z variables

Tom Conley's CUCI (cookie) on CBT tape satisfies

several IBM RFEs

CUCI needed programatic way to determine HILITE

settings

APAR OA62409 for 2.4 and 2.5 (RFE 145682)

ISPF enhancements for pervasive encryption

Pre 3.1, no support for pervasive encryption

Could only be allocated via TOS command or by

using JCL

Now "key label" field add to ALLOCATE panel (option

3.2) or in Define Cluster panel

ALLOC allocates whether encryption worked or not so

ISPF message "key label ignored"

Case-insensitive sort for ISPF UNIX directory list

UDLIST similar to ISHELL except could not use caseless

sort

ZOS-I-1298 Idea implemented case-insensitive sort

UDLIST Option to make CIS option default

SORT caseless option

PDSE V2 member generation enhancements

Primary option Edit/View/Browse panel have member

gen option

E/V/B commands also support GEN option

E/V/B services provide better return codes for use of

member generations

Was RC14 only, now a few more RC values can be returned

New variables for services processing

New line command “n” to see RGEN (relative generations) that are available for this member

Delete generation will leave a “hole”

Info on a line here shows generation information

Ideas (was RFE)

www.ibm.com/ideas (see handout for z/OS direct link)

Submit tactical rather than strategic Ideas

SCLM is still supported but not being enhanced

“Owned” by Rational group at IBM

JES2 Product Update

By Tom Wasik, IBM

26 attendees

Current JES2 releases (see chart)

See website with current release info for all products

JES3 and BDT are not in 3.1 and will not support JES3 2.5 running on 3.1

OA61231 JOBS REST interface

Removes dependency on CEA/CIM for Jo completion notification

Same JSON document generated by JES2 instead of CEA

Original ENF78 still issued by JES2 - ENF has indicator that shows JES2 issued HTTP POST notification

SYS_JOB_NOTIFY symbol moved earlier in INTRDR

processing

EDS (email delivery system) JES2EDS

Includes multiple TCP/IP stacks

\$T JOBDEF,HTTP_NOTIFY=ENABLED to prevent CIM sending similar messages

AT-TLS policy must be configured for notification to be used
Same policy as CIM supported

OA62796 JOBS REST Interface

Additional statuses via notifications

Ready, Active, Complete

Enhanced RESTJOBS API -see z/OSMF Job document

OA61229 CKPT versions in 64-bit storage

applications and ISVs should not be using CKPT versions at

all

V10 DSERV (IAZDSERV) with 64-bit data pointers (available

in 2.4)

internal performance improvements, reduced number of data

spaces

See RSM OA64077 has fix for error exposed by this change

See OA63943 for co-req fix

JES2 3.1

Policy updates

Introduced in JES2 V2R4

reduce or replace JES2 Exits

SAF checks, list of programs in use by JOB

New policies not being rolled back to earlier JES2

releases

JobInput at end of input phase

Right before exits 20/50 are called

JobCreate applied very early in life's of JOBS

after JCL scan and before job resources are created

Variables

can be passed between policies, extract system
symbols and JES symbols

name, type, scope, policyVersion 2

scope can be local or instance

Action, variable, value to assign a value to a variable

Variable can be prefixed by \$ to make unique

Built-in functions

JESSymbol(symbol-name) to get info from JES2

symbols

Can be used by JOBInput policy
 SysSymbolSub(string) to allow use of System
 Symbols
 FailJob(option) determines how job should fail
 Use in JobInput and JobCreate type policies

New JOB attributes that can be queried

See JES2 Installation Exits book

Restricting JES Cancel Job

New JOB attribute that can restrict JES CANCEL
 command (\$C or \$C,P)

JESCANCEL=ALLOWED | RESTRICTED

Only JES CANCEL, not z/OS CANCEL command

\$T J|S|T|JQ(xxx),JESCANCEL=xxx default is ALLOWED

\$T JOBCLASS(xxx),JESCANCEL= MAS-wide, persists
 over warmstarts

Pre-execution policies can set CANCELRESTRICT true

3.1 upgrade and Coexistence considerations

Compatibility APAR OA61751 to tolerate new function
 and recommended for fallback to 2.4 and 2.5

Service Updates

JOBDEF INTERPRET=JES is becoming more important
 so move earlier rather than later

OA60777 adds HAM CTRACE - very important to
 problem diagnosis

Tour Top Zowe Client Use Cases

By Joseph Winchester, IBM and others

<https://medium.com/zowe/archive> blog

Zowe stats

Lots of blog entries

Zowe.org open source companies (9) see ecosystem for vendor
 names

Top Picks. (See Archives)

Beginner's Guide: how to access mainframe via Zowe in 10 easy steps

1. Get a mainframe
Zowe.org/learn
COBOL Course on GitHub with hands on exercises on real mainframe

IBM Z Xplore training

2. Install VS code and Zowe Explorer
3. configure Zowe
use config file
4. Access complete!
5. Create PDS
6. Add member
7. Run Hello world JCL example
8. Submit job
9. Search for job output
10. Ecosystem of Zowe Explorer extensions

Setting up CA Endevor for Zowe CLI

Software management and lots of related extensions

Continuous Integration for Mainframe App

Zowe Interactively

Developing pipeline

Jenkins-based

How to execute REXX using ZOWE CLI

Zowe TSO start to initiate address space and provide command input then Zowe stop to end address space

Direct key to environmental variable and be able to pass thru commands until stop

How to Automate z/OS Data Set allocation

Ridiculous names for Open Source tools

{{ }} template to be replaced by provided value

Persistent Password Problem

Port 443 default

Basic auth - userid and password

Persistent password could be captured and use nefariously

Zowe z/OS Component uses port 7554
Talks to API mediation layer and forwards to z/OS security via SAF or z/OSMF
JSON web token comes back (JWT has to be enabled in z/OSMF)
Tokentype and tokenvalue
Could be stored in secure store on your desktop/laptop
Use bearer token for CLI

Zowe CLI: Token Authentication, MFA, and SSO

Using MFA with Zowe: How It Works

Many Connections with Zowe

35 CLI extensions but API can manage this for you

Configure API Mediation Layer is very important, particularly for security and running at scale

Zowe Desktop

Intro to Zowe virtual desktop and blog

See YouTube videos about zowe

Blogs are peer-reviewed by at least 2 persons

z/OS Core Tech Lunch

By Art Gutowski, Huntington Bank

Deep Dive into AI on IBM zSystems...

By Elpida Tzortzatos, IBM

55+ attendees

Elpida T. has been working for past 5 years on AI on Z
80% want real-time insights; 49% are challenges to get those insights; 10% of transactions in high volume enterprise workloads go thru real-time AI screenings

AI Explainability, transparency are important to enterprise-capable AI

Z16 Integrated Accelerator for AI

3.5 million transactions per second

Up to 19x higher throughput and 20x lower response time

AI is on-chip. 7watt versus than x86 Nvidia GPU is

300watt

AI on z16 strategy

Real time business insights, Intelligent infrastructure

In z/OS 3.1, WLM will exploit AI to better manage workloads

3 key focus areas

AI at scale - hardware accelerator on-chip

AI Ecosystem - allows easy access to AI capabilities

AI Agility - train anywhere inferences on z16 and embrace

democratic AI

Applications need AI libraries and frameworks

Will run on z15 but probably could use the z16 acceleration

Calculator on Z to determine if how AI can leverage your work

NNPA Neural Network Processor Assist instruction with lots of features

ZDNN library equivalent to Cuda x86

Open Neural Network Exchange (ONNX) to allow exchange of models from different transient environments and run them on Z

TensorFlow on IBM z16

Native Scoring from CICS COBOL transactions

User Experience Automating Building IBM's OS Resident volume Sets

By Jerry Edgington, IBM Office of the CIO, Chief Z Architect

Started at IBM 11 months ago (April 2022)

Building z/OS CI/CD Pipeline

release, test, provision&deploy, Build, Code, Analyze, Plan,

Monitor and start over

Uses GitHub for input controls

z/OSMF (SMP/E and non-SMP/E), build, deploy, IPL dev, run test cases, successful - yes

no, back off IPL DEV

- move workload, IPL Test, Run test cases, Successful
- No, back off IPL Test

Client Zero for Shopz

z/OSMF Workflows for the Baffled Sysprog

By Steve Pryor and Jerry Spencer, DTS Software, LLC

Jerry S. started in application 1975, Sysprog in 1978

“PCs as Toys, mainframes as tools”

Welcome to z/OSMF

Automate common tasks

Standardizing process

Possible uses: provisioning, QA, installations/file transfer

“Create a workflow” but no way to start creating a workflow

“in common meaning”

Don't Despair, There is help

One Stop Hub

Join Communities to communicate with kindred spirits or lost souls

z/OSMF Guild home page

Archived presentations back into 2021

Workflow Editor The magic bullet

Discovered the Workflow Editor

Edit Workflow Definition to define a new workflow

select options including No prefix

Create a new step

Choose type such inline, then other options appear

Add instructions to user

Set maxRC and 80 for logical record length

Added JCL for inline

Set option for Contains variable substitution
 set variables
 Create all variables for all steps in the workflow
 Each variable has a type, can be validated by z/

OSMF

for example, Acct# valid alphanumeric and
 provide a default

Chose which variables go with each step
 Saved workflow definition file as PDS member,
 sequential file, USS file

Testing your way to success

In WFE, you can test WF
 Or create a WF instance from the data set where the WF
 definitions reside

Assign all steps to owner userid

Choose step to test

Actions>Perform

Provide variable values

Create the JOB statement (a default provided)

Wrap up

Action>Customize default statement so my default is used in
 future WF Job Statement

Experienced System Programmers

Pass on your knowledge

Get creative with workflows

user provisioning, reporting, maintenance

Early Tenure System Programmers

Ask questions

Research what the workflows actually do

After you understand the WF, feel free to tinker in non-
 production environment

Make your workflows Local, not Global

Now move Workflow to Management Services Catalog

08Mar2023 Wednesday

Digital Signatures for z/OS Software Packages

By Kurt Quackenbush, IBM

Digital Signature support already delivered in recent PTFs

SMP/E GIMZIP creates portable packages of ready to install SMP/E consumables, or already installed software.

Extended GIMZIP to digitally sign packages

SMP/E and z/OSMF are extended to verify packages signatures

Signature is hashed data that is then encrypted with public/private key

Digital certificate is certified by trusted authority and contains identity info and the public key

In the GIMZIP package is a new file GIMPAF2.XML

SMP/E does not require signature verification for a signed GIMZIP package (yet)

Providers can start signing packages whether or not consumers are verifying the signature

Signing certificate comes with GIMZIP package from provider

SMP/E verification uses Java services

RACF provides the IBM CA Root "STG Code Signing CA-G2" automatically

But marked Not Trusted

READ to LISTRING FACILITY Class is good enough, but a provider may need RDATA LIB Class active

Infusing AI into z/OS

By Steve Warren, IBM and Khadija Souissi, IBM via online

z/OS 3.1 major theme is AI-infused

Intro

- Overview of future AI and AI for WLM preview

- Greg, Zach, Alice, Christina, Felix personas

- Still being reviewed by Sponsored Users

- Skills gap due to generation shift

- AI can help novice users increase productivity and efficiency

- Detect patterns and extract actions insights form IT data

- Optimize process via automation armed with intelligence

Past and how journey began

- 2018 high volume transactions at end of month

- Bank users using mobile app to rapidly growing workload on IBM Z

- Pain points - difficult to predict capacity and workload needs with serious consequences, high stress level, aging

- WLM team used 12 weeks of SMF data to train model, and used 13th week of data to validate the model

Present journey

Problem statement

- z/OS Workload manger helps automate resource allocation for z/OS, users still require skills and experience to use effectively

- workload cycles over time, long-standing service definitions may not to be a new user, leading to manual errors

- New WLM needs simplified approach possibly by AI

Future with AI

- How z/OS infrastructure might use WLM via AI?

- Use a z/OSMF Workflow to configure and setup the AI functionality

- No longer need to be a data scientist or AI expert

- Just need to use her systems IT data to train the model and see predict match reality

- Turn on AI controlled WLM and celebrate

Use z/OSMF WLM to view success and see if model needs to be re-trained

AI journey and z/OS experience roadmap

AI will not handle everything alone

WLM have 3 algorithms that can be used

AI, reactive mode, xxxxx

WLM Managed initiators added as workload spikes

AI predicts an increase and starts WLM initiators before Workload arrives

Just pushing Training button on consumer z/OSMF panels

Train on SMF99 data

AI WLM will start with WLM initiators but see more pieces in the future such as anomaly detection

Not a deep learning model or tree-based model so z16 acceleration not needed, ZIIP-based training - SIMD capable is needed so z15 is OK

Summary

AI-powered WLM concept to manage workloads

Committed to design a straightforward user experience

Early AI-powered WLM results show proven results for managing workloads

Next steps

IBM z/OS Security Server - RACF update Spring 2023

By Mark Nelson, IBM

RACF Update Agenda

z/OS 2.5

Five new health checks

Residual info erased when data sets are deleted

EraseAll specified deals with temporary data sets

Verify PassTickets are encrypted and stored in ICSF

KEYMASKED is weak

KEYENCRYPTED and KEYLABEL then value stored in ICSF by RACF

Enhanced PassTickets: modernize algorithm, new

keywords

Verify RACF is enabled for Sysplex Communications within a single Sysplex

Purge around systems is more surgical when this function enabled

RRSF not involved

Verify that RACF address space is active

All checks run every 24 hours but you can change if needed

ALTER Access Administrative Authority

Restrict ALTER access from managing discrete profiles...

Should have removed ALTER allowing administrator access function

IRR.ALTER.* in FACILITY with UACC(NONE)

Certificate Fingerprint Support

>> see Certificate Basics SHARE session Video or handout

RACF can show fingerprint in several places

PKI Services part of z/OS manage digital certificates

Identity Token Support

Use adheres to JSON Web Token (JWT) IETF specs: RFC

7519

only for z/OS to z/OS work

Currently for MFA use

Password Interval Current Processing

Passphrases need separate change interval

PHRASEINT

IBM Z Security and Compliance Center

SMF Record Type 1154 subtype 83 provides compliance info

CIS benchmark for z/OS - not U.S. government

RACF VSAM database update with OA62267

ICSF must start via PARMLIB

Post z/OS 2.5

z/OS V3R1

Custom field in ACEE

Watson & Walker zRoadshow Winter 2023 Edition

By Frank Kyne, Watson & Walker

Frank just met Cheryl in person for first time in 3 years! She was at this SHARE for one day.

RMF CF Optimizations Enhancements

New 2.5 CF Optimization option - turn it on (off by default)

CPENABLE considerations

CPs enabled to handle I/O interrupts

Z14 and later set to 5,15 (was 10,30)

Erase-on-Scratch (EoS) and Related Topics

EoS delete data set writes zeros over tracks

Was bad performance

EoS only applies to non-mirrored disks

Add EOSV2=YES in DEVSUPxx to significantly improve

EoS performance

STIG V-259 and z/OS RACF STIG “is EoS enabled?”

Check with vendor about non-IBM DASD

Enable for all data sets, or ones with larger SECLEVEL above a given value, or Data sets specify ERASE in the their profile

HDD EoS physically write zeros to disk...

SSDs work differently- writes a blank page, other concerns

OA61492 adds UNMAP to mark pages as invalid to remove actual writes

UNMAP not supported for devices in copy services relationship

UNMAP uses SAF FACILITY class profile to enable or disable

Software Risk Assessment

SMP/E role ends when it has updated your target libraries

If cloned, target libraries may be corrupted. So now SMP/E creates a UUID to match data sets with source

What if you init 3390-54 production volume? See handout for details

Hidden Treasures in z/OS, a.k.a. Bit Bucket x'41'

By Jerry Edgington

Mike Shorkend

Ed Webb substituting for Ed Jaffe

J.E.'s part of BB

DDVIPA is Distributed VIPA, has to be DVIPA or VIPA

Mike Shorkend

Jobs fill up inits on one member of sysplex before using idle ones on another member

Ed Webb/Ed Jaffe:

Colorful Console Language

MSys for Operations introduced in z/OS 1.2 (200n)

- One of its most notable innovations was a new appearance for MCS consoles that provided greatly improved message heuristics by taking full advantage of EDS and programmable color attributes

Now z/OSMF Console function can do the same!