
IBM Z
FAQ
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z/OS V2.4
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Frequently Asked Questions

Worldwide



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Announcement Questions

What is being announced for IBM z/OS® on July 23, 2019?

- IBM z/OS, Version 2 Release 4, is announced on July 23, 2019 with a general availability scheduled for September 30, 2019. This release delivers innovation through an agile, optimized, and resilient platform that helps companies build applications and services based on a highly scalable and secure infrastructure that provides the performance and availability for on-premise or provisioned as-a-service workloads.
- z/OS V2.4 delivers the following capabilities to accomplish this:
 - An exciting new capability, IBM z/OS Container Extensions (zCX), which enables the ability to run almost any Linux® on IBM Z® Docker container in z/OS alongside existing z/OS applications and data without a separate provisioned Linux server,
 - Easier integration of z/OS into private and multi-cloud environments with improvements that deliver a more robust, easy to use, and highly available implementation using IBM Cloud™ Provisioning and Management for z/OS, IBM z/OS Cloud Broker and IBM Cloud Storage Access for z/OS Data,
 - Enhancements that continue to simplify and modernize the z/OS environment for a better user experience and improved productivity by reducing the level of IBM Z specific skills that are required to maintain z/OS,
 - Ongoing industry-wide simplification improvements to help companies install and configure software using a common and modern method. These installation improvements range from the packaging of software through the configuration so that faster time to value can be realized throughout the enterprise,
 - IBM Open Data Analytics for z/OS provides enhancements to simplify data analysis by combining open source runtimes and libraries with analysis of z/OS data at its source,
 - Enhancements to security and data protection on the system with support for new industry cryptography and continued enhancements driving pervasive encryption through the ability to encrypt data without application changes. A new RACF® capability improves management of access and privileges,
 - and much more ...

Where can I find more information about z/OS 2.4?

On the z/OS homepage: <https://www.ibm.com/it-infrastructure/z/zos>

Coexistence, Support and Migration Planning

Which servers will be supported with z/OS Version 2.4?

z/OS Version 2.4 is planned to be able to better leverage the capabilities of current server technology by support for IBM zEnterprise® EC12 (zEC12), IBM zEnterprise BC12 (zBC12), IBM z13®, IBM z13s®, IBM z14™, z14 ZR1 and IBM z15.

Does IBM expect different migration efforts to be required to upgrade to z/OS V2.4?

z/OS V2.4 is not expected to require special migration efforts differing substantially from those associated with prior upgrades.

The z/OS Migration book will no longer be provided for z/OS V2.4. How will z/OS migration technical information be found?

z/OS V2.4 migration technical information, now known as "upgrade actions", will be provided in two formats. One is in a "z/OS V2.4 Upgrade Workflow" which is usable with the z/OSMF Workflow function for the z/OS V2.2 and V2.3 paths. This format offers several benefits over the traditional book, such as customization for a specific z/OS environment, tracking of actions, functional applicability, and ability to provide feedback to IBM. The upgrade workflows will be found here: <https://github.com/IBM/IBM-Z-zOS/tree/master/zOS-Workflow> . If you have used a z/OS Migration Workflow prior to z/OS V2.4, then you will be familiar with the z/OS V2.4 Upgrade Workflow format already. It is strongly encouraged you use this z/OSMF workflow format as these distinct benefits are not found in the second format. You can see a short video on how to use a z/OSMF Workflow here: <https://www.youtube.com/watch?v=ejQRSYaxz9M>.

The second format are exported files of the z/OS V2.4 Upgrade Workflow for the z/OS V2.2 and V2.3 paths which can be found on the z/OS KnowledgeCenter for z/OS V2.4. Each exported file is created from the corresponding z/OS V2.4 Upgrade Workflow and is a single file containing all the technical upgrade actions. This file is suitable for viewing, searching, and printing as you see fit. However, none of the benefits you have when using the z/OSMF workflow function will be present. Meaning, you will be provided all the technical material and any tracking or determination of applicability will be the user's responsibility.

Note that as of z/OS V2.4, the term "migration" will be replaced in general with the term "upgrade" to indicate a higher release level is being installed.

z/OS Container Extensions (zCX)

What is z/OS Container Extensions?

z/OS Container Extensions (zCX) is a new z/OS 2.4 feature that enables clients to deploy Linux on Z applications as Docker containers in a z/OS system to directly support z/OS workloads. This is done without provisioning a separate Linux server, maintains operational control within z/OS, and is supported by z/OS Qualities of Service.

What are the benefits of z/OS Container Extensions?

z/OS Container Extensions expands and modernizes the software ecosystem for z/OS to include Linux on Z applications. Most applications (including Systems Management components and development utilities/tools) that are currently only available to run on Linux will be able to run on z/OS as Docker containers.

Linux on Z applications can be run on z/OS, using existing z/OS operations staff and reusing the existing z/OS environment.

z/OS Container Extensions runs Linux on Z applications on z/OS while maintaining operational control within z/OS and z/OS Qualities of Service (scalability, availability, integrated disaster recovery, backup, WLM, and integration with z/OS security).

On which machine(s) does z/OS Container Extensions run?

z/OS Container Extensions is planned to run on the IBM z14 systems.

On which engine types can z/OS Container Extensions run?

In addition to General Purpose engines, the workload run on z/OS Container Extensions is planned to be zIIP eligible.

Where can I find more information on z/OS Container Extensions?

Current information can be found on the z/OS Container Extensions homepage:
<https://www.ibm.com/support/z-content-solutions/container-extensions/>

z/OS Management Facility (z/OSMF)

Please describe some of the new enhancements to z/OSMF.

A new task, Security Configuration Assistant, is introduced to simplify z/OSMF security setup and troubleshooting. z/OSMF Security Configuration Assistant can automatically check if the required security configuration for z/OSMF is satisfied. With graphic interface and functions such as filter, a user can easily check z/OSMF security configuration status at any time. This can help both z/OSMF security planning and z/OSMF security configuration troubleshooting.

z/OSMF provides a new plug-in named IBM z/OS Encryption Readiness Technology (zERT) Network Analyzer in V2R3 with APAR PH03137 and in z/OS V2R4. IBM zERT Network Analyzer is a web-based graphical user interface that z/OS network security administrators can use to analyze and report on data reported in zERT Summary records. These records can help users visually determine which z/OS TCP and Enterprise Extender traffic is or is not cryptographically protected. More information can be found at this [website](#).

Many z/OSMF functions have been provided via Continuous Delivery and are applicable to not just z/OS V2.4, but some prior releases. See the z/OSMF new function APAR [website](#) for all the recent new functions.

For more information on the z/OS Management Facility, see <https://www.ibm.com/us-en/marketplace/zos-management-facility>

Pricing and Service

What is Tailored Fit Pricing for IBM Z?

Tailored Fit Pricing is a new, flexible software pricing model that dramatically simplifies the existing pricing landscape through flexible deployment options tailored to your IBM Z environment. Two new pricing solutions, Enterprise Consumption and Enterprise Capacity, offer alternatives to the rolling four-hour average (R4HA) based pricing model, for both new and existing workloads.

Where can I find more information on Tailored Fit Pricing for IBM Z?

On the Tailored Fit Pricing homepage:

<https://www.ibm.com/it-infrastructure/z/software/pricing-tailored-fit>

Planned migration from JES3 to JES2

What has IBM announced about migration from JES3 to JES2?

In the z/OS V2.4 Preview Announcement ([219-013](#)) on February 26, 2019, IBM issued the following Statement of Direction (SOD):

In Software Announcement [217-246](#), dated July 17, 2017, IBM announced that JES2 is the strategic Job Entry Subsystem (JES) for the z/OS Operating System and that JES3 would continue to be supported and maintained. To date, IBM has made significant investment in JES2 by delivering unique functions such as email support in JCL, spool migration and merge, and dynamic checkpoint expansion and tuning to make management easier. In z/OS V2.4, IBM plans to deliver in JES2 Spool Encryption and a new user exit alternative based on defining policies that allow exit programs to be implemented in a parameterized rule-based approach. To help JES3 to JES2 migration efforts, JES2 has added functionality, including dependent job control, deadline scheduling, 8-character job classes, and interpreting JES3 JECL control statements. For z/OS V2.4, additional function to aid in migrations is planned, including Disk Reader capability and enhanced JES3 JECL support in JES2 (ROUTE XEQ). Today, as a result of our strategic investment and ongoing commitment to JES2, as well as continuing to enhance JES3 to JES2 migration aids, IBM is announcing that the release following z/OS V2.4 is planned to be the last release of z/OS that will include JES3 as a feature.

If you are one of the clients who remains on JES3, IBM encourages you to start planning your migration. For questions, contact jes3q@us.ibm.com.

Why has IBM decided to move to JES2 only and publish this latest JES Statement of Direction (SOD)?

IBM evaluates its strategy continuously and while JES3 is a good product it generally duplicates function in JES2. The number of customers running JES3 has been in steady decline. By moving to a single spooling subsystem IBM can focus new function on a single deliverable.

How long will it be until JES3 is no longer shipped with z/OS?

From the time of this announcement you will have 4.5 years (Q3 of 2023) before the first release of z/OS is planned to ship without JES3. The release of z/OS that is planned to ship in Q3 of 2021 will be supported for 5 years (Q3 2026), so the delivery of a z/OS release without JES3 does not mean that support for JES3 ends at that time.

Does this mean JES3 is no longer supported?

JES3 is supported until the last release that includes JES3 goes out of service. This would be based on the normal service schedules for z/OS releases. Typically, 5 years of support from GA plus 3 years of extended support for an additional fee.

Where can I learn more about migrating to JES2 from JES3?

The following two IBM Redbooks are highly recommended reading before any migration activities and assessments:

- JES3 to JES2 Migration Considerations (SG24-8083), 2014 (<http://www.redbooks.ibm.com/abstracts/sg248083.html>)
- A Guide to JES3 to JES2 Migration (SG24-8427), 2018 (<http://www.redbooks.ibm.com/abstracts/sg248427.html>)

Lab Services

Are there resources available to help me migrate to the newer z/OS level?

Yes, IBM Systems Lab Services provides assistance to clients with Currency and Migration. You can contact IBM Systems Lab Services via the Internet at:

<https://www.ibm.com/it-infrastructure/services/lab-services> or send an email to ibmsls@us.ibm.com

How can I learn more about the new z/OS Container Extensions (zCX) and get some help getting started with this new capability?

IBM Systems Lab Services consultants get early access to new functions such as z/OS Container Extensions (zCX) and based on that early experience have developed a new planning and implementation offering for zCX. As with many of our planning and implementation offerings, we customize the exact services to meet individual client needs. Our z/CX offering will help clients plan and use the z/CX capabilities while helping them learn more about the capability. You can contact Systems Lab Services directly via e-mail at ibmsls@us.ibm.com or contact your IBM Sales Representative.

Are there resources available to help me implement the recent enhancements to SMC-R and to zEDC?

Yes, IBM Systems Lab Services provides assistance to clients wanting to implement new hardware innovations. You can contact IBM Systems Lab Services via the Internet at:

<https://www.ibm.com/it-infrastructure/services/lab-services> or send an email to ibmsls@us.ibm.com

Are there resources available to help me implement the recent enhancements to SMT?

Yes, IBM Systems Lab Services provides assistance to clients wanting to implement new hardware innovations such as SMT. You can contact IBM Systems Lab Services via the Internet at:

<https://www.ibm.com/it-infrastructure/services/lab-services> or send an email to ibmsls@us.ibm.com

Are there resources available to help me implement the recent enhancements to z/OSMF provisioning?

Yes, IBM Systems Lab Services provides assistance to clients wanting to implement z/OSMF provisioning capability for cloud. You can contact IBM Systems Lab Services via the Internet at:

<https://www.ibm.com/it-infrastructure/services/lab-services> or send an email to ibmsls@us.ibm.com

I am interested in making sure my IT personnel is well trained in all aspects of IBM Z, but especially in regard to z/OS. Are there resources to help me with client education?

Yes, IBM Systems Lab Services and our Global Training Providers can assist with this. IBM Lab Services provides training through its technical events and private skills transfer engagements to clients and business partners. The Global Training Providers provide ongoing client digital and classroom-based education. You can contact IBM Systems Lab Services via the Internet at:

<https://www.ibm.com/it-infrastructure/services/lab-services> or send an email to ibmsls@us.ibm.com



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