What's New in z/OS 3.2: Sunshine Edition

Steve Warren
STSM, Principal Z Solution Architect
IBM Worldwide System Center
swarren@us.ibm.com

Marna Walle
STSM, z/OS System Install
z/OS Development
mwalle@us.ibm.com

Table of Contents (3.2 GA Announcement)

(CD) – Base z/OS 3.2 items that were **C**ontinuous **D**elivery on previous release(s)
(CD) – **C**ontinuous **D**elivery items post-z/OS 3.2 General Availability

IBM z/OS 3.2: A highly securable and scalable operating system for running mission-critical applications

IBM z/OS 3.2, the next release of its flagship operating system for IBM Z, is designed for hybrid cloud and AI, including support for IBM z17®, new AI-infused capabilities, and enhancements to simplify IT management. With IBM z17, the next release of z/OS is intended to fuel innovation and growth, secure clients' most important data, and automate and improve operational efficiency.

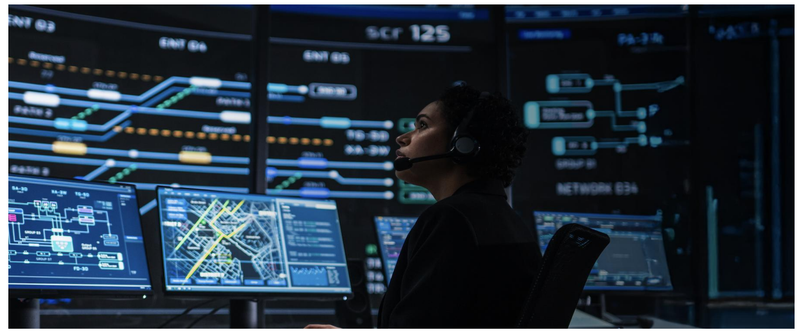
3.2 Overview

AI-infusion

Drive greater impact and deliver business growth with deep insights by using secure AI on critical data

Transforming for Efficiency

Leverage industry standard technology to efficiently build, deploy, and manage workloads



Cyber Resiliency

Strengthen security posture and leverage cyber resiliency capabilities to safeguard data

z/OS 3.2 Release Overview – z/OS support summary

Release	IBM z13® IBM z13s® WdfM	IBM z14® zR1 WdfM	IBM z15® T01 T02 WdfM	IBM z16® A01 A02	IBM z17® ME1	End of Service	Extended Defect Support
z/OS V2.3	X	X	X	X[3]		9/22	9/25[2]
z/OS V2.4	X	X	X	X	X[3]	9/24	9/27[2]
z/OS V2.5	X	X	X	X	X	9/26[1]	9/29[2]
z/OS 3.1		X	X	X	X	9/28[1]	9/31[2]
z/OS 3.2			X	X	X	9/30[1]	9/33[2]

Notes:

[1] - All statements regarding IBM's plans, directions, and intent are subject to change or withdrawal without notice.

[2] - Extended support dates are projected and are subject to change or withdrawal without notice.

[3] – Toleration Support only

WdfM - Server has been withdrawn from Marketing

Legend

Defect support provided with IBM Software Support Services for z/OS
Generally supported

Table of Contents

IBM Z Hardware Support

IBM **z17 (9175) Model ME1** Functions & Features

One hardware model, Five Features, 1-4 19” Frame System,
Maximum 8 cores/chip, 2 chips/DCM
1 integrated I/O accelerator/chip. 5.4Ghz.

Up to 85 user partitions, 32 TB per partition, 208 CPUs/zIIPs/IFLs per partition, up from 200.
• Up to 16 TB per z/OS LPAR as of z/OS V2.5

•2 CP chips on a Dual Chip Module (DCM), 5.4 GHz
•L1 Private 128K instruction & 128K data
•L2 Shared 36 MB / core, 270 MB effective shared
•10 x Private/Shared 36 MB L3 caches

684 GB HSA, 64 TB maximum, 16 TB per drawer

Channel Subsystem scalability
•Up to six (6) Channel Sub Systems (CSSs)
• 4 Subchannel Sets per LCSS

HiperDispatch Enhancements

IBM Z Integrated Accelerator for AI

Hardware Instrumentation Services (CPUMF)

New machine instructions

Network Express

Crypto Express8S

OSA Express7S 1.2 1/10/25 Gb

BCPii support for z/OS Identity Mapping

(z/OS support in blue)

Integrated I/O architecture (including Enhanced QDIO)

ICA-SR 2.0 for short-reach coupling
• 4 CHPIDs/port for CS5
• Same limits as z15/z16 with 48 adapters/96 ports.

Coupling Express3 LR 10Gb/25Gb optics for long-reach
• 4 CHPIDs/port for CL5/CL6
• 32 adapters, 64 ports per CEC

CF Level 26
• Parallel Sysplex® scalability, virtualization, consolidation, and density enhancements.
• Removal of support for CF Flash Memory and CF images using dedicated GP processors.

Max coupling CHPIDs per CEC of all types: 384

10 GbE and 25 GbE RoCE Express 3 SR and LR (CX6-DX)

FICON Express 32G

zHyperLink® Express 2.0
• Maximum 16 Adapters /32 ports

IBM Flexible Capacity for Cyber Resilience

TFP for Hardware
• Workload Classification
• Replacement Capacity

Power Consumption Reporting

IBM Z Hardware Support (z17)

Next-Gen Mainframe: Exploring the IBM z17 Inside and Out - Wed 3:45pm

IBM z17 highlights

- Memory
  - Up to 16 TB of memory per z/OS instance, used by select middleware
    - Max memory per z17 drawer is now 16TB, making this limit practical for very high z/OS memory needs
- Instructions
  - New z17 instructions for the compiler to accelerate numeric formatting, and hardware support for new numeric conversion instructions (exponents and arithmetic common in financial applications)
  - Enhancements to the Perform Locked Operation (PLO) instruction to provide a replacement solution for constrained transaction execution support (which will be removed on future machines)
- Coupling Facility
  - A new level of coupling facility support, CFLEVEL 26, which provides Coupling and Parallel Sysplex enhancements such as:
    - Coupling limits enhancements (ICP buffers per CHPID increased from 7 to 8)
    - Support for new Coupling Express3 10GB/25GB long-reach coupling link
    - Support for new ICA SR 2.0 short-reach coupling link
    - Removal of support for CF Flash Memory (VFM) and CF images using dedicated GP process
- Network Express card
  - Single card supports both OSA (for enhanced QDIO) and RoCE communications
  - New OSH CHPID for OSA EQDIO and new FID type NETH for RoCE support in z/OS Communications Server support
- Enhanced CPACF support
  - Clear Key acceleration using a new CPACF instruction

IBM Z Hardware Support (z17)

Unleashing AI at Scale: Exploring the IBM Spyre Accelerator on IBM z17- Thurs 9:15am

Exploitation of new z17 IBM Telum II™ AI Accelerator and IBM Spyre™ Accelerator for AI(CD)

- 2nd Generation IBM Z Integrated Accelerator for AI on the Telum II processor provides Additional LLM (encoder) acceleration, Quantization (INT8) in addition to existing FP16, expanded Neural Network Primitives and in-drawer intelligent routing to other accelerators
  - IBM Deep Learning Compiler (DLC) to be enhanced to enable deep learning models to be deployed on IBM z17 exploiting more primitives.
  - IBM Z Deep Neural Network library (zDNN) software library is enhanced to support new accelerator capabilities
- Spyre to support running larger LLM (encoder) as well as GenAI (decoder) models for complex AI business use cases, assistants and Agentic AI

Tailored Fit Pricing for Hardware for zIIPs (Workload Classification Pricing)

- Scale new workloads on z/OS with optimized TCO with the agility of cloud-like pricing for zIIP capacity
- Unlock a pool of always-on subscription zIIP capacity for AI inferencing on z/OS, zCX Classic and zCX for OpenShift workloads
- Consumption-based pricing delivers greater agility to be able to meet the dynamic demands of new workloads
- Does not require Tailored Fit Pricing for Software as a pre-requisite

IBM Z Hardware Support (z17)

z/OS BCPii server-side authentication supported

- z/OS BCPii supports a new authentication model to allow map z/OS userIDs to HMC users and their granular authorizations using JSON Web Tokens (JWTs) instead of using SAF security controls
  - JWTs map z/OS users to HMC users/templates, as defined on Custom Console Services panel of the HMC
- Requires usage of the HWIREST BCPii API as well as both the location of where the BCPii application is running and the target or the request to be at z17 level
- BCPii also supports directly targeting HMCs with the HWIREST or HWTREST2 service

ICSF z17 Support

- New NIST-certified Quantum Safe Algorithms(ML-KEM and ML-DSA) support
- Support updates to CPACF, including new instructions for Hash-based Message Authentication Code (HMAC) processing
- Improved performance for SHA-3 hashing
- Updates to the TR-31 export service to allow the export of AES PINPROT type “B” keys and the generation and use of 8192-bit RSA keys

System Recovery Boost (for z16 and z17) (CD 2Q25 (3.1) – OA66837)

- System Recovery Boost Recovery Process Boost for Dynamic I/O Activation processing, when large hardware dynamic I/O changes are detected.

Table of Contents

IBM z/OS 3.2 Release Overview

Usability and Skills

z/OSMF Sysplex Mgmt (CF structure sizing), Release Upgrade, z/OSMF Storage Mgmt plug-in, ServerPac® improvements, z/OSMF Software Update improvements, Parmlib Syntax REST APIs, z/OSMF WLM Policy Advisor, Assembler exit reduction …

Application Development

Artificial Intelligence, z/OS Container Extensions free entitlement, Red Hat OpenShift, zCX Sysplex Distributor support, z/OS Container Platform, Java™ 21, Free entitlement for: Python, ZOAU, OEF for z/OS, z/OS UNIX® enhancements …

Enhancing Security

RACF® userID containment, RACF Password Envelope, RACF Resiliency & Constraint Relief, RACF certificate support for multiple altnames, ICSF/Crypto,RACF, z/OS Validated Boot, CCA 8.4 updates, Threat Detection for z/OS, RACF quantum-safe passwords for LDAPBIND …

Scalability & Performance

RMF™ UI improvements, RMF reporting enhancements, RMF data gatherer enhancements, DFSMS data set copy performance enhancements, WLM healthcheck …

Data Serving & Storage

Cloud Data Access, EzNoSQL Python APIs, TCT enhancements, DSS Dump/Restore leveraging CDA, DFSMSrmm™ z/OSMF plug-in enhancements, OAM REST API, zFS and z/OS File system healthchecks, Data Set File System …

Availability

BCPii communication resiliency, PPRC Suspension enhancements, System Recovery Boost enhancements …

Systems Management

AI infused z/OS (AI-Powered WLM & Network Packet Batching), AI framework enhancements, SDSF new displays, SMF explorer, JES2 spool access enhancements, Change Tracker …

Networking

zERT, zERT reporting, SMTP AUTH…

Table of Contents

AI Application Development

AI on IBM Z and LinuxONE Strategy for 2026 and Beyond! - Mon 2:30pm

AI on z/OS – Materials to help jump start your AI adoption journey

- Journey to AI on IBM Z and IBM LinuxONE content solution
  - Guidance on identifying use cases, available solutions, recent developments and more.

  https://www.ibm.com/support/z-content-solutions/journey-to-ai-on-z/
- AI on Z and LinuxONE Discovery Workshop
  - Learn about analytics and AI technologies and solutions on IBM Z and where you are in your AI Journey
  - Discover which AI on Z use cases would be ideal for your company
  - Each workshop is tailored to fit your needs
  - Contact aionz@us.ibm.com to find out more

IBM Z Platform for Apache Spark 1.1 [5698-SPK]

- Apache Spark 3.5 available on z/OS, staying current with open-source community (3Q24)
- In-memory compute engine and analytics runtime, supports big data popular languages Java, Scala, Python and R
- Foundational capabilities for leveraging lightning-fast data processing on large volumes of z/OS data.

IBM Z Content Solutions | Journey to open data analytics

Application Development- Ecosystem

BYOD Lab: Advanced AI Insights Leveraging Huggingface LLMs as part of a Multi-Model Approach on IBM Z and LinuxONE - Tue 3:45pm

Python AI Toolkit for IBM z/OS 1.13 [5698-PAL] (1Q25)

- Industry-leading IBM-owned Python packages relevant for AI and ML workloads available on z/OS, with optional IBM Elite Support
- Unlocks verified open-source software with supply chain security
- Familiar, flexible, and agile package installation process leveraging PyPI

IBM Z Content Solutions | Journey to open data analytics

AI Toolkit for IBM Z and LinuxONE [Available on Passport Advantage]

- Popular used open-source AI frameworks with optional IBM Elite Support, fully adapted for IBM Z and LinuxONE
  - Includes IBM Z Accelerated for TensorFlow and IBM Snap ML, IBM Z Deep Learning Compiler, IBM Z Accelerated Serving for TensorFlow, IBM Z Accelerated for NVIDIA Triton Inference Server and more recently IBM Z Accelerated for PyTorch (4Q24)

IBM Synthetic Data Sets [Available on Passport Advantage] (1Q25)

- A family of artificially-generated data sets designed to enhance predictive AI model training and LLMs to benefit IBM Z and LinuxONE enterprises
- 3 data sets: Payment Cards; Core Banking and Money Laundering; Homeowner's Insurance
- Free trial available for PoC; Paid medium sized data sets (Pro); Paid larger-sized data sets (Enterprise)

Application Development- Strategic Offerings

Accelerated Business Decisions with Machine Learning for z/OS -Tue 10:30am

IBM Machine Learning for z/OS 3.2 (MLz Enterprise) [5698-WME]

- Real-time analytics at the source with machine learning and deep learning models without impacting SLAs.
- Supporting build anywhere and deploy on Z strategy: easily import, optimize and deploy Open Neural Network Exchange (ONNX) deep learning models to z/OS natively
  - Leverages the IBM Deep Learning Compiler
  - In-transaction scoring for native CICS®, IMS™ & Batch COBOL applications with near-zero latency
  - Telum on-chip AI Accelerator exploitation for AI inferencing at scale
  - Trustworthy AI capability provides native AI model explainability and drift detection capability for Spark, Predictive Model Markup Language (PMML), Python and Open Neural Network Exchange (ONNX) format models.
  - Addition of Python AI Toolkit for IBM z/OS as a supporting program, including support entitlement.

IBM Machine Learning for z/OS Core edition 3.2 (MLz Core) [5698-WMC]

- Continues to be the offering that provides foundational AI capabilities on z/OS to enable the development of ready to use AI solutions for clients and partners.
- This offering is delivered as a stand-alone offering as well as an embedded component of the Machine Learning for IBM z/OS Enterprise Edition which offers flexibility to our clients with multiple configuration options for their AI workloads on z/OS.
- Machine Learning for IBM z/OS Core version serves as the key AI serving stack for AI Infused IBM z/OS 3.2.

Application Development

z/OS Container Extensions (Standard) – Run Linux Containerized workloads on z/OS

- z/OS Container Extensions provides a virtual appliance for running Linux on Z workloads on z/OS
- The **same binary** container images that run on Linux on Z under z/VM® or zKVM will run in zCX
  - No porting is typically required from Linux on Z
- zIIP eligibility - 98%+ ziip offload in lab measurements*

Free entitlement of zCX standard with zCX 2.0 (CD 1Q25 (2.4) -OA66764 & OA66765)

- zCX longer requires usage entitlement via the IBM Container Hosting Foundation

For more information, see the zCX content solution https://www.ibm.com/support/z-content-solutions/container-extensions/.

What's New in zCX – Both Standard and OpenShift Versions - Thurs 10:30am

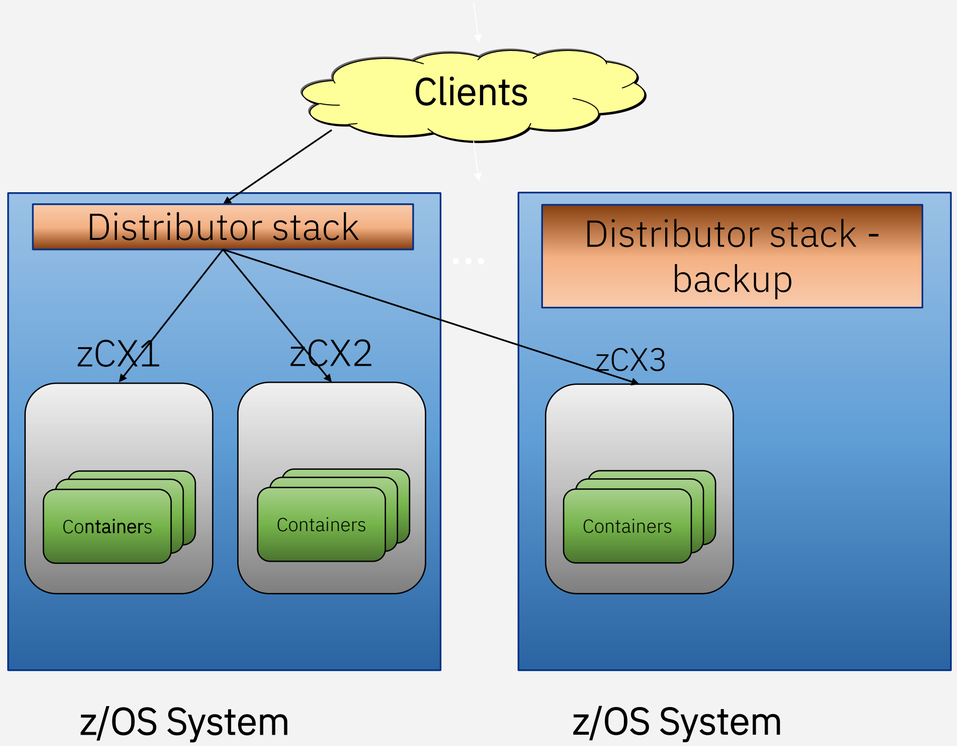
Application Development

zCX Sysplex Distributor Support (CD 4Q24 (2.5) - OA66764, OA66765, OA66767, OA66769, OA66770, OA66771)

- Distributor stack dynamically learns when applications running within Linux on z/OS appliances (i.e. Docker containers within zCX) are available
  - z/OS system hosting zCX instance(s) act as the Target stack
  - HA configuration for zCX clusters can be achieved using z/OS-only components

zCX support for ElasticSearch (ELK) containers (CD 4Q24 (2.5) – OA66765, OA66767, OA66769, OA66770, OA66771)

- Support for large number of memory maps, allowing for logging and monitoring tools like ELK or OpenSearch)



Application Development

Single Node OpenShift (SNO) supported (CD 4Q23 (2.4) - OA65756)

- Only 2 SMT-2 enabled zIIPs required!
- Great for testing or PoC of running application on OpenShift on z/OS without a huge investment
- Not suitable for most production workloads
- Available with RH OCP 4.14.0 and higher

Multi-architecture support (CD 4Q23 (2.4) - OA65756)

- Allows for the control plane machines (control nodes) can operate on x86 architecture while the compute plane machines (compute nodes) utilize zCX (s390x architecture)
- Allows the facilitation of workloads running on z/OS with both HA and co-location advantages without the need for a separate s390x RH OCP cluster installation
- Available with OCP 4.14.0 and above

Sysplex Distributor Support (CD 2Q25 (2.5) - OA66817 and OA65756)

- A zCX for OpenShift cluster can leverage Sysplex Distributor support to provide a self-contained, highly available load balancing solution for both control and compute nodes
- Replaces the need for an external HAPROXY in a RHOCP Infrastructure node
- Day-2 operation requires setup after zCX for OpenShift cluster is deployed
- Both Control and Compute nodes can be managed with Sysplex Distributor

Application Development

IBM zCX with Red Hat OpenShift AI (CD 4Q25)

- Containerized platform for AI/ML workloads on z/OS
- Allows RedHat OpenShift AI services to run on z/OS
  - AI inferencing co-located with transactional data reducing data movement and latency
    - Triton Inference Server with supported backends for PyTorch, SnapML and zDLC, allow which can access both Telum I and Telum II.
  - Driving innovation by deploying LLMs on-premises for intelligent applications close to your data
  - Provides model development capabilities
  - Provides RedHat OpenShift AI explainability capabilities
- Separate orderable product
  - IBM zCX with Red Hat OpenShift AI 1.1 (5655-ZC2)
  - IBM zCX with Red Hat OpenShift AI Subscription and Support 1.1 (5655-ZCN)

Unlocking Business Insights: Deep Dive into AI on IBM Z and LinuxONE - Tue 9:15am

Application Development

Introducing the z/OS Container Platform - Wed 9:15am

z/OS Container Platform (zOSCP) [5655-MC3]

- New container orchestration support for the management of containerized z/OS UNIX applications running natively on z/OS to address the challenges that arise as enterprises embrace modern application development, utilizing container technology as part of their digital transformation strategy.
  - Application Modernization and Co-location
    - Run containerized z/OS UNIX applications on z/OS to modernize existing workloads and build new applications
  - Industry-standard cloud technologies
    - Based on industry-standard open-source technologies such as an OCI container runtime, Kubernetes container orchestration and more
  - Container images
    - IBM-provided “base” images to utilize for building your own container images on the IBM Container Registry
- A new unpriced program product, available to all z/OS licensees, with optional Service & Support available

(CD 1Q24 (2.5) - OA66262, OA66266, OA66267, OA66268, OA66269, OA66270, OA66361, OA66362, OA66363, OA66364, OA66365, OA66366)

Multiple VIPA ranges for zOSCP (CD 1Q25 (2.5) – PH63940)

- Previously, only a single range of DVIPA address were allowed to be specified for use of containers started with zOSCP
- Alleviates the restriction where clients would need to ensure they had available contiguous DVIPA address within a single configured range

Content Solution website (https://www.ibm.com/products/zos-container-platform) has everything needed to get started!

Application Development- Ecosystem

z/OS modernization frameworks/products included in z/OS base at no charge (CD 2Q24 (3.1) – effective July 1, 2024)

- Open Enterprise SDK for Python, Z Open Automation Utilities (ZOAU), and Open Enterprise Foundation for z/OS are be available as bypassable requisites for z/OS 3.1 and 3.2.
  - Both Open Enterprise SDK for Python S&S [5655-PYS] and Z Open Automation Utilities S&S [5698-PAS] are reduced to no cost.
- These products can be ordered with z/OS 3.2 and arrive integrated, or acquired separately at a later time

MVS: z/OS Operating System

Select		Product	Description			Version	Language	Notes
☑	△●◆	[5655-ZOS]	z/OS 3 Base	[Entitlement Description]	[FMIDs]	3.01.00	English (US)	ⓘ
The above product has a bypassable requisite for one of the following products:								
○	▲●◆	[5655-PYT]	Open Ent SDK for Python	[Entitlement Description]	[FMIDs]	3.12.00	English (US)	
The above product has a bypassable requisite for one of the following products:								
○	▲●◆	[5698-PA1]	Z Open Automation Utilities	[Entitlement Description]	[FMIDs]	1.03.00	English (US)	
The above product has a bypassable requisite for one of the following products:								
○	▲●◆	[5655-JB1]	Semeru Runtime Java z/OS 21	[Entitlement Description]	[FMIDs]	21.00.00	English (US)	
The above product has a bypassable requisite for one of the following products:								
○	▲●◆	[5655-164]	z/OS AI Services	[Entitlement Description]	[FMIDs]	1.01.00	English (US)	
The above product has a bypassable requisite for one of the following products:								
○	▲●◆	[5655-OEF]	Open Enterprise Foundation	[Entitlement Description]	[FMIDs]	1.01.00	English (US)	

Complete list of Bypassable Requisites for z/OS 3.2

Application Development

Upgrade to z/OS 3.2 – Part 1: Planning - Mon 3:45pm

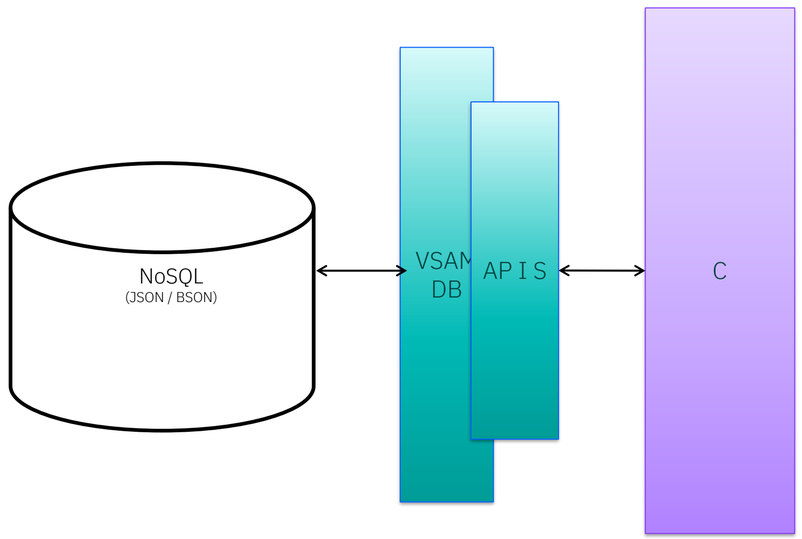
z/OS 3.2 and Java

- At GA of z/OS 3.2, z/OS has a functional dependency for **Semeru 21**
- It is planned that the z/OS functional dependency for Semeru levels will change over the z/OS 3.2 lifecycle
- Always, watch the *z/OS 3.2 Planning for Installation* book for the latest news in z/OS Semeru dependency, and which z/OS functions are affected.
- For customer applications, z/OS 3.2 will support any Semeru level as long as it is service-supported

IBM Open XL C/C++ 2.2 for z/OS (3.1 and higher, October 31, 2025)

- Combines the benefits and innovations from the LLVM community with IBM XL C/C++ compiler technology to deliver leading-edge application performance for the latest z17 architecture.
  - Open XL C/C++ 2.2 for z/OS **(available at no charge for clients with priced XL C/C++ compiler)**
    - Support for integrated CICS translator and IMS subsystems for clients to protect and leverage investments on IBM Z and reduce business and IT risks.
    - Support for the C++20 language standard to improve compatibility of C++ applications across platforms
    - Usability has been enhanced with the addition of debug information storing in side-files as well as the initial rollout of listing file support in Open XL C/C++.
    - **Open XL C/C++ 2.2 and XL C/C++ are designed to be used independently and are also serviced and supported independently.**
    - Available as a web deliverable from the IBM C/C++ for z/OS website.

Application Development Data Serving and Storage)



EzNoSQL APIs

- NoSQL for z/OS provides a key:value document store on z/OS and allows applications the ability to store open standard BSON/JSON (UTF-8) objects.
- EzNoSQL provides a set of modern APIs, with a key-value interface, to simplify the application effort needed to access NoSQL VSAMDB data sets on z/OS in real-time, at scale, and with consistency.
  - C, assembler, JAVA and Python (CD 4Q24 (3.1) – OA66418) languages supported with a simple key-value interface to a NoSQL database
  - **Enhanced ResultSet Java APIS (CD 4Q25 (3.1) – OA67886) provides additional diagnostic information similar to what is provided with the C APIs for improved usability.**
  - **New COBOL support in IBM Enterprise COBOL for z/OS 6.5**
  - Allows applications to share NOSQL database between programs written in all these languages
- Support to scan NoSQL documents sequentially using a new ordered index parameter (CD 1Q24 (2.5) – OA64954)

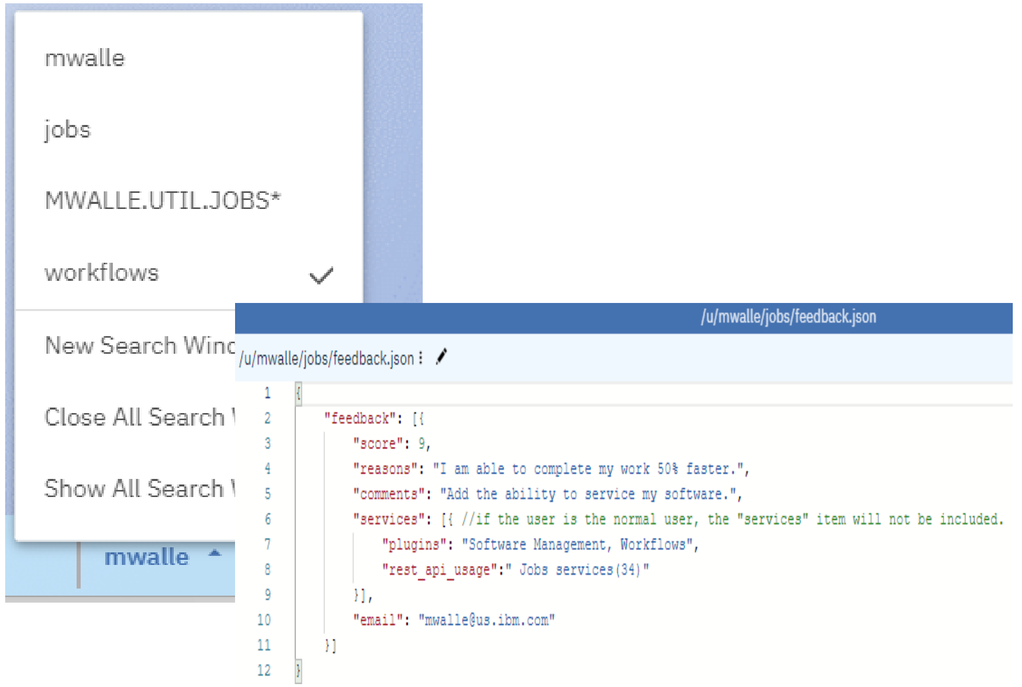
Content Solution website (https://www.ibm.com/support/z-content-solutions/eznosql) has everything needed to get started!

Table of Contents

Usability & Skills

z/OSMF Desktop Productivity Enhancements

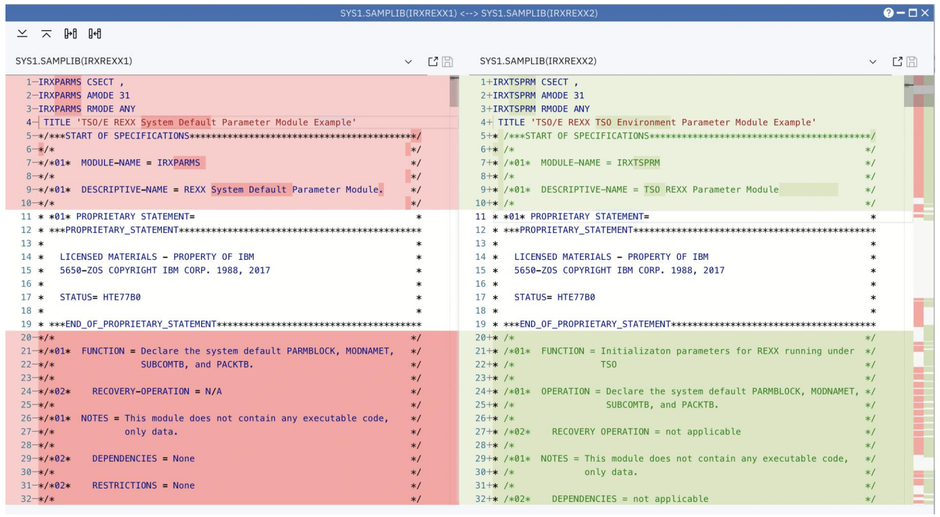
- More information displayed when working with data sets (volume, track, record format, etc..), including more attributes about Job Output
- Users can save sequential data set or member with specific content types (CD 4Q24 (3.1) – PH62589)
- Ability to perform data set and z/OS UNIX actions on a remote system, such as: search, view jobs, compare
- Open a new data set and file search window from the search icon.
- Multiple search windows are supported.
- Syntax highlighting for Python, JSON and YAML files.



z/OSMF Data Set and File Compare

Enhanced desktop editor to compare two files and visualize the differences.

- Comparisons of files or data sets from different systems, uncatalogued data sets, and to change the attributes of files directly from the file editor.
- Last modified time displayed in comparison window (CD 4Q24 (3.1) – PH62589)

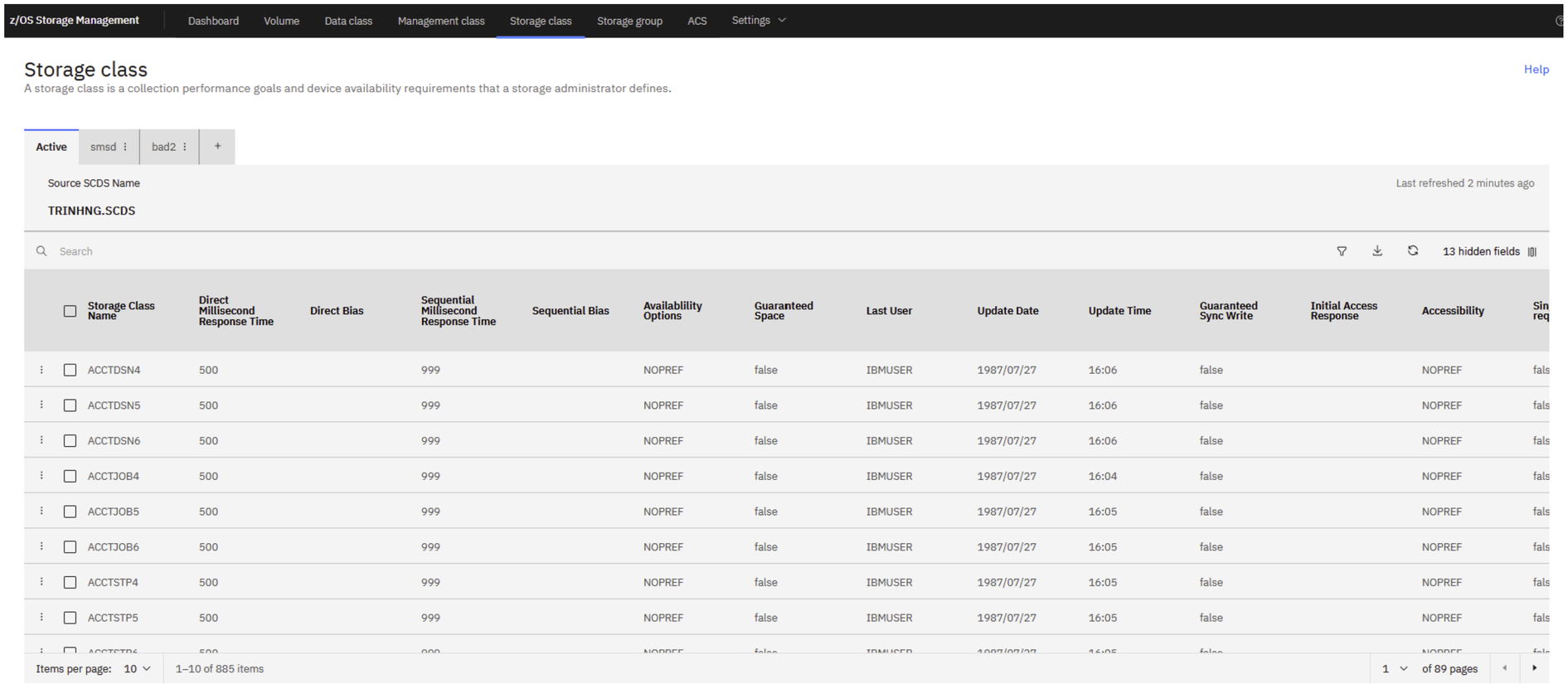


Usability & Skills

z/OSMF Storage Management Plugin - SMS Like Never Before - Wed 8am

z/OSMF Storage Management Plugin

- Allows some z/OS storage management tasks to be performed with a shortened onboarding timeline
  - View, edit and activate DataClass, ManagementClass, StorageClass, StorageGroups, ACS Routines
- Reduces complexity for z/OS storage admins
- Leverages the storage management REST APIs previously delivered in prior release
- Definitions can be exported in CSV format for easy viewing in reporting



Usability & Skills

z/OSMF Sysplex Management Plugin

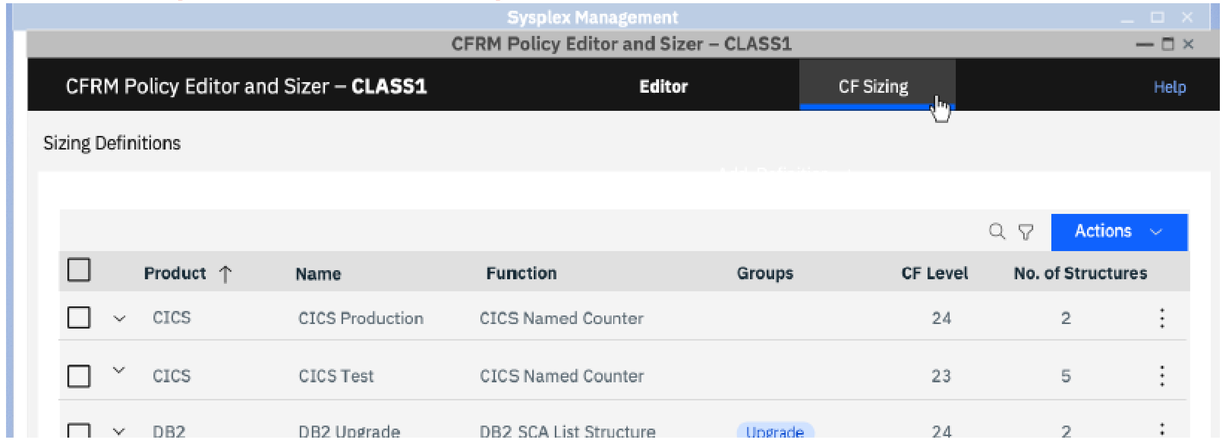
- **View** Sysplex configuration
  - Table and graphical views
- **Modify** Sysplex configuration
  - Sysplex-wide commands and results display
  - Command Log retained across IPL
  - Allows review of who took what action when (and the detailed results of each action)
  - Optionally view generated commands before issuing them
  - Actions include Rebuild, Duplex, Reallocate, CF actions, CF connectivity management, Couple Dataset Mgmt.
- **Sysplex CFRM Policy Editor**
  - Edits information about Sysplex CFRM policy including structure sizes
  - Policy actions – create, delete, rename, activate, copy
  - CF and CF structure definition, modify, delete, rename, copy
  - Bulk edit/modify of structures
  - Full referential integrity, health checking and best practices
    - Prevent mistakes rather than recover from them!
  - Replacing the need for IXCMIAPU batch utility
    - Co-exists and interoperates with IXCMIAPU batch utility
- Programmatic REST APIs: Copy, Rename, Delete, Changing CFRM Policy
- Import/Export of CFRM policy data and bulk copy of struct
- Exporting policies in CSV format and comparing policies after changes, and Policy Comparison

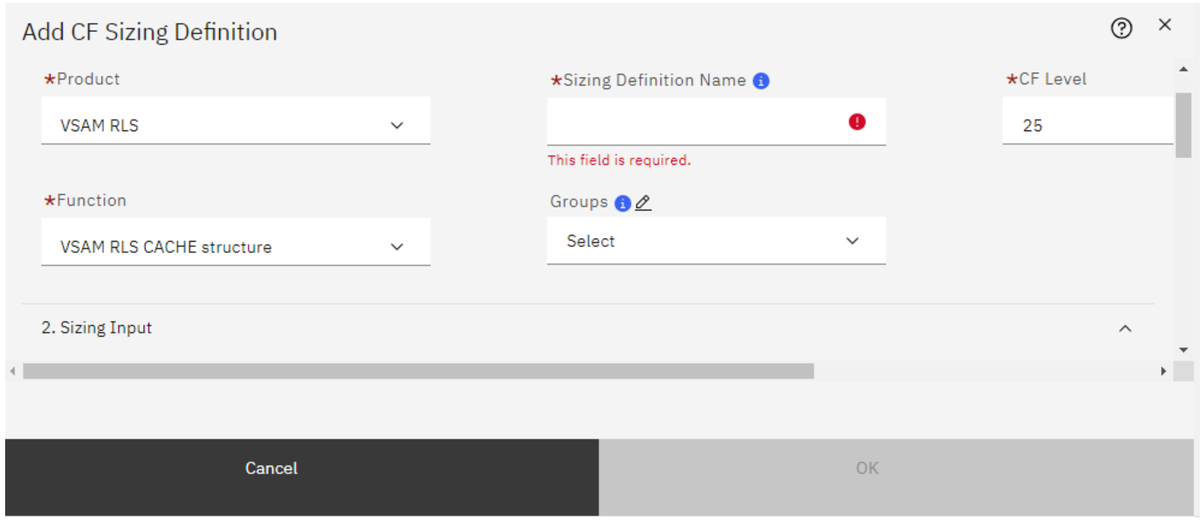
- CF Structure **Sizer** for re-sizing Structures
  - Retains CF sizing information for future use
    - Based on CF Level going forward, supp for **CFLEVEL26**

IBM intends to sunset the CFSizer web application in 4Q26.

IBM recommends that all CFSizer users transition to using z/OSMF for workload-based structure sizing.

Note: The sunset of the CFSizer web application will not impact the availability of the SIZER utility.



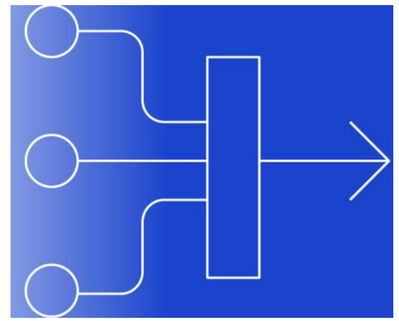


Usability & Skills

z/OSMF Software Management Installation of z/OS 3.2 ServerPac

- Uses a simplified web-based GUI replacing the ISPF CustomPac Dialog
  - Manages allocation and placement of data sets, cataloging, and deployment in z/OSMF Software Management
  - Customization and verification is done in z/OSMF Workflows
  - Data set merge and disconnect Master Catalog on driving system
  - Remove temporary catalog aliases are supported
  - REST APIs to run missing critical updates, missing FIXCAT updates, and software update search
    - Including support in the ibm_zosmf Ansible Collection.
  - A UUID fetchable from a running z/OS can be used to locate the corresponding SW Instance on an active system
  - **Support for new master catalog, and re-using existing user catalogs**.

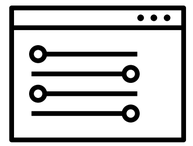
- IBM (and participating major ISVs) deliver z/OSMF Portable Software Instances as a common installation method for z/OS stack software.
  - IBM z/OS, IMS, Db2, and CICS Transaction Server and associated products, all can be installed with z/OSMF today. CBPDO remains available and is unchanged.
  - z/OS 3.2 ServerPac is only provided as a z/OSMF Portable Software Instance
    - z/OSMF is a driving system requirement for all IBM ServerPacs. (CD)



For more information, see the z/OSMF ServerPac content solution
Try a sample package to be familiar with the install, before you install any ServerPac. Earn a badge!.

Usability & Skills

Driving Software Updates with APIs - Wed 9:15am



z/OSMF Software Update

z/OSMF Software Update now supports three updated use cases for fixes: (CD 2Q24 (3.1) - PH58221)

1. **Install by name.** Install individual software updates to fix a problem.
2. **Install by Source ID**. Install a group of updates by their Source ID. All software updates that are recommended by software vendors are pre-selected.
3. **Install by Fix Category**. Install software updates to support new hardware, software, or functions identified with a SMP/E FIXCAT.

New Software Update REST APIs for z/OS 3.2 (CD 2025 (3.1))

Enable the automation of software update installations with a new set of REST APIs, as well as a new application link that can instantly start a software update install process for an identified PTF from an external application:

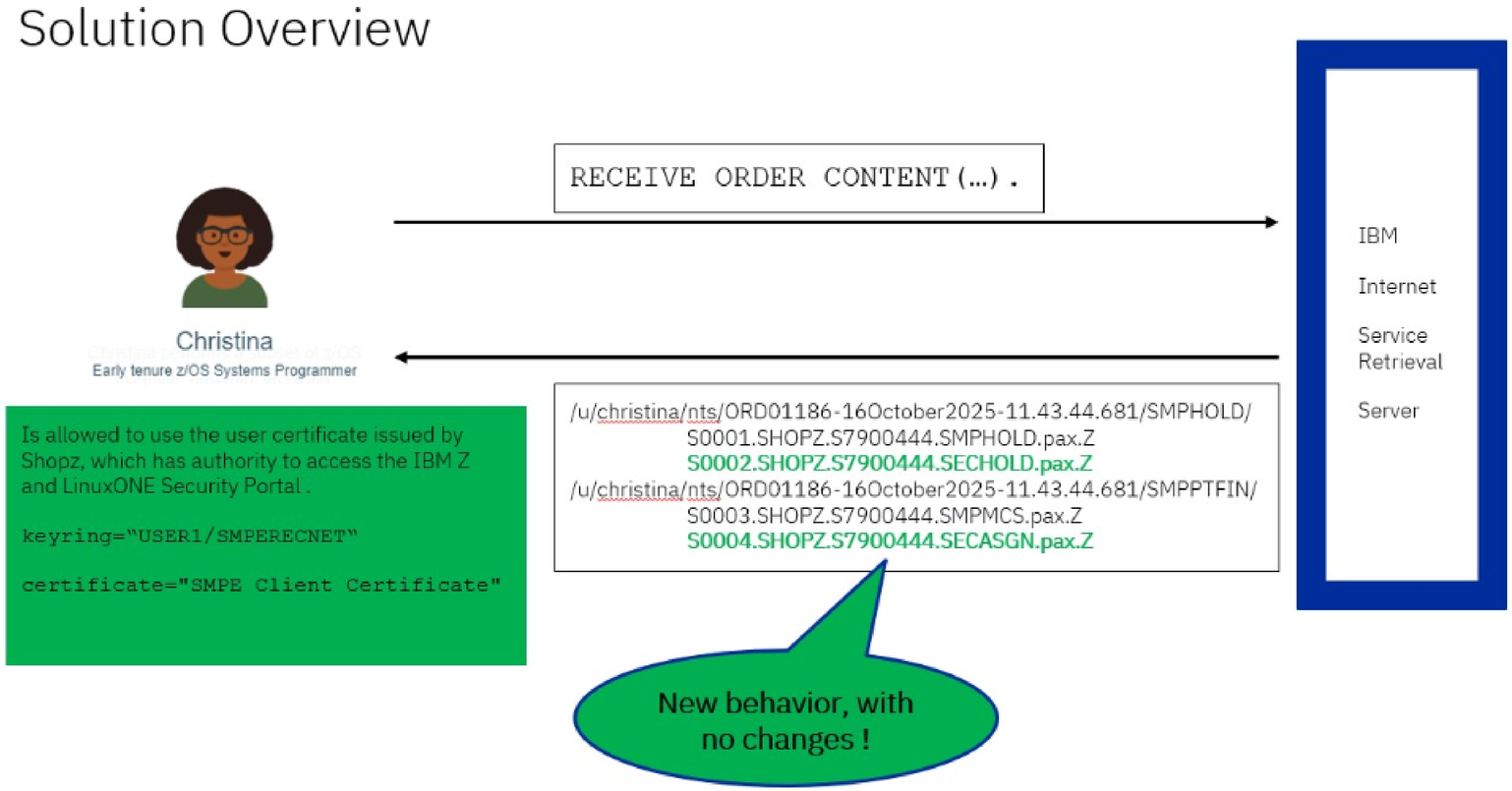
- **Start** a software update process
- **Retrieve** the status of a software update process
- **Resume** a suspended software update process
- **Cancel** a software update process
- **Copy** the output for a completed software update process
  - **Along with Ansible Galaxy and Red Hat Ansible Automation Hub support, including sample playbooks!**
  - A new REST API to query data stored in SMPCSI data sets has been introduced. (CD 2Q24 (3.1) - PH58221)

For more information about z/OSMF Software Update, including helpful instructions on how to get started, see the Software Update with z/OSMF content solution (https://www.ibm.com/support/z-content-solutions/software-update-zosmf/).

Usability & Skills / Security

Automated access to IBM Z Security Portal HOLDDATA (October 16, 2025)

- SMP/E RECEIVE ORDER requests sent to the IBM server will automatically include the “IBM Confidential” SECINT HOLDDATA and ASSIGN statements in the order content, if appropriate.
- Requires that the user submitting the request has access to the IBM Z and LinuxONE Security Portal
- See https://www.ibm.com/support/pages/node/7248201 for more information.

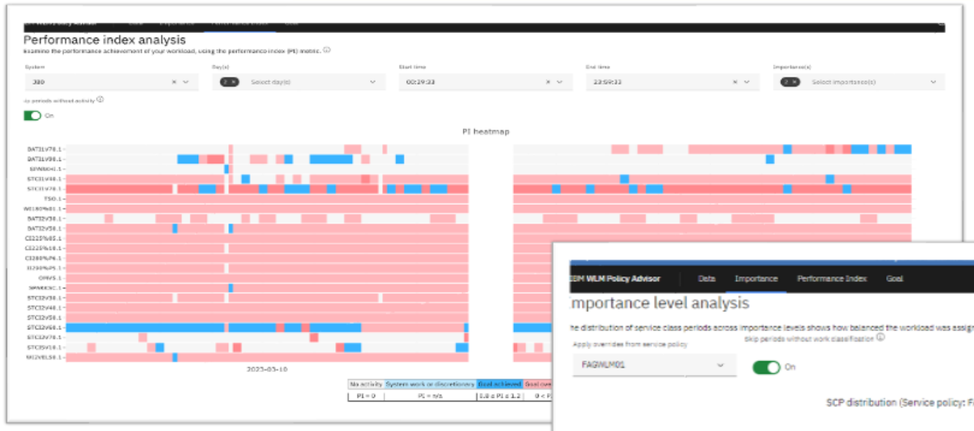


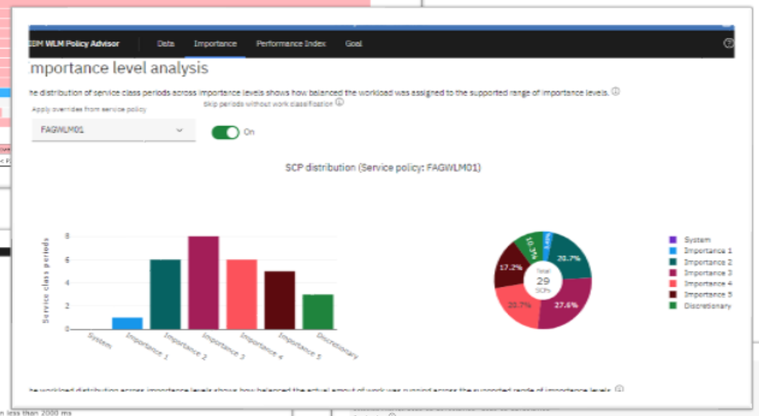
Usability & Skills

WLM Update for IBM z and IBM z/OS - SRM Lock Contention Relief and More - Mon 1:15pm

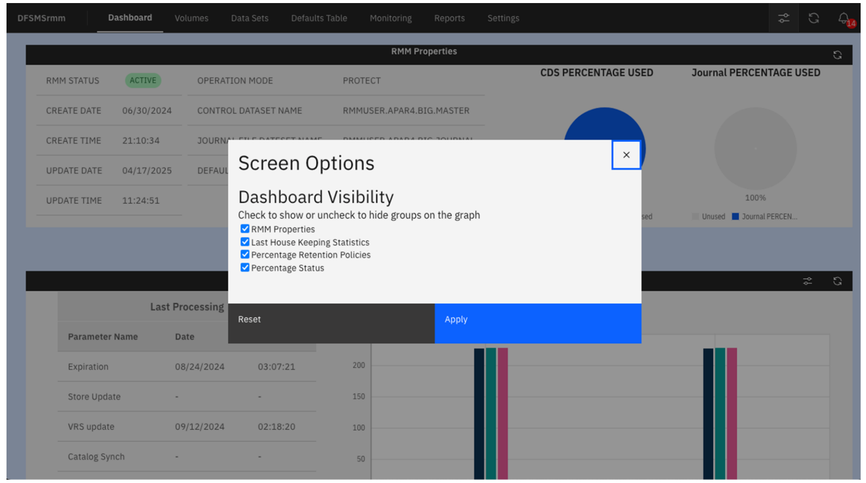
z/OSMF WLM Policy Advisor

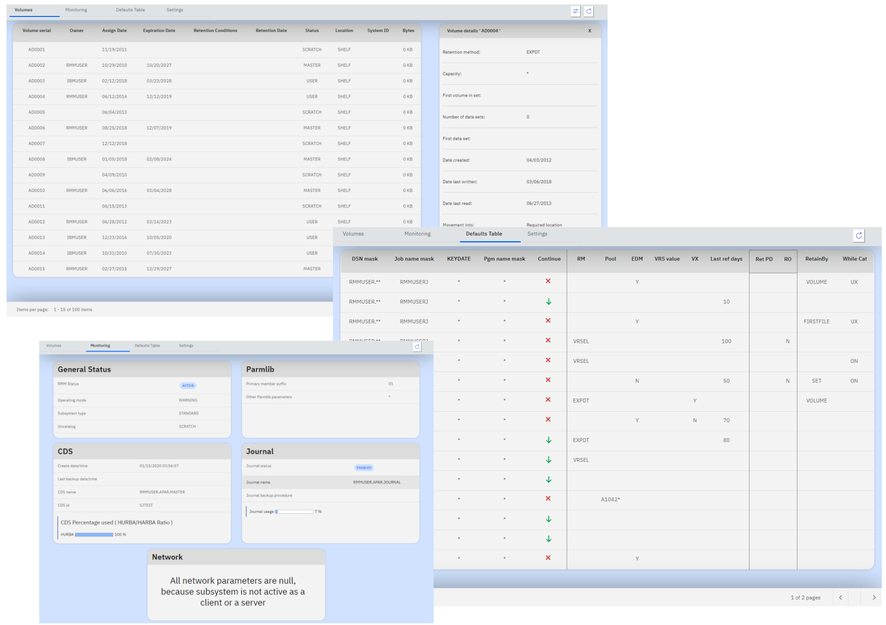
- Analyzes a WLM service definition that has collected SMF performance measurements while the service policy was active
- Presents miscellaneous graphics which compare the definition with actual performance data and gives advice on potential improvements for unfavorable goal settings.
- The task of setting up a WLM policy with a stringent set of goals and balanced importance levels gets less error-prone which will lead to improved system reliability and resilience.
- **New support includes searching for data sets directly from the interface, loading SMF data from multiple data sets at once, and a new overview page that outlines focal areas for further analysis.**





Usability & Skills (Data Serving and Storage)





DFSMSrmm z/OSMF plug-in enhancements

- DFSMSrmm (RMM) supports a modern graphical user interface via a z/OSMF plugin in addition to the existing TSO and ISPF dialog support.

Customizable, at-a-glance, Dashboard view.

- Provides information on the RMM address space and subsystem.
- Designed to reduce manual steps required to perform RMM management tasks.

Ability to generate, view, and download RMM extended reports based on shared templates.

- Brings an existing RMM feature panel to the z/OSMF plugin.
- Provides a modern, flexible interface designed for ease of use and to potentially save time when creating reports.

Usability & Skills

JES2 z/OS 3.2 Product Update and Latest - Wed 8am

Assembler Skills Reduction

- JES2 policy-based exit reduction
- Intended to provide a non-assembler facility to *extend* JES2
  - Can be mixed with traditional JES2 exits
- Support for
  - Job input is new (approximately exit 20/50)
  - Pre conversion
  - Post conversion (approximately exit 44)
  - Sysout Group (approximately exit 40)
  - **JCLEvaluation –visibility to job's key JCL statements**
- Predicates and actions
  - Ability to access symbols during input processing
  - Ability to use system symbols in JES2 policy
  - **Ability to write messages to the job's JCLIN data set**
  - **Additional attributes and actions**

```
{ "policyName": " JINPUT1 ",
"policyVersion": 1,
"policyType": " JobInput ", /* at the end of input phase*/
"definitions":
[   /* if the estim # of spool bytes is > 9999k */
    { "condition" : " EstByteNum > 9999 ",
        "actions" :
            [
                {"action" : " modifyJob ",  /* modify the job */
                 "attribute" : " EstByteOpt ",
                 "value" : "'CANCEL'" /* cancel it …. And …   */
                },
                {"action" : " SendMessage ", /* send message */
                "message" : " 'Job ' || JOBNAME || ' will be canceled' "
                }
.....
```

- Policy files are release-neutral and do not require change during release or service upgrades (no reassembly required)
  - Dynamically enabled – Changes can be applied and removed while JES2 is running
  - Policies generally apply across the JESplex

Table of Contents

Scalability & Performance

Data Gatherer – base function in z/OS

- Enhancements to Data Gatherer
  - Access to Monitor III data is now available via z/OS Data Gatherer Monitor III REST services.
    - Applications can retrieve Monitor III data from a VSAM data set for local in-storage buffer via HTTP REST calls. (CD 4Q24 (3.1) - OA65072 & PH60122)
- z/OS OpenTelemetry Emitter function enables emission of OpenTelemetry distributed tracing from IBM CICS Transaction Server for z/OS, IBM IMS, IBM Db2 and IBM MQ for z/OS.
  - Using a suitable observability backend such as IBM Instana, you can now view application flows and topologies as they traverse systems on premises and the cloud to spot and alleviate problems before they escalate. (CD 4Q25 (3.1) - OA66345)
  - Find exploiters using SMP/E FIXCAT IBM.Function.OpenTelemetry

DFSMS Optimization Mode for Data Set Copy (CD 1Q25 (2.5) – OA63434)

- Performance improvement in copying encrypted data sets without having to decrypt/re-encrypt or uncompress/re-compress
  - Applies to VSAM-encrypted and sequential encrypted extended format data sets
  - Requires source and target to have the same keylabel and data set attributes
- Performance improvement in copying compressed data sets
  - Applies to sequential extended format BSAM data sets
  - Requires source and target to have the same compression type and data set attributes
- IDCAMS REPRO is initial exploiter

Scalability & Performance

New WLM Health Check

- Helps to ensure workload meets its defined Service Level Agreement (SLA)
  - The health check continuously monitors the CPU consumption in service calls SYSSTC
  - If the workload exceeds predefined thresholds, issues a warning message and reports the 5 highest CPU consumers in service class SYSSTC.

```
SDSF OUTPUT DISPLAY WLM_SCLASS_SYSSTC              LINE 0       COLUMNS
COMMAND INPUT ===>                                            SCROLL ==
********************************* TOP OF DATA ***********************************
CHECK(IBMWLM,WLM_SCLASS_SYSSTC)
SYSPLEX:     UTCPLXCB  SYSTEM: CB89
START TIME: 08/11/2025 10:05:55.815223
CHECK DATE: 20240425  CHECK SEVERITY: MEDIUM-DYNAMIC
CHECK PARM: THRESHOLD_LOW(20%),THRESHOLD_MED(40%),THRESHOLD_HIGH(60%)


IWMH103I CPU consumption in SYSSTC service class is 1%. The low
threshold of 20% is not reached. No action is required.

END TIME: 08/11/2025 10:05:55.815262  STATUS: SUCCESSFUL
******************************** BOTTOM OF DATA *********************************
```

Table of Contents

Availability

z/OS BCPii automatically reestablishes lost communication (CD 3Q24 (V2.5) – OA62934)

- More pro-active in reestablishing lost communication with a monitored CPC.
  - In addition, BCPii will issue console messages when it loses communication with a CPC, re-establishes communication with a CPC, or has stopped attempting to regain communication with a CPC.
- This enhancement also delivers support for a DISPLAY BCPII system command that can be used to obtain the current communication status between BCPii and available CPCs.

z/OS BCPii Async Event Support for HWIREST and HWIREST2 APIs

- Support for listening for unsolicited events in the HMC network like legacy HWIEVENT service, but using the newer BCPii REST APIs
- Response in ENF68 exit in JSON format

Test Unplanned PPRC Suspension Events for HyperSwap

A new command, SETIOS HSWAP,FREEZE is provided to freeze a PPRC pair in the HyperSwap configuration

- Simulates a PPRC mirroring disruption by raising a suspension event, which is a Freeze Trigger
  - Avoids the complexity of having to block ports or force errors, and avoids the risk of accidentally affecting a non-HyperSwap managed PPRC pair
  - This is now the recommended way to test Consistent Freeze processing
- Works for both z/IOS HyperSwap or GDPS Metro.

Availability

System Recovery Boost – System and select potentially disruptive process acceleration

- System Recovery Boost initially provided recovery acceleration via additional processor capacity and parallelism, but only during image-level events like image Shutdowns and re-IPLs
  - IPL and image Shutdown (***configuration required***) boosts
    - Speed boost (subcap GPs running at fullcap speed) and/or zIIP boost (selected GP workload made eligible to run on zIIP processors) and GDPS acceleration
    - 60 minutes of boost at IPL and up to 30 minutes of boost at image shutdown
  - Recovery process boosts for smaller-scope boosts such as occasional sysplex recovery activities
    - Boosts automatically initiated when these recovery events occur
    - And on the relevant set of systems in the sysplex where the recovery is taking place
    - Short-term boost periods (from one to several minutes), limited in total amount (up to 30 minutes per LPAR per day)
- Recovery process boosts for z16 and above include:
  - **Middleware start-up boosts** for policy-selected STC middleware – ***configuration required***
  - **SVC Dump boosts** for selected dumps based on dump size – ***configuration required***
  - **Hyperswap® configuration load and reload**
  - **Dynamic I/O Activation processing for large I/O changes** (CD 2Q25(3.1) - OA66837)
- All with no planned increase in IBM software licensing costs!
- New z/OS 3.2 SRB enhancements include:
  - Improved SRB messages and SMF 90, subtype 40 records to document the z/OS produced step and program that received the middleware startup boost
  - Improved SMF type 89 records documenting the total recovery process boost duration
  - Improved processing for transient boots zIIP proessors when zIIPS are explicitly configured online during a boost (along with an API to support identification of any transient boost zIIPs

For more information see the Systems Recovery Boost Content solution (https://www.ibm.com/support/z-content-solutions/system-recovery-boost/).

Summary: z/OS System Recovery Boost

Aug 11, 2025

Boosts are: 1.Speed: subcap can run fullcap 2.zIIP: allowing workload onto zIIPs On by default in IEASYSxx BOOST=SYSTEM	SMP/E FIXCAT IBM.Function.SystemRecoveryBoost										
	z16 and z17										
	z15							z16 and z17			
	System Recovery Boost			Recovery Process Boost* at MCL P46602.005 for IBM z15 Driver 41C (Bundle S29)				Recovery Process Boost*			
	IPL Startup	Standalone Dump (no zIIP boost)	Shutdown	Sysplex Partitioning – planned or unplanned removal	CF Structure Recovery – rebuild or duplex	CF Datasharing Member Recovery-disconnect or failure from locking resources	Planned/Unplanned HyperSwap	SVC Dump	Middleware start/restart	HyperSwap configuration load	Dynamic I/O Activate
Intended Duration	60 min	60 min	30 min	2 min	1 min	1 min	2 min	2 min	5 min	2 min	2 min
Basis of use	Auto	Auto	S IEASDBS	Auto	Auto	Auto	Auto	CHNGDUMP SET,SDUMP, RPBMINSZ threshold	WLM service definition BOOST attribute	Auto	Auto, limited to larger I/O changes on systems with smaller number of CPs
Boost scope	System	System	System	Systems participating in removal	Systems participating in recovery	Systems participating in recovery	Systems participating in HyperSwap	System	System	Systems affected by configuration load	System(s) affected by the hardware I/O change
z/OS 2.3	PTF	PTF	PTF	PTF	PTF	PTF	PTF				
z/OS 2.4	PTF	PTF	PTF	PTF	PTF	PTF	PTF	PTF	PTF	PTF	
z/OS 2.5	PTF	PTF	PTF	PTF	PTF	PTF	PTF	PTF	PTF	PTF	
z/OS 3.1	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	PTF
z/OS 3.2	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

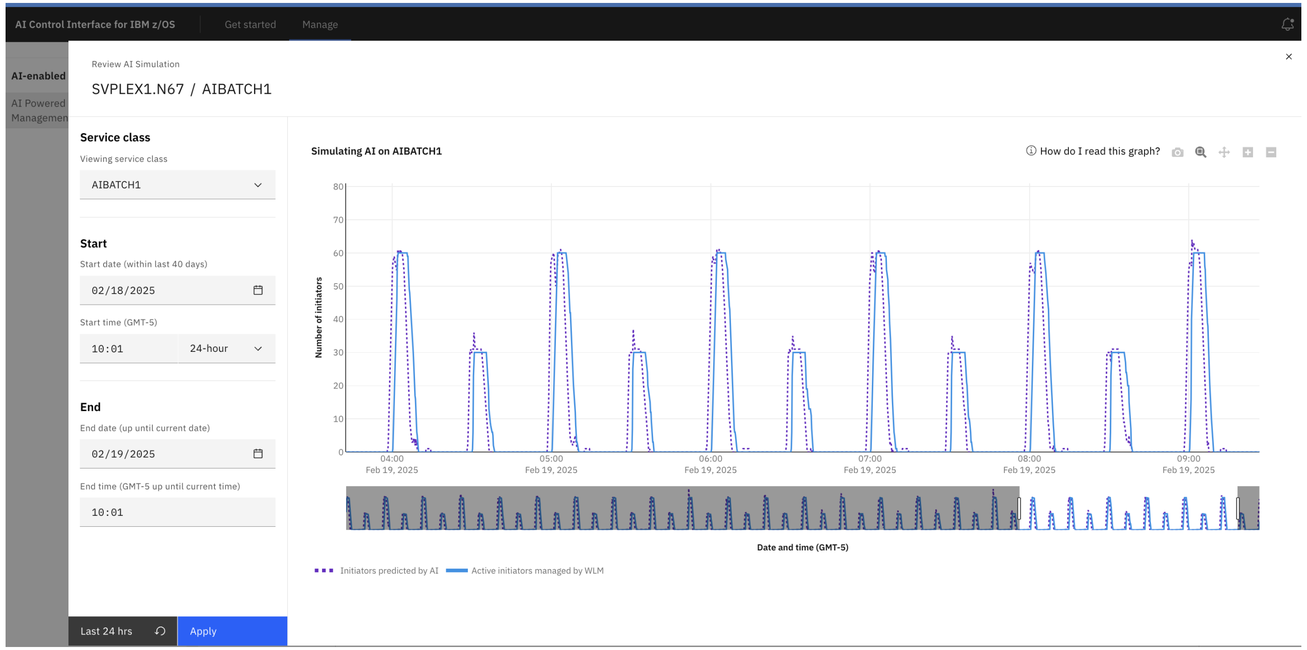
*Recovery Process Boost limited to 30 min per day per LPAR in aggregate. In V2.4 and higher, can be enabled or disabled with S IEASRB,CLASS=RP,REQ=DISABLE|ENABLE
New SMF 70-78 record interval at boost start and stop, on boosted systems. Flag in 70.1 for other LPARs on machine with boost period. SMF 90.40. contains the type of boost for the system..
GDPS provides configuration and orchestration parallelization in GDPS V4R2 and higher.

Table of Contents

Systems Management – AI-infused z/OS Use Cases

AI-Powered WLM

- AI-powered WLM batch initiator management.
- AI is used to predict workload spikes based on the client's unique historical data
- Optionally can proactively adjust the number of WLM-managed batch initiators before the demand has
  even occurred.
- New pattern prediction of job service unit consumption is integrated into the model, allowing initiators to be started even faster and still ensure stable system utilization



AI-Powered Network Packet Batching (CD 4Q25 (3.2) - OA67784, PH66976, PH67238, and PH67239)

- Optimizes the batching of TCP/IP packets sent out at one time to provide a better balance of transactional latency and network CPU overhead than previous non-AI methods
- Works with the OSA (initially OSD) network

AI Infused z/OS: Overview and Updates - Thurs 9:15am

Systems Management – AI-infused z/OS Enhancements

AI Framework for IBM z/OS Configuration Workflow

- Configuration for the AI Framework for z/OS made easier using updated z/OSMF workflow

AI System Services for IBM z/OS 1.2 [5655-164]

- No-charge bypassable requiste bunding including
  - Machine Learning for IBM z/OS 3.2 Core Edition with new functionality
  - IBM Z Common Data Provider, supporting AI infusion into z/OS base components only
- Delivers support of key AI lifecycle phases including data ingestion, AI model training, inference, AI model quality monitoring, and retraining services.

AI Base Component for IBM z/OS (AIB)

- Supports communication between core z/OS components and the Machine Learning element.
  - AIB now registers with Automatic Restart Manager, allowing failed AIB instances to automatically restart
  - Enhanced for greater reliability, availability and serviceability
  - Improved CTRACE helps facilitate troubleshooting (CD 4Q24 (3.1) – OA66203)

z/OSMF AI Control Interface (AICI)

- Client interface to interact with the AI Framework for z/OS including pointing framework to training data, kicking off training and visualization
- Enhancements made to AI-Powered WLM use case to visualize number of active batch initiators managed by WLM vs. the number predicted by AI in simulation mode

AI Infused z/OS: Overview and Updates - Thurs 9:15am

Systems Management

IBM SMF Explorer with Python

Data access/analysis toolkit designed to help access SMF data and extract insights in an easy and modern way

- Leverages state-of-the-art technologies like Jupyter Notebooks and Python
- Understand, interpret SMF data and unlock value from it, even with limited z/OS skills
- Additional capabilities to support SMF type 30 records that include information related to address spaces' and jobs' activities.
- New support to be able to run in z/OS UNIX, which better facilitates analysis for clients for prefer that their system data remains on z/OS
  https://ibm.github.io/IBM-SMF-Explorer/
  Hot Topics Blog - How to turn your SMF data into valuable insights without z/OS expertise

Auto-tuning for I/O Processor Configuration

- IEAOPTxx parmlib member's CPENABLE parameter is now recommended to take the default value, allowing the system to best choose the number of I/O-enabled processors
- A new healthcheck will now trigger of the CPENABLE value is not set to the IBM-recommended value
- Client no longer need to tune this parameter

Systems Management

JES2 z/OS 3.2 Product Update and Latest - Wed 8:00am

New way of allocating JES2-managed data sets on the JES2 spool

- SPOOL data set browse allows a DYNALLOC to access any JES managed DS
  - Currently requires writing a program to do a dynamic allocation with a special TU
- Support added to allow specification of SUBSYS= on JCL DD statement
  - Simplifies accessing JES2 managed data sets from JCL (no program needed)
  - Specify JES2 subsystem where allocation is to be done
  - Option ACTIVE=YES|NO controls accessing in storage buffers

Example: A JESMSGLG (job log) data set (where, DSN was copied from SDSF)

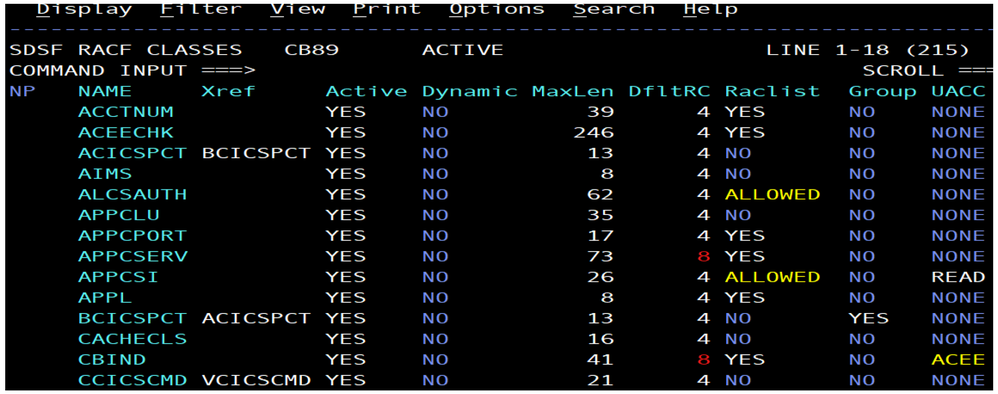
```
//SYSUT1   DD     DSN=IBMUSER.IBMUSERS.JOB00021.D0000002.JESMSGLG,
//             SUBSYS=JES2
```

Systems Management

What's New in SDSF in z/OS 3.2 - Tues 3:45pm

SDSF – System Display and Search Facility Priced Feature

- SDSF programming language extended with pySDSF
  - Python interface to common SDSF functions and data, such as:
    - Browsing SYSOUT data sets for an active job
    - Retrieving active user or job status information
    - Reading OPERLOG or SYSLOG
    - Issuing commands
- Additional panels to display additional RACF information
  - New RACF displays including logged events from SMF-80 records (RLOG), active RACF data bases, and RRSF information
  - Extending the module fetch monitor to track the action of loading modules from z/OS UNIX paths
- New Device Space panel (DEVS) showing both SMS and non-SMS DASD volumes, including statistic and VTOC
- New z/OS Functional Registry panel reports on products leveraging the FR showing product info and functions.
- SMF displays enhanced to include SMF log stream and in-memory resource information
- Other new panels display:
  - JES2 resource usage summarized by owning userID
  - Catalog information
  - Address space summary by WLM class
  - 64-bit common memory object
  - Network activity by port number
  - z/OS UNIX process threads
- SDSF user profiles can be optionally stored in the z/OS UNIX file system, allowing SDSF to save criteria larger than what can fit in traditional ISPF profiles.



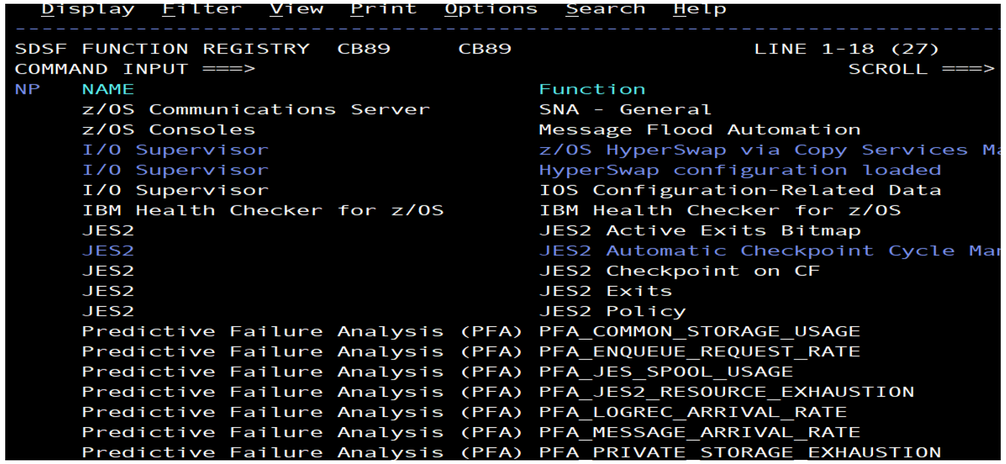


Table of Contents

Networking

z/OS Communications Server Technical Update: Winter 2026 Edition - Mon 10:30am

z/OS Encryption Readiness Technology (zERT)

- zERT Network Analyzer, a z/OSMF plug-in, that provides an easy-to-use web UI for analyzing zERT data reported in SMF 119 subtype 12 records
  - Significantly improves Time-To-Value of gaining insights into zERT data and driving a Pervasive Encryption strategy for all z/OS network communications
  - **With z/OS 3.2, the zERT Network Analyzer streamlines its Db2 for z/OS database access by using multiple commit points for import and provides a configurable JDBC collection ID to use when binding Db2 for z/OS packages**

- zERT distinguishes between TLS/SSH and unprotected connections
  - Provides all the information required to ensure network traffic is protected per network policy.

- zERT support for new SSH cryptographic attributes
  - New SSH key exchange methods and new SSH key types supported in TCP/IP (CD 1Q24 (3.1) – PH58110)
  - zERT Network Analyzer recognizes new attributes (CD 1Q24 (3.1) – PH58105)
  - zERT Policy Enhancement and Network Configuration Assistant recognize new attributes (CD 1Q24 (3.1) – PH57412)

Networking

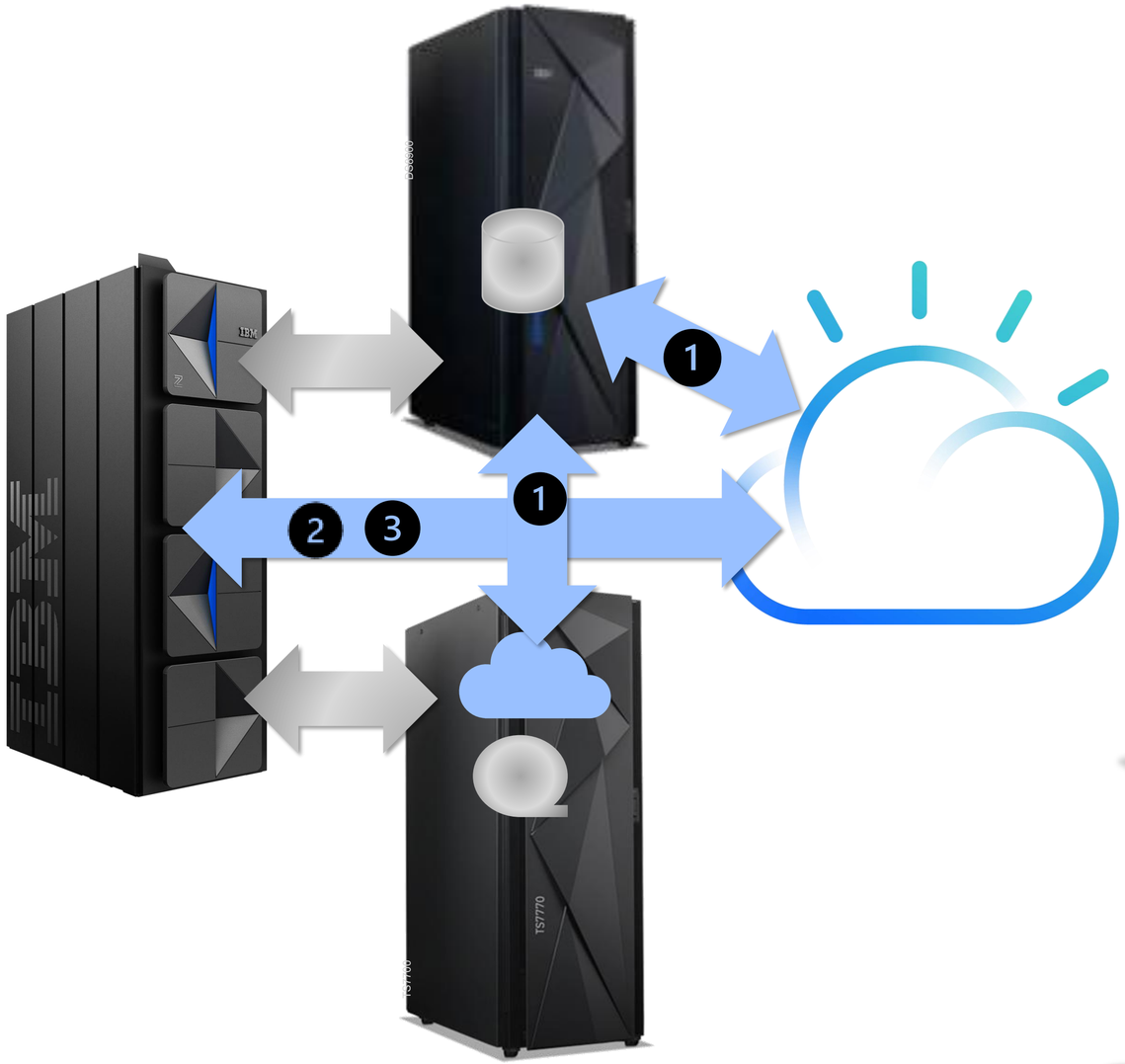
SSMTP Client Authentication support for CSSMTP (CD 1Q25 (2.5) – PH61015)

- CSSMTP, the z/OS email client, now supports the SMTP AUTH command
- Allows mail servers to authenticate the originator of email
- Allows interoperability with mail servers requesting client authorization.
- Helps ensure regulatory compliance

Table of Contents

Data Serving and Storage

What's new in DFSMS - Mon 2:30pm



Cloud Storage

z/OS clients are integrating cloud object storage into traditional disk and tape environments to create a hybrid storage architecture that enables clients to leverage the strengths of on-premises disk and tape storage while adding the intrinsic strengths of cloud solutions for backup, archive, and unstructured data to enable new use cases, increase business agility, reduce the complexity of storage environments, and provide cost optimization.

There are *several* existing DFSMS™ Solutions that leverage Cloud Object Storage …

Serverless Data Management

- DS8900 Transparent Cloud Tiering (TCT) and TS7700 DS8000® Object Store enable DFSMS backup and archive to be performed with *none* of the data passing through z/OS, *minimizing MIPS*

Store Application Data Directly

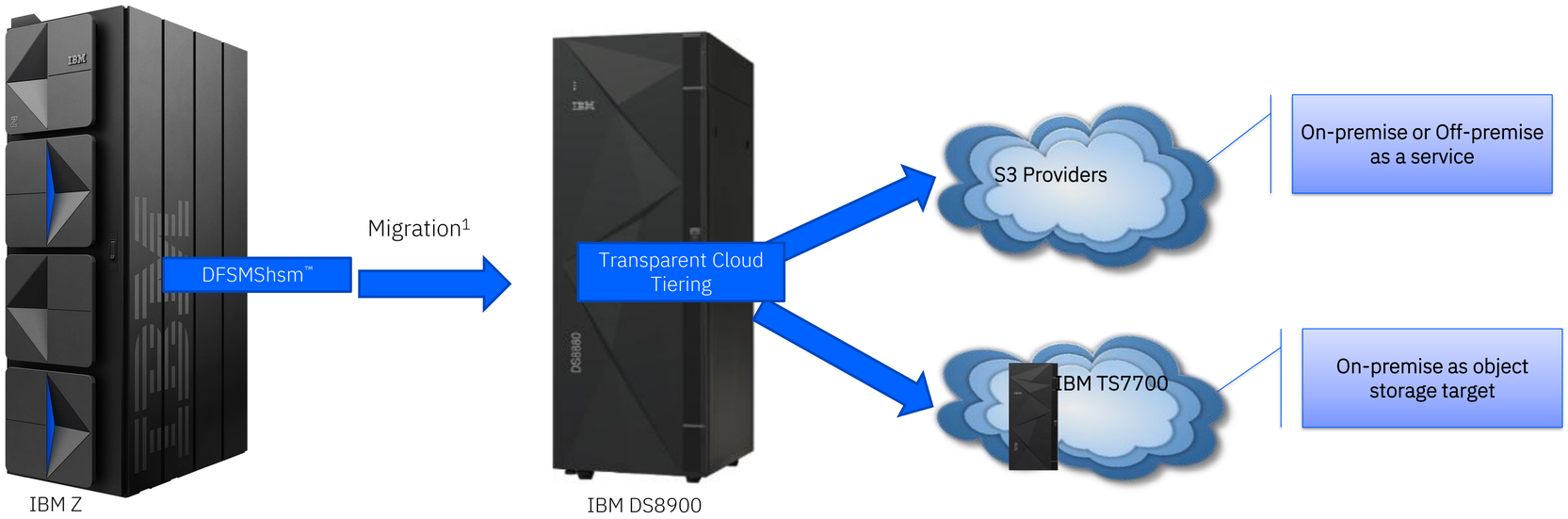
- 2 OAM stores and manages unstructured data as objects to public, private, or hybrid cloud infrastructures
- Cloud Data Access will provide a simple method to store any z/OS data directly onto cloud object storage

Data Serving and Storage

Transparent Cloud Tiering improves business efficiency and flexibility while reducing capital and operating expenses with direct data transfer from DS8900 to hybrid cloud environments for simplified data archiving operations on IBM Z.

Transparent Cloud Tiering

- Off-loads data movement responsibility to the DS8900 avoiding the need for additional HW infrastructure.
- Dramatically reduces CPU resources to be efficiently used in other business-oriented applications.
- Saves z/OS MIPS utilization by eliminating constraints tied to original tape methodologies:
  - 16K Block sizes, dual data movement, recycle, serial access to tape
- In conjunction with hardware DS8000 R9.4, now supports TLS 1.3 for faster and more secure handshakes (CD 4Q24 (3.1) – OA66407, OA66413, OA66414, OA66415, OA66416, OA66412)

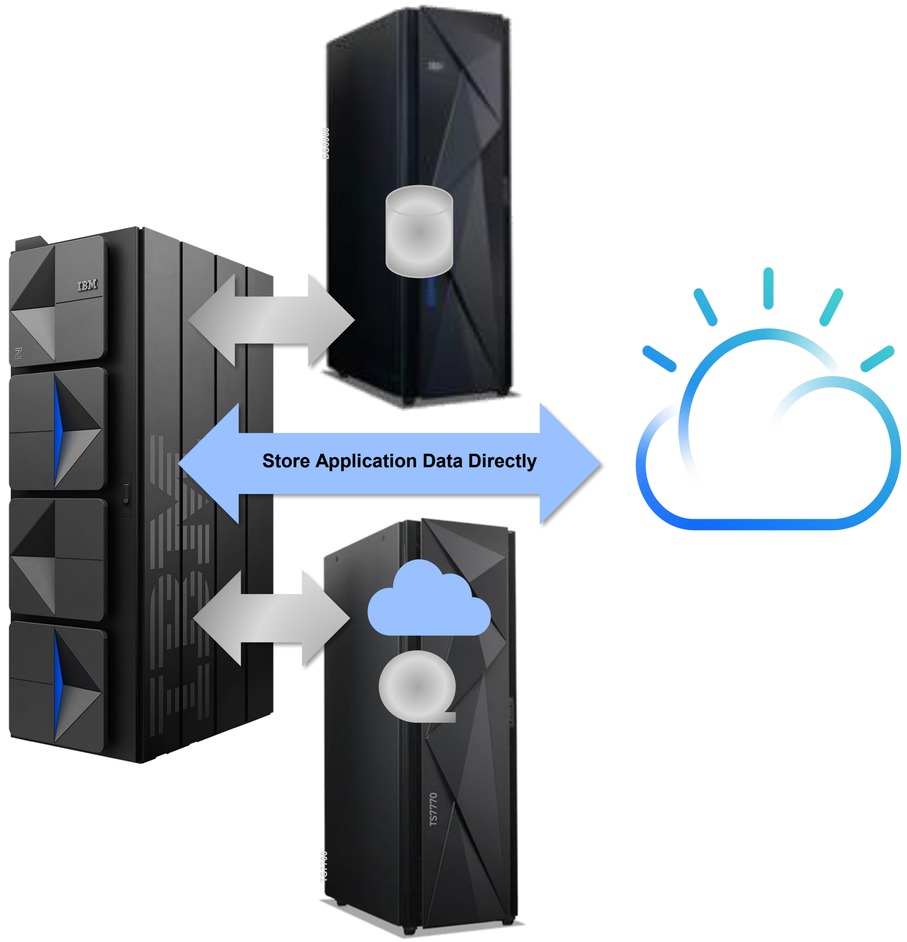


[1] Migration based on age of data

Data Serving and Storage

Cloud Data Access

- Provides a simple method to store and share any z/OS data directly onto cloud object storage.
  - Enables S3 / Cloud Object Storage as another tier for z/OS applications.
  - Simplified data sharing – reduce and/or eliminate ETL.
  - Simplified application development and flexibility with a single API to interact with various Cloud Object Storage providers.
  - Simplified authentication with the Provider Configuration File describing the target Cloud Object Storage provider.
  - Supported cloud providers include IBM Cloud® Object Storage, Amazon Simple Storage Service (Amazon S3), Azure Blob Storage, and Google Cloud Storage. (Azure support also available on 2.5 CD 1Q24 - OA65925)
  - Ensure the validity of the data being sent to an S3 Cloud provider attributes (CD 3Q24 (V2.5) – OA65989)
    - This enhancement will add a new key:value pair to the operation in a provider file of "signedPayload": "true" to indicate that that operation should use the signed payload support on the request.
  - Data compression support – allows data to be compressed before storing to cloud object storage and automatically decompressed after retrieving it (CD 1Q25 (3.1) – OA66536)
    - Can specify to use zEDC or gzip compression



Data Serving and Storage

Unlocking a New Era of z/OS Storage with Cloud Object Integration - Tues 2:30pm

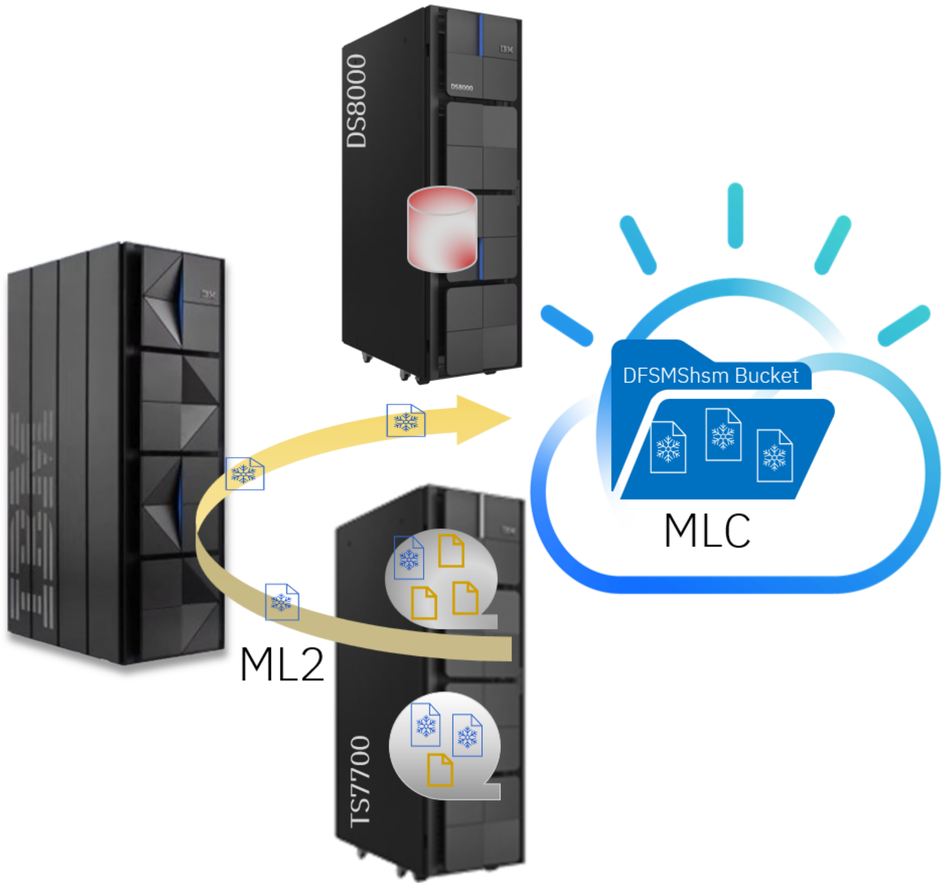
Cloud Data Access (continued…)

- If the local data set does not exist in the z/OS Catalog, CDA dynamically creates the local data set based on the metadata tags associated with the cloud object
- Enables more types of sequential data sets to uploaded or downloaded from cloud object storage
  - DSS backups, VSAM data set types Entry Sequenced Data Sets(ESDS) and Key Sequenced Data Sets (KSDS)

Cloud Data Manager (DFSMScdm) – [5698-CDM]

- Manages object storage data and provides z/OS Governance of z/OS data on the cloud
- 3 main functions:
  - **Summary** - Reads the entire HSM Migration Control Data Set giving the user an overall summary of cold HSM data
  - **Simulate** - User creates manageable and trackable groups of data sets to be re-migrated to the Cloud
  - **Migrate** - Uses the migration groups created by Simulate to allow for an orderly re-migration of data sets, including tuning parameters to reduce or prevent impact on production HSM

DFSMScdm Use Case



Data Serving & Storage

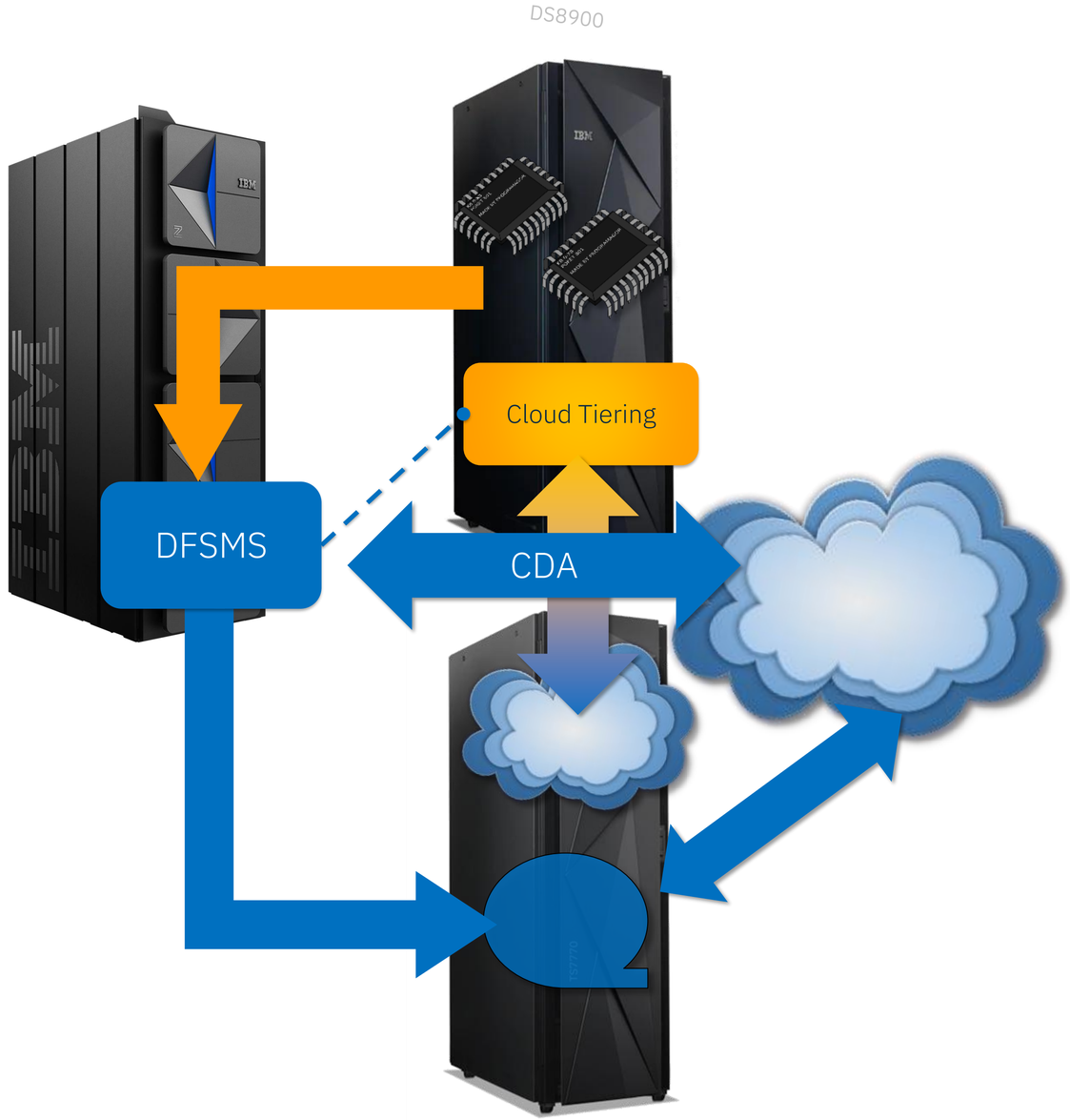
Cloud Storage Access for z/OS

- Cloud object storage enables a low-cost storage tier that's easily accessible and provides a simple mechanism to share data.
- A utility, GDKUTIL, can download or upload between cloud objects and z/OS using S3 APIs.
  - Supported data set types include UNIX files, sequential data sets, PDS or PDSE members, or GDG versions.
  - Can be invoked through JCL.
  - Data can be converted from EBCDIC to UTF-8 on upload, and from UTF-8 to EBCDIC on download commands.
  - Quick-Start Guide provided to help with initial configuration.
- Allows specification of metadata to be associated with the Cloud Object on an UPLOAD command with a new keyword, METADATA(<dd_name>) (CD 4Q23 - OA64874)
  - Specifies the DD name containing the key:value pairs that should be sent to the Cloud Object server for association with the object.
  - GDKUTIL LIST command can be used to display the metadata associated with a specified object.
- **Data Compression support** – GDKUTIL enhanced with new compression keyword for UPLOAD to specify either zEDC or gzip compression (CD 1Q25 (3.1) – OA66536)

Data Serving & Storage

DSS DUMP and RESTORE Leverage CDA (CD 1Q25 (3.1) – OA66450, OA67394)

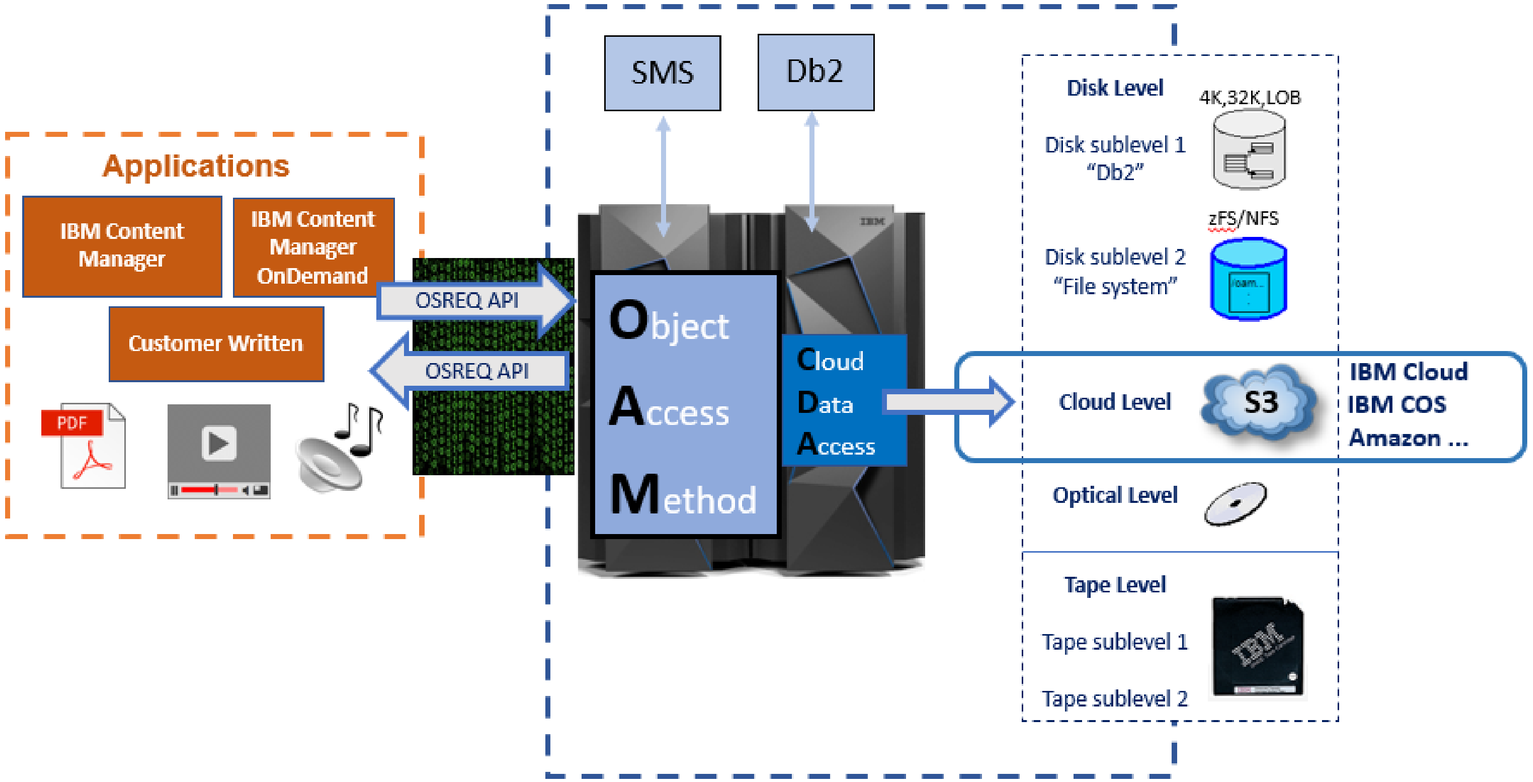
- Leverages CDA to target Object Storage directly
- Storage vendor agnostic solution
- Supports full range of CDA cloud providers
  - Allows storing to any CDA-supported public cloud or your own by specifying a CDA cloud provider file
- More flexibility, but it uses IBM Z CPU to perform the data movement
- Data compression support – cloud object storage backups can support zEDC



Data Serving & Storage

Object Access Method (OAM) REST APIs

- New REST API interface allows distributed applications to now access existing OAM-managed data on z/OS
  - Provides alternative to existing assembler APIs to access the data



Data Serving & Storage

Data Set File System

- File system type that allows customers to access data in data sets from the z/OS UNIX space.
- Enables z/OS UNIX applications, tools, and utilities to use data in data sets in a secure and consistent manner.
- Supports Sequential, PDS, PDSE data sets; RECFM = F, FB, FBS,V, VB,U
- Compressed or encrypted data sets are also supported
- Existing cataloged data sets (DASD) can be read and written.
- UNIX file extended attributes utilized to represent data set characteristics (e.g. data set type, name, LRECL, RECFM, etc..) (CD 1Q24 (2.5) – OA63902)
- Direct access to jobs on the JES Spool (CD 1Q24 (2.5) - OA65560)
- Support for migrated data sets (CD 1Q24 (2.5) – OA63902,OA65560)
- Data Set File System can also create new data sets or delete a data set or PDS / PDSE member.
- Data set serialization is consistent with serialization done by ISPF edit.
- Access to a data set is governed by user permission to the data set - UNIX permissions are **not** used.
- User needs to know the type of data that is in the data set in order to use it under z/OS UNIX.
- Support to allow specification of multiple data set qualifiers for the HLQ directory - useful to reduce scope of data sets being accessed by DSFS (CD)
- New optional z/OSMF Portable Software Instance Configuration support
- Use case scenarios: **grep** to search for things in data sets, **vi** to edit data sets, **sftp** data sets

Network File System (NFS) Support for Non-Interactive Login

- Does not require the specification of a password on the command line
- The mvslogin command can now load login information from netrc files or do a password-less certificate-based login using x509 certificates

NFS Unmounting Enhancements

- z/OS NFS now allows the unmounting of mountpoints on a per NFS client basis

Data Serving & Storage

zFS Health Check and Conversion Utility (CD 1Q24 (2.5) – OA63911)

- Two new zFS health checks now support the ability to tune and configure z/OS UNIX file systems to prevent outages and failures
  - ZFS_CACHE_PERFORMANCE
    - Reports when the zFS file cache hit ratio or meta cache hit ratio are low
  - ZFS_EXCEPTIONS
    - Detailed file system information for mounted zFS file systems that have one or more exception states such as Low on Space, Disk I/O error, XCF communication error and much more
- New conversion utility to help customers migrate their zFS directories from V4 to V5, which provides better performance characteristics

z/OS UNIX File System Health Checker (CD 1Q25 (2.5) – OA67191)

- A new z/OS UNIX file system health check to help with best practices in configuration of file system and directory structure
  - Works in both single system and share file system environments

Enhance internal space management in PDSE to prevent out of space on member deletion

- After 3.2, PDSE member will not be added, unless it can be removed
- Possibly, will need a larger PDSE *at most* one more time on 3.2 only, then no more out-of-space errors on delete

Table of Contents

Security

RACF Update: z/OS 3.2 and More! - Thurs 9:15am

RACF userID Containment

- An extension of userID revoking, where work already in progress continues to function.
- Provides quarantine functionality, where SAF calls made on the user's behalf will fail.
  - With a unique reason code, console message, and SMF 80 Event Code 92 record.
- Used to limit a userID authority that is still currently logged onto the system, rather than just limit the ability of the userID to logon again

RACF Password Envelope Support

- Allows enterprises to synchronize password and passphrase changes across the enterprise
- Supports stronger quantum-safe signing and encryption algorithms for these envelopes

RACF Password Phrase Self-Service (CD 4Q25 (3.1) – OA68301)

- Provides easy transition from password to passphrases
- RACF allows end-users to assign themselves their initial password phrase while authenticating to a z/OS application with their password.
- No security admin intervention required to assign an initial secure phrase and securely communicate this to their end users.

Security

RACF optional phrase syntax rules (CD 4Q25 (3.1) – OA67750, OA67751)

- RACF allows the built-in password phrase syntax rules to be selectively bypassed, allowing you to enforce a consistent set of password quality rules across the entire enterprise.

RACF certificate support for multiple altnames

- Was a significant pain point for clients using digital certificates in RACF.
- Reduces the security administrative overhead of securing internet entities with certificates generated using RACF
- Certificates with multiple altnames can be used to secure connections to a server which can be reached through multiple access methods or addresses.
  - RACDCERT now allows for multiple altnames to be included in certificates it generates.
  - Also allows for multiple altnames to be listed from certificates from external providers.

Security

RACF Resiliency Enhancements

- Provides a sample to recover RACF commands from SMF 80 records
  - Can be used in recovery scenarios to bring an offline backup RACF database up-to-date
- Provides mitigation for cases when operator prompt is necessary to change the state of the db.
  - RVARY is enhanced to:
    - Check OPERCMDS class whenever possible, even sometimes when the RACF database is inactive
    - If OPERCMDS is unavailable, or the user is unauthorized, RACF falls back to the existing user prompt

RACF Constraint Relief

- Enhancement made to DIAGxx parmlib member to direct RACF to allocate 3rd-party ACEEs in 31-bit memory, providing 24-bit constraint relief
  - Requires client to verify that AMODE24 apps or exits reference the ACEE3PTY field
- RACF subsystem now uses REUSASID=YES on its internal start so that the ASID is reusable when the address space goes down
  - Clients should change any manual or automated start of the RACF subsystem to also use this keyword

Security

ICSF Enhancements

- Support for CCA 8.4
  - NIST standard quantum-safe algorithms Module-Lattice-Based Key-Encapsulation Mechanism (ML-KEM) and Model-Lattice-Based Digital Signature Algorithm (ML-DSA) are available to replace the use CRYSTALS-Kyber and CRYSTALS-Dilithium keys.
  - CRYSTALS keys still supported but recommended to migrate to NIST-approved versions ASAP.
- Support for CCA 7.5 and 8.2 (CD 4Q23 (2.4) - OA64883)
  - Strengthens RSA encryption possibilities by implementing 8192-bit key size.
  - Provides additional flexibility for quantum safe key exchange with additional CRYSTALS-Kyber keys, creates a new callable service CSNBMMS “Multi Mac Scheme” in support of the evolving German Banking Industry Committee standards, and implements the CKM-RAKW algorithm for RSA import operations.
- Exploit an EP11 Crypto Express Coprocessor (CEXxP) running in new FIPS compliance modes (CD 1Q24 – (2.4) – OA65205, OA65206)
  - Supports FIPS 2021, FIPS 2024 modes.
- ISCF query function ICSFIQF has been updated to allow the query of the Master Key Verification Patterns in all forms used in operational keys.
- z/OS Public Key Infrastructure (PKI) Services, System SSL, and RACDCERT EXPORT, ADD, and CHECKCERT now support PKCS#12 packages protected by Password-Based Encryption Scheme 2 (PBES2) with Password-Based Key Derivation Function 2 (PBKDF2) standards.

Security

RACF LDAPBIND password protection updates (CD 1Q25 (2.5) – OA66458)

- LDAPBIND now provides the option of quantum-safe encryption for its operations
  - RACF provides functions for encrypting and decrypting passwords for external servers such as LDAP
  - Enhancement provides an option for using quantum-safe AES encryption algorithm.

Logging of bypassing SAF checks of VSAM Opens for Supervisor State or Execution Key 0 callers (CD 1Q2025 (2.5) – OA66738 and OA67032)

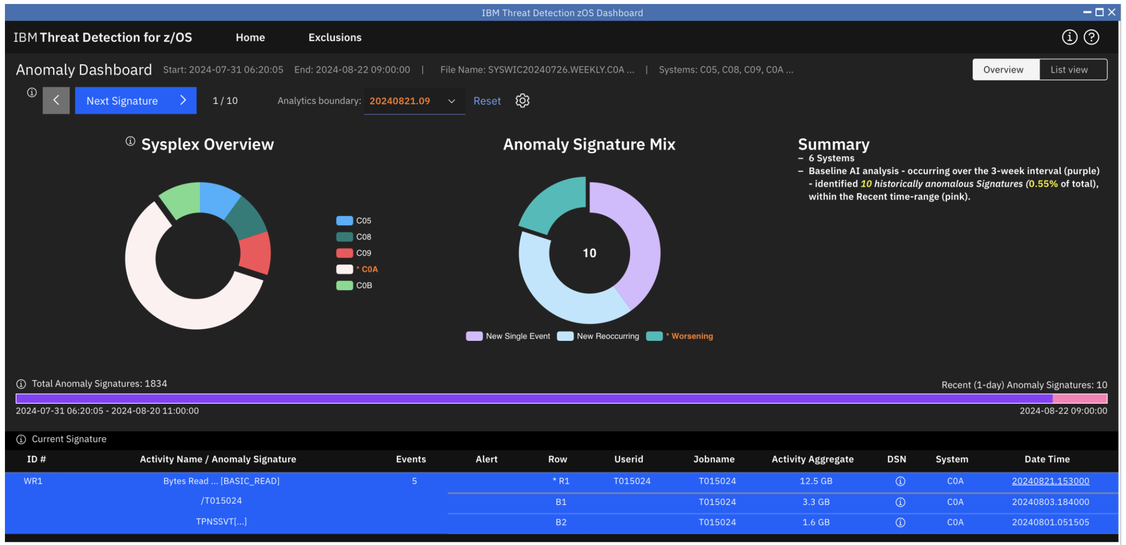
- Currently, VSAM OPENs invoked by supervisor state or EKM 0 callers bypass SAF checks
- With this support, SMF80 records may be written to identify which programs are currently bypassing these checks
- Recording is turned on by granting the user associated with the VSAM OPEN issuer READ access to the STGADMIN.IGG.AUTO.BYPASS.LOG resource in the FACILITY class
- Anticipated support in future release to enforce SAF checking of these callers

Security

IBM Threat Detection for z/OS (TDz) [5698-CA1]

- Detects anomalous, potentially malicious, data access on z/OS
  - Lightweight AI
  - Policy/Exclusion lists for false positive mitigation
- Leverages zWIC facilitated SMF feed at the DFSMS level
  - VSAM & non-VSAM reads and writes
- SMF 98 new subtypes 5-8 recordNotification issued via console message & SMF record, facilitating integration with…
  - GDPS®/LCP & its Safeguarded Copy operations*
  - zSecure® Alert notification expansion**
  - zSecure SIEM Adapter feed for SIEMs**
- GUI dashboard to further explain the anomaly and simplify diagnosis (z/OSMF plugin)

*GDSP/LCP integration is not yet available, but the intent is in the previously referenced SOD
**zSecure integration support is intended but not committed & subject to change



IBM z/OS Authorized Code Scanner is entitled with the license to TDz.

Security

z/OS Authorized Code Scanner and Monitor Priced Feature

- The IBM **z/OS Authorized Code Scanner** is an optional priced feature of z/OS that provides system integrity testing in a development/test environment as part of DevSecOps modernization. It scans for Program Calls (PCs) and Supervisor Calls (SVCs) and generates a series of tests that dynamically scan them for integrity.
  - zACS is entitled when purchasing the new product IBM Threat Detection for z/OS 1.1 (5698-CA1)
- zACS has extended its scanning ability to include AC(1) code found in MVS data sets and z/OS UNIX files, providing users greater coverage in testing their development/test system for potential vulnerabilities for remediation as needed.
  - **New support allows AC(1) programs loaded with batch processing in addition to when invoked from TSO/E.**
- **z/OS Authorized Code Monitor** (zACM) is now available, as a non-disruptive tool for production systems, examining ABENDs from z/OS recovery processing and reporting on potential vulnerabilities found there for remediation as needed.

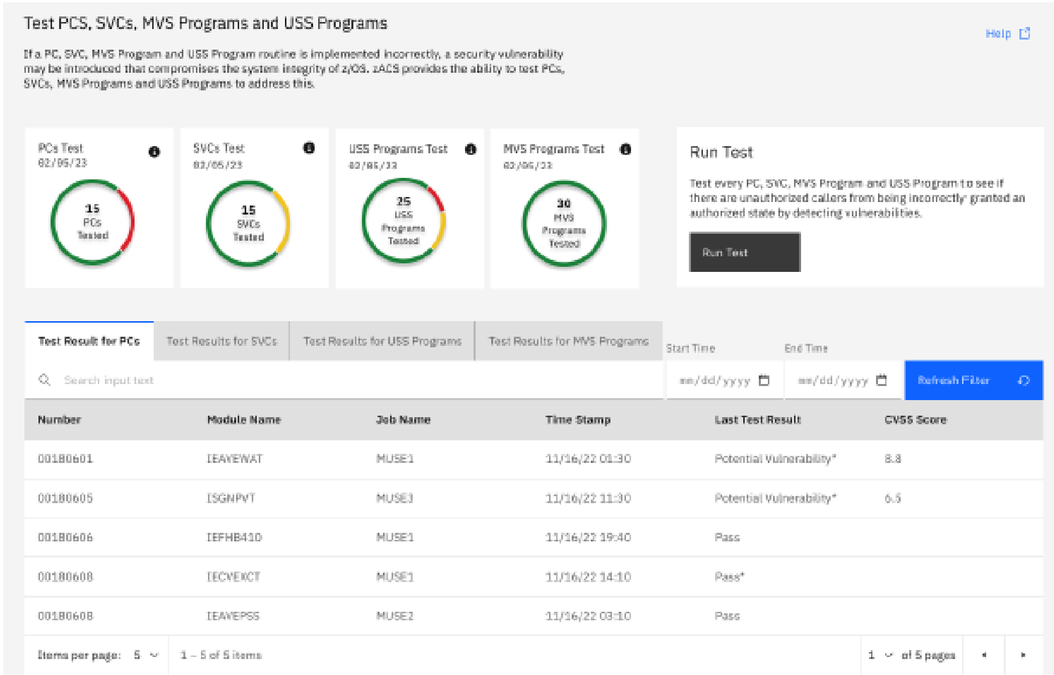


Table of Contents

Continuous delivery

- z/OS embraces continuous delivery through new function APARs
- Get weekly emails when APARs close with My Notification: start at https://www.ibm.com/support/entry/portal/support
- Look on the web, updated monthly: https://www-03.ibm.com/systems/z/os/zos/installation/zosnfapars.html

Experience more with IBM

Visit us at the IBM Booth #113

After a full day of technical sessions, take a break with us!

Connect with our experts, snap a photo with the z17 Plexi or the latest Telum II, and get an up-close look at our Spyre Accelerator.

Come back each day for fresh topics and demos at our expert stations.

Think 2026

Join 5000+ senior business and technology leaders who are seizing the AI revolution to unlock unprecedented growth and productivity at **Think 2026**.

Find out more information using the QR code below.

IBM Digital Asset Haven

IBM Digital Asset Haven is the operational backbone for financial institutions and regulated enterprises entering the digital asset economy.

Find out more information using the QR code below.

Your feedback is important!

SHARE
EDUCATE ▸ NETWORK ▸ INFLUENCE

Submit a session evaluation for each session you attend:

www.share.org/evaluation

Notices and disclaimers

This document is distributed "as is" without any warranty, either express or implied. In no event shall IBM be liable for any damage arising from the use of this information, including but not limited to, loss of data, business interruption, loss of profit or loss of opportunity.

Case studies and client examples are presented as illustrations of how customers or IBM has used IBM products in production or test environments and the results they may have observed. Actual performance, cost, savings or other results in other operating environments may vary.

Workshops, sessions and associated materials may have been prepared by independent session speakers, and do not necessarily reflect the views of IBM.

Not all offerings are available in every country in which IBM operates.

Any statements regarding IBM's future direction, intent or product plans are subject to change or withdrawal without notice.

Notice Regarding Specialty Engines (e.g., zIIPs, ICFs and IFLs)

Any information contained in this document regarding Specialty Engines ("SEs") and SE eligible workloads provides only general descriptions of the types and portions of workloads that are eligible for execution on Specialty Engines (e.g., zIIPs, ICFs, and IFLs). IBM authorizes customers to use IBM SE only to execute the processing of Eligible Workloads of specific Programs expressly authorized by IBM as specified in the "Authorized Use Table for IBM Machines" provided at www.ibm.com/systems/support/machine_warranties/machine_code/aut.html ("AUT").

No other workload processing is authorized for execution on an SE.

IBM offers SEs at a lower price than General Processors/Central Processors because customers are authorized to use SEs only to process certain types and/or amounts of workloads as specified by IBM in the AUT.

Trademarks

IBM, the IBM logo, IBM Cloud, IBM Z, CICS, Db2, DFSMS, DFSMShsm, DFSMSrmm, GDPS, HyperSwap, IMS, RACF, RMF, Parallel Sysplex, Spyre, Telum II, z13, z13s, z14, z15, z16, z17, z/OS and z/VM are trademarks of IBM Corporation, registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on https://www.ibm.com/legal/copyright-trademark.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

The registered trademark Linux is used pursuant to a sublicense from the Linux Foundation, the exclusive licensee of Linus Torvalds, owner of the mark on a worldwide basis.

Red Hat®, JBoss®, OpenShift®, Fedora®, Hibernate®, Ansible®, CloudForms®, RHCA®, RHCE®, RHCSA®, Ceph®, Gluster® and InstructLab™ are trademarks or registered trademarks of Red Hat, Inc. or its subsidiaries in the United States and other countries.

UNIX is a registered trademark of The Open Group in the United States and other countries.

This document is distributed “as is” without any warranty, either express or implied. In no event, shall IBM be liable for any damage arising from the use of this information, including but not limited to, loss of data, business interruption, loss of profit or loss of opportunity.

Client examples are presented as illustrations of how those clients have used IBM products and the results they may have achieved. Actual performance, cost, savings or other results in other operating environments may vary.

Not all offerings are available in every country in which IBM operates.

Any statements regarding IBM’s future direction, intent or product plans are subject to change or withdrawal without notice.

All names and references for organizations and other business institutions used in this deliverable’s scenarios are fictional. Any match with real organizations or institutions is coincidental.

All names and associated information for people in this deliverable’s scenarios are fictional. Any match with a real person is coincidental. Videos may show information about or belonging to third parties. Such videos do not suggest endorsement of third parties or their products or services.