IBM z/OS Version 2 Release 4 1Q 2020 new functions and enhancements

Table of contents

Overview

IBM[(R)] z/OS[(R)] continuous delivery (CD) offers you opportunities to use new functions, capabilities, and technologies by applying service rather than upgrading. Applying the service is designed to be nondisruptive to maintain system behavior until clients are ready to exploit it.

This latest CD for z/OS Version 2 Release 4 further extends its capabilities with innovative new functions that improve the development experience, while at the same time providing significant updates in the core areas of management.

Key features delivered in this CD release in support of z/OS Version 2.4 include:

z/OS Container Extensions (zCX) now has a 90-day trial[i], which allows clients to experiment with relevant workloads deployed in a test zCX instance without requiring feature code (FC) 0104 or incurring licensing cost. zCX is also providing enhancements that improve performance for more efficient zIIP exploitation for workloads deployed in zCX as well as an enhancement to the IBM License Metric Tool (ILMT) to support the zCX environment.

Cloud Provisioning and Management provides capabilities to scale the cloud provisioning environment beyond the scope of a single sysplex. A system administrator can now deliver a flexible and agile self-provisioning of z/OS resources to z/OS developers with access to a larger resource pool with storage resources that have user-level isolation and limits.

z/OS Management Facilities continues to deliver incremental capabilities such as enhancements to startup performance and automatic validation of security configuration. z/OSMF continues to enable modernization of the z/OS system using automation and scripting of systems management tasks, thus creating productivity and a lower skill barrier for both experienced and new systems administrators.

First IBM ServerPac in a z/OSMF Portable Software Instance format is delivered for IBM CICS[(R)] and IBM CICS licensed programs, offering a simplified and guided process for installation. This provides an efficient and accelerated subsystem install with minimal z/OS systems skills.

[i] 90-day trial is free subject to normal hardware and software consumption when adding a workload to z/OS.

You may have also seen the following announcements:

IBM z/OS Workload Interaction Correlator: z/OS Workload Interaction Correlator is a new z/OS priced feature that improves workload resilience. See Software Announcement 220-032, dated January 21, 2020.

Fibre Channel Endpoint Security: Fibre Channel Endpoint Security offers a new end-to-end solution designed to ensure the integrity and confidentiality of all data

flowing on Fibre Channel links between authorized servers and new IBM DS8900F storage devices, creating a trusted storage network that encrypts data in flight. See Hardware Announcement 120-013, dated January 14, 2020.

See the Description section for more detail.

z/OS V2.4 runs on these IBM servers:

- IBM z15™ Model T01
- IBM z14(R) Models M01-M05
- IBM z14 Model ZR1
- IBM z13(R)
- IBM z13s(R)
- IBM zEnterprise(R) EC12 (zEC12)
- IBM zEnterprise BC12 (zBC12)

Description

z/OS Container Extensions

z/OS Container Extensions trial

z/OS Container Extensions (zCX) is now available on a trial[1] basis. Clients may try zCX for up to 90 days without having to purchase hardware FC 0104. When the 90-day trial period has ended, zCX instances will no longer function unless FC 0104 has been installed.

zCX trial can be applied with the PTF for APAR OA58969. With the trial APAR, it is intended that clients will have a full zCX user experience for the 90 days once zCX is enabled.

[1] 90-day trial is free subject to normal hardware and software consumption when adding a workload to z/OS.

zCX performance enhancement

zCX is providing several enhancements that improve performance by reducing lock contention and optimizing processing. These enhancements provide improved performance and more efficient zIIP exploitation for workloads deployed in zCX, especially for zCX instances that are configured with a larger number of virtual processors. These enhancements are available on z/OS V2.4 with the PTF for APAR OA58296.

zCX ILMT support

The IBM License Metric Tool (ILMT) has been enhanced to support the zCX environment. Utilization of ILMT is now mandatory for subcapacity pricing for licensing of IBM Linux(R) on Z software products procured through Passport Advantage(R). Manual counting for subcapacity pricing in the zCX environment will no longer be permissible.

Additional information on ILMT enablement in zCX, including PTFs required, can be found in IBM Knowledge Center.

Cloud Provisioning and Management

IBM Cloud™ Provisioning and Management (CP&M) for z/OS is continuing its journey to provide an improved user experience and new functions. The following exciting features were delivered on December 12, 2019 with PTFs UI66659 (z/OS V2.3) and UI66660 (z/OS V2.4) to expand CP&M provisioning capability and offer a robust provisioning platform on z/OS.

Support for multiple sysplexes

This enhancement improves scalability and speed of z/OS middleware provisioning. By provisioning instances across multiple sysplexes via a primary z/OSMF system, an application programmer can scale the cloud provisioning environment beyond the scope of a single sysplex (that is, now has access to a larger resource pool of z/OS systems). With this configuration, system and application programmers no longer have to individually define and provision middleware templates and instances using different z/OSMF access points for each sysplex in their domain. See the IBM Cloud Provisioning and Management Knowledge Center for more information about this capability.

No changes are required in the middleware provisioning template to leverage this function. With this support, an external cloud management platform like OpenShift(R) can provision z/OS middlewares on any z/OS system in the private cloud infrastructure by communicating with a single z/OSMF instance via CP&M REST APIs.

DASD/storage resource pool

With this new capability, CP&M expands resource pools of managed resources to now include storage/DASD resources. Collaborating with the storage administrator, a z/OS system programmer can partition the storage resources for z/OS middleware provisioning with tenant-level isolation and limits. By isolating storage resources of specific teams, z/OS system programmers can prevent "starvation" (that is, teams sharing a resource deplete available space) and provide policy-based resource allocation.

A storage administrator can create storage resources with dedicated attributes and settings defined via data classes, storage classes, and management classes (for example, encryption, or performance objectives). The z/OS system programmer can then define a DASD/storage resource pool for specific teams and templates, allowing for greater customization and quality of service tailored to tenant and template needs. Simplified and automated allocation of storage during provisioning (through the use of templates in z/OSMF) leads to less time spent on storage resource orchestration. See the IBM Cloud Provisioning and Management Knowledge Center for more information about this capability.

To dynamically obtain data set allocation attributes, the middleware provisioning templates must be updated to invoke the resource pool services REST API, which is described in the *IBM z/OS Management Facility Programming Guide*.

Support SAF group name for administrator

You can specify SAF groups for various administrator roles when you create, modify, or view domains. You can also specify a SAF group for template approvers when you create or modify a template. Previously, it was necessary to specify individual user IDs for these roles. You might find that using groups to represent administrators can help to simplify the management of cloud provisioning resources.

z/OSMF Workflow Editor enhancements

IBM introduced the following new features to improve the usability of z/OSMF Workflow Editor:

- Flat text editor: A raw text option is added to Workflow Editor. If you select this option, the Workflow Editor opens the workflow definition in a simple text editor. Consider using the text editor when you need to quickly correct a syntax error that prevents the file from opening in the Workflow Editor UI. The flat text editor also helps you quickly locate where a specific variable is used.
- An Expand option is added to the Instructions tab on the Step Details page and the Template contents field for template steps. Use this option to expand the input area to full screen width for a larger text entry area.
- It is possible to create an input properties file in the Workflow Editor during an editing session. Previously, you had to supply an existing input properties file at the beginning of an editing session.

- As a convenience, the Edit Workflow Definition dialog now saves the location of the files that you edit. On subsequent uses, you can select the file location from the pull-down menu, rather than having to enter the full path and file name manually, as was previously necessary.

z/OSMF

Continuing the delivery drumbeat of z/OSMF there are a number of updates available via continuous delivery:

z/OSMF security configuration assistant

- Enhanced to support variables via the PTF for APAR PH17871 so that more security configuration checking can be validated automatically. This is designed to reduce the number of manual actions reported by the assistant. The security configuration assistant helps the security administrator or the system programmer to understand what security settings are required for z/OSMF.

z/OSMF general

- Updated embedded Liberty to 19.0.0.9, z/OSMF changed to use the "current" alias instead of pointing to a hardcoded version of Liberty with the PTF for APAR PH17867. The intent is for z/OSMF to pick up the latest Liberty changes without requiring a corresponding change in z/OSMF, which should result in reducing the time it takes to roll out a Liberty service.
- Startup performance improvements when there are no changes in z/OSMF parmlib configuration from one start to the next.

z/OSMF desktop

- The z/OSMF desktop UI is enhanced by the PTF for APAR PH16076 to allow users to submit a data set or Unix file as JCL from the z/OSMF desktop search window or editor window. The PTF for APAR PH16076 also introduces a new task named "Job Output" so that users can check job status and retrieve job output directly from the z/OSMF desktop UI.

z/OSMF Sysplex Management

- The z/OSMF Sysplex Management plug-in is enhanced by the PTF for APAR PH15554 to allow users to create a new couple data set for several operations like set Primary CDS, switch Alternate CDS to Primary CDS, and so on.

First IBM ServerPac in a z/OSMF Portable Software Instance

On December 6, 2019, IBM offered the first of several planned deliverables using the z/OSMF Portable Software Instance format, installable with the z/OSMF Software Management application. This first deliverable was for IBM CICS and IBM CICS licensed programs. A new choice on Shopz is available for you to select, which will allow you to install software using the z/OSMF Software Management application instead of the traditional CustomPac (ISPF) dialog. By selecting this option, you will install your ServerPac in the z/OS platform-wide consistent method that IBM and other leading software vendors are embracing. This installation method will use a simplified web-based interface to guide you through the process of acquisition, allocation, and placement of data sets, cataloging, and other common tasks, continuing through to help you with configuration of your software. To learn how to install a z/OSMF ServerPac, see the IBM Z(R) Content Solutions website.

See "z/OS platform software installation improvements" in the Statement of general direction section for additional information on subsequent ServerPac deliveries.

IBM zERT Network Analyzer database administration enhancements

The PTF for APAR PH16223 enhances flexibility in IBM zERT Network Analyzer's Db2(R) for z/OS database schema definitions and reduces the access privileges required by the IBM zERT Network Analyzer's database user ID through the use of Db2 partitioned tables. The supplied database schema tooling adds support for

customizing the database schema name, index names, and table names along with many other operational parameters that were already configurable.

SMTPD compatibility enhancements for CSSMTP

With the PTF for APAR PH18237, the Communications Server SMTP (CSSMTP) application is enhanced with three new configuration parameters to provide better compatibility with SMTPD for your migration from SMTPD to CSSMTP.

DFSMShsm UNIX File Level Backup

DFSMShsm UNIX File Level Backup is enhanced to support an exclude keyword on backup and recover commands. This keyword accepts a comma separated list of either filename patterns or directory names that should be excluded from processing.

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBMid).

BP Attachment for Announcement Letter 220-102

Statement of general direction

z/OS platform software installation improvements

As announced in Software Announcement 216-392, dated October 4, 2016, IBM and other leading industry software vendors have been collaborating on a variety of installation-related improvements. These improvements are intended to make z/OS-platform software installation, configuration, and deployment consistent for our client community. As part of that initiative, IBM also announced in Software Announcement 219-013, dated February 26, 2019, the intention to offer an IBM ServerPac packaged as a z/OSMF Software Management Portable Software Instance. Following on the additional delivery offering in Shopz of CICS products in a Portable Software Instance, IBM intends to continue this packaging roll-out with subsequent subsystems of IMS and Db2 before the end of 2020. IBM recommends clients become familiar with the z/OSMF Software Management deployment process and take advantage of these improvements to simplify software installation.

z/OS software update improvements

One of the more challenging tasks that new z/OS-platform system programmers face is having to update software with fixes. IBM intends to provide a new web-based application that will assist with that task. This new application, z/OSMF Software Update, is intended to guide you through the installation of SMP/E-packaged fixes (PTFs). Whether these fixes are supplied by IBM or other vendors, for operating system, middleware, or licensed programs, the Software Update application is planned to simplify the process with an intuitive interface. The fix installation process is designed to allow you to organize, review, and resolve any applicable information needing attention (SMP/E HOLDDATA), yet not clutter your work task with unnecessary information. Of course, should you need a complete set of installation information, that is planned to still be available. The first planned use case for updating z/OS software is installing corrective service.

Updating z/OS software is a substantial part of the z/OS platform-wide installation strategy IBM shares with other leading software vendors. This strategy encompasses the entire software lifecycle, from software packaging, acquisition, installation, configuration, deployment, and servicing through end of service.

z/OSMF notifications

z/OS V2.4 is planned to be the last release to support z/OSMF mobile notification services for z/OSMF notifications. The mobile notification services are planned to be removed in the release following V2.4. All of the rest of z/OSMF notification services, including the z/OSMF Notifications task and email notification services, remain unaffected. The removal of z/OSMF mobile notification services includes removing the browser user interface screens for "Mobile Configuration", removing the "z/OSMF mobile application" entry in the "User" panel for Notification Settings, and removing the Notification REST service APIs related to z/OSMF mobile notification.

Statements by IBM regarding its plans, directions, and intent are subject to change or withdrawal without notice at the sole discretion of IBM. Information regarding potential future products is intended to outline general product direction and should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for IBM products remain at the sole discretion of IBM.

Reference information

For additional information, see:

- Software Announcement 219-344, dated July 23, 2019

  (IBM z/OS V2.4 GA)

- Hardware Announcement 119-027, dated September 12, 2019

  (IBM z15)

Order now

To order, contact the IBM Digital Sales Center, your local IBM representative, or your IBM Business Partner. To identify your local IBM representative or IBM Business Partner, call 800-IBM-4YOU (426-4968). For more information, contact the IBM Digital Sales Center.

Phone: 800-IBM-CALL (426-2255)

Fax: 800-2IBM-FAX (242-6329)

For IBM representative: askibm@ca. ibm.com[R]

For IBM Business Partner: pwcs@us. ibm.com

IBM Digital Sales Offices
1177 S Belt Line Rd
Coppell, TX 75019-4642, US

The IBM Digital Sales Center, our national direct marketing organization, can add your name to the mailing list for catalogs of IBM products.

Note: Shipments will begin after the planned availability date.

Trademarks

IBM z15 and IBM Cloud are trademarks of IBM Corporation in the United States, other countries, or both.

IBM, z/OS, CICS, IBM z14, IBM z13, IBM z13s, zEnterprise, Passport Advantage, IBM Z, Db2 and ibm.com are registered trademarks of IBM Corporation in the United States, other countries, or both.
Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.
OpenShift is a registered trademark of Red Hat Inc. in the U.S. and other countries.
Other company, product, and service names may be trademarks or service marks of others.

Terms of use

IBM products and services which are announced and available in your country can be ordered under the applicable standard agreements, terms, conditions, and prices in effect at the time. IBM reserves the right to modify or withdraw this announcement at any time without notice. This announcement is provided for your information only.Additional terms of use are located at

Terms of use

For the most current information regarding IBM products, consult your IBM representative or reseller, or go to the IBM worldwide contacts page

IBM United States