

z/OS V2.5 IBM Education Assistant

Solution Name: Installation Overview



Agenda

- Trademarks
- Session Objectives
- Overview
- Usage & Invocation
- Interactions & Dependencies
- Installation
- Upgrade & Coexistence Considerations
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Trademarks

- See url <http://www.ibm.com/legal/copytrade.shtml> for a list of trademarks.
- Additional Trademarks:
 - None

Session Objectives

- Provide an overview of z/OS V2R5 ServerPac installation considerations,
including:
 - Solution Name: Enable z/OS ServerPac in z/OSMF Software Management
 - Element(s)/Component(s): z/OS (5650-ZOS) with ServerPac (5751-CS9)
- Describe z/OS Upgrade Workflow
 - Solution Name: z/OS V2R5 Upgrade Workflow
 - Element(s)/Component(s): BCP
- Describe some actions when upgrading to z/OS V2R5 from z/OS V2R4

High Level Function / Solution Description

Solution: Enable z/OS ServerPac in z/OSMF Software Management

- z/OS V2R5 ServerPac will be provided as a z/OSMF portable software instance for when ordered using ShopZ.
 - z/OS V2.5 (and any program products ordered with it) will not be offered as the traditional CustomPac dialog method of installation, after January 2022.
- This installation delivery format developed in collaboration with leading industry software vendors.
 - Today, CICS®, IMS, and Db2 (and the related licensed programs) can be ordered as a ServerPac in z/OSMF Software Management portable software instance (PSI) format.
- To learn about the z/OSMF installation method, go here: <https://www.ibm.com/support/z-content-solutions/serverpac-install-zosmf/> . There is a sample portable software instance you can try out now, to learn the process.

Overview

- Who (Audience)
 - z/OS system programmers who install z/OS V2R5 ServerPac
- What (Solution)
 - z/OSMF Portable Software Instance exploitation for the installation of z/OS V2.5 and any z/OS program products ordered on Shopz.
 - z/OSMF Software Management deployment operation support for creation of a new master catalog, along with all existing customization capabilities (data set names, placement, indirect cataloging, and other tasks)
 - z/OSMF Workflows for software configuration for products in ServerPac
- Wow (Benefit / Value, Need Addressed)
 - The z/OS system programmer can install z/OS using a common packaging format, aligned with other leading z/OS platform software vendors, that is simpler to install and configure in a guided and helpful graphic user interface.

Interactions & Dependencies

- To exploit this item, all systems in the Sysplex must be at the new z/OS level: No
- Software Dependencies
 - Driving System Requirements (only for system on which installation is done):
 - z/OSMF Software Management requires the PTF that fixes APAR PH22280 as follows:
 - z/OS V2.3, HSMA234 = UI76170
 - z/OS V2.4, HSMA244 = UI76169
 - z/OS V2.5, HSMA254 = UI76168
 - z/OSMF Workflows requires the PTF that fixes APAR PH04817 as follows:
 - z/OS V2.3 (HSMA237) = UI60040
 - HTTPS downloads are recommended.
- Hardware Dependencies
 - None
- Exploiters: CICS®, IMS, Db2 and all their program products are already installable with z/OSMF

Overview of Ordering

- Ordering z/OS V2R5
 - Program number 5650-ZOS
 - Order any optional priced or unpriced features that were used with previous z/OS releases
- Key dates
 - z/OS V2R5 General Availability (GA) ordering is planned to begin 09/17/2021
 - z/OS V2R5 General Availability is planned for 09/30/2021

Overview of Elements and Features Changing

Elements and **Features** Changing in z/OS V2R5

- BCP
- BCP Program Management Binder
- BCP Capacity Provisioning
- Communications Server
 - **Communications Server Security Level 3**
- Cryptographic Services - ICSF, PKI, System SSL
- DFSMSdfp, **DFSMSdss, DFSMStvs, DFSMShsm, DFSMSrmm**
- **DFSORT**
- HCD
- **HCM**
- IBM z/OS Management Facility
- **Infoprint Server -**
 - **NetSpool, Print Interface**
- Integrated Security Services
 - Network Authentication Services
- IOCP
- ISPF

Overview of Elements and Features Changing

Elements and **Features** Changing in z/OS V2R5 (continued)

- JES2
- **JES3**
- Language Environment
- Network File System (NFS)
- **RMF**
- **SDSF**
- **Security Server RACF**
- TSO/E
- Unicode
- z/OS File System (zFS)
- z/OS Font Collection
- **z/OS Security Level 3**
 - **System SSL Security Level 3**
 - **Network Authentication Service Security Level 3**
- z/OS Data Gatherer – base element
- **z/OS Advanced Data Gatherer – optional feature**

Overview of withdrawn elements

- Elements withdrawn as of z/OS V2R5
 - Enterprise Identity Mapping (EIM) - FMID HIT7750
 - Open Cryptographic Services Facility (OCSF) - FMID HCRY740
 - Open Cryptographic Enhanced Plug-ins (OCEP) - FMID HRO7740
- z/OS Upgrade Workflow describes the upgrade actions for these elements.

Usage & Invocation

- Use z/OSMF to install and configure z/OS V2R5 ServerPac in the portable software instance format

Interactions & Dependencies

- z/OS V2R5 has an overall dependency on IBM 64-bit SDK for z/OS, Java™ Technology Edition, V8 (5655-DGH) and IBM 31-bit SDK for z/OS, Java™ Technology Edition, V8 (5655-DGG). Generally, this dependency exists for new or enhanced functions in z/OS. Older functions that are unchanged from previous releases, and have lower Java requirements, are expected to work with earlier supported releases of Java.
 - For the specific Java dependencies for each element, see z/OS V2R5 Planning for Installation
 - The IBM z/OS Management Facility (z/OSMF) element requires that the following Java level be installed:
 - IBM 64-bit SDK for z/OS, Java Technology Edition, V8 (5655-DGH)
 - The Knowledge Center element requires that the following Java level is installed:
 - IBM 64-bit SDK for z/OS, Java Technology Edition, V8 (5655-DGH)

Installation

- Planning for z/OS V2R5 installation
 - Review installation and upgrade documentation
 - z/OS V2R5 Planning for Installation (GA32-0890)
 - z/OS Upgrade Workflow
 - z/OS V2R5 Program Directory for CBPDO install
 - Review Preventative Service Planning (PSP) bucket for z/OS V2R5
 - Upgrade ZOSV2R5 includes subsets for z/OS elements
 - Review applicable hardware PSP buckets
 - z/OS Upgrade Workflow identifies the hardware PSP Buckets

Installation – Driving System Requirements

- Driving system requirements (system on which installation is done)
 - z/OS V2R3 or later with z/OS V2R5 levels of SMP/E, High-Level Assembler and Program Management Binder
 - Program Management Binder changed in z/OS V2R5
 - SMP/E has not changed in z/OS V2R5
 - HLASM has not changed since z/OS V1R10
 - To install a portable software instance, z/OSMF with required PTFs must be on the driving system.
 - For service installation, a Java Runtime Environment using IBM 31-bit SDK for z/OS Java Technology Edition V8.0 or higher (5655-DGG), or IBM 64-bit SDK for z/OS Java Technology Edition V8.0 or higher (5655-DGH) must be available on the driving system.
 - z/OS Planning for Installation describes the driving system requirements

Installation – Target System Requirements

- Target system requirements
 - z/OS Planning for Installation identifies other IBM products that are required to use some elements in z/OS V2R5
- z/OS V2R5 DASD - approximate requirements, as of July 2021:
 - Target libraries:
 - z/OS V2R5 total space required is 11348 3390 cylinders
 - z/OS V2R4 total space required is 10944 3390 cylinders
 - Delta: + 404 3390 cylinders
 - Distribution Libraries:
 - z/OS V2R5 total space required is 19158 3390 cylinders
 - z/OS V2R4 total space required is 19255 3390 cylinders
 - Delta: - 97 3390 cylinders

Installation – Target System Requirements

- z/OS V2R5 DASD - approximate requirements:
 - Root file system:
 - z/OS V2R5 zFS space required is 4614 3390 cylinders
 - z/OS V2R4 zFS space required is 4990 3390 cylinders
 - Delta: - 376 3390 cylinders
 - z/OS Font Collection:
 - z/OS V2R5 zFS space required is 2649 3390 cylinders
 - z/OS V2R4 zFS space required is 2409 3390 cylinders
 - Delta: +240 3390 cylinders
 - IBM z/OS Liberty Embedded
 - z/OS V2R5 zFS space required is 2400 3390 cylinders
 - IBM z/OS Container Extensions
 - z/OS V2R5 zFS space required is 5250 3390 cylinders

Installation

- Install required service for IBM products
 - Use the REPORT MISSINGFIX command and use FIXCAT(IBM.TargetSystem-RequiredService.z/OS.V2R5) to identify required PTFs that must be installed
- Processor requirements:
 - IBM z15, z14, IBM z13, IBM z13s
- Refer to z/OS Planning for Installation for IBM I/O devices and subsystems supported by z/OS V2R5

Upgrade & Coexistence Considerations

- z/OS V2R5 is supported for coexistence, fallback, and upgrade with z/OS V2R3 and z/OS V2R4
- Coexistence and fallback PTFs must be installed on lower z/OS systems which coexist with z/OS V2R5
 - Use the REPORT MISSINGFIX command with a FIXCAT (fix category) of IBM.Coexistence.z/OS.V2R5 after receiving the latest HOLDDATA to identify PTFs for the lower z/OS releases

High Level Function / Solution Description

Solution: z/OS V2.5 Upgrade Workflow

- z/OS V2.5 Upgrade Workflow will be integrated into the z/OS BCP element by PTFs
 - Both the z/OS V2.3 to z/OS V2.5 upgrade path, and the z/OS V2.4 to z/OS V2.5 upgrade path
 - Found in file system path /usr/lpp/bcp/upgrade after the PTFs are installed
- Provided in PTFs to z/OS V2.3 and z/OS V2.4, as well as in z/OS V2.5, and identified with the coexistence FIXCAT: IBM.Coexistence.z/OS.V2R5
- The z/OS V2.5 Upgrade Workflow will not be put on github.
 - Existing z/OS Upgrade Workflows on github will remain there.
- Export of z/OS V2.5 Upgrade Workflow will be available on Knowledge Center, as usual.
- Service support will be via Case to IBM Support.

Overview - z/OS V2.5 Upgrade Workflow

- Who (Audience)
 - z/OS system programmers who are upgrading to z/OS V2.5
- What (Solution)
 - z/OSMF z/OS V2.5 Upgrade Workflow provided in the z/OS product
 - Provided in PTFs, back to z/OS V2.3
- Wow (Benefit / Value, Need Addressed)
 - The z/OS system programmer can use the z/OS Upgrade Workflow to identify appropriate upgrade actions on the system without having to do extra work to retrieve it from github.
 - IBM Service can provide support for z/OS Upgrade Workflow, without having to use the zosmig@us.ibm.com email anymore.

Interactions & Dependencies

Solution: z/OS V2.5 Upgrade Workflow

- To exploit this item, all systems in the Sysplex must be at the new z/OS level: No
- Software Dependencies
 - Driving System Requirements (only for system on which installation is done):
 - z/OSMF Workflow
- Hardware Dependencies:
 - None
- Exploiters:
 - None

Actions you can perform on your current z/OS release to prepare for functions not supported as of z/OS V2R5

- As of z/OS V2R5, z/OS no longer supports Enterprise Identity Mapping (EIM) and Open Cryptographic Services Facility (OCSF), including its plug-ins, such as Open Cryptographic Enhanced Plug-ins (OCEP) and PKI Services Trust Policy (PKITP).
 - These components were not widely used or enhanced for several releases of z/OS.
 - IBM recommends that you use other applications for comparable functions, such as Integrated Cryptographic Services Facility (ICSF) and System SSL.
- As of z/OS V2R5, z/OS UNIX System Services has removed support for the HFS (Hierarchical File System) data structure.
 - You will no longer be able to mount data structures with DSNTYPE=HFS. zFS (z/OS File System) is the strategic file system structure for UNIX System Services and is the replacement technology that should be used.
 - If you have not done so already, you must migrate your HFS file systems to zFS. The z/OS operating system includes utilities to aid you in the migration process.
 - Use the z/OS V2R5 Upgrade Workflow to drive a health check which can be used to verify if HFS is used.

Actions you can perform on your current z/OS release to prepare for functions not supported as of z/OS V2R5

- z/OS V2R5 removes support for the ISPF Workstation Agent (WSA), also known as the ISPF client/server component.
 - WSA is an application that runs on your local workstation and maintains a connection between the workstation and the ISPF host. It is primarily used to transfer files between the workstation and the host.
 - IBM recommends that you use a more current file transfer solution, such as those provided by z/OS FTP, the sftp utility of OpenSSH, or another file transfer mechanism. These solutions have more capabilities, including the ability to provide secure communications.
 - Use the z/OS V2R5 Upgrade Workflow to drive a health check which can be used to verify if WSA is used.
- In z/OS V2R5, HCD removes support for processor types that are out of service. Specifically, HCD no longer supports the following processors types:
 - IBM z9 EC, processor type 2094 models S08, S18, S28, S38 and S54
 - IBM z9 BC, processor type 2096 models R07 and S07
 - IBM z10 BC, processor type 2098 model E10
 - z/OS V2R5 does not run on these servers. If your IO definition file (IODF) contains definitions for these servers, and you use HCD to maintain your configuration, you must delete the old definitions before moving to z/OS V2R5.

Actions you can perform on your current z/OS release to prepare for functions not supported as of z/OS V2R5

- Starting with z/OS V2R5, JES2 no longer supports the z11 level for checkpoint data sets. z22 mode was introduced in z/OS V2R2.
 - Activate JES2 in z22 mode, if you have not done so. When you switch to z22 mode, the system upgrades the JES2 checkpoint.
 - Use the z/OS V2R5 Upgrade Workflow to drive a health check which can be used to verify if Z11 level is used.
- As previously announced, for clients that use JES3, z/OS V2R5 is the last release for which IBM plans to include the JES3 feature. Clients should plan to migrate to an alternative.

Actions you can perform on your current z/OS release to prepare for functions not supported as of z/OS V2R5

- Starting in z/OS V2R5, only SAF-based security is used to protect SDSF product functions.
 - SDSF no longer supports the use of legacy internal security, which is provided by definitions in the ISFPARMS assembler source or ISFPRMxx PARMLIB statements.
 - As of z/OS V2R5, SDSF uses only SAF security profiles in classes, such as SDSF, OPERCMDS and JESSPOOL, to control the display and command authority in the product.
 - If you are using SDSF internal security or the ISFUSER exit to enforce local security decisions, you must upgrade to SAF security for SDSF before using z/OS V2R5. Converting to SAF security for SDSF can be performed on any currently supported release of z/OS.

Session Summary

- This presentation provided an overview of z/OS V2R5 ServerPac installation using z/OSMF and z/OS Upgrade Workflow when upgrading to z/OS V2R5
- For a complete description of the upgrade actions when upgrading to z/OS V2R5 from z/OS V2R3 or z/OS V2R4, use the z/OS Upgrade Workflow

Appendix

- Publications
 - z/OS Planning for Installation (GA32-0890)
- References
 - z/OS Upgrade Workflow