
IBM Z
Introduction
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z/OS V2.3 Announcement
July 17th, 2017

Frequently Asked Questions

Worldwide



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Announcement Questions

What is being announced for IBM z/OS® on July 17, 2017?

- IBM z/OS, Version 2 Release 3, is announced on July 17, 2017 with a general availability scheduled for September 29, 2017. This release features many capabilities that leverage the new IBM z14™ (z14) processor such as Virtual Flash Memory, IBM zHyperLink™ Express, and additional new I/O attachment options. In addition, z/OS features many enhancements to JES, z/OSMF, SDSF, encryption, and overall Java® and compiler related performance improvements
- z/OS V2.3 will simplify and modernize the user experience and help make pertinent information readily available and easily accessible:
 - In z/OS V2.3, z/OSMF will be started during the z/OS IPL process. This helps to ensure that z/OSMF services, such as notification services, are present for exploiters of z/OSMF.
 - Continuing to lay the foundation for installation improvements through enhancements to the software packaging and installation capabilities in z/OSMF that provide the basis for a common installer.
 - z/OSMF will support workflow extensions for IBM Cloud Provisioning and Management for z/OS.
- and much more ...

What are some of the key z14 hardware functions supported by z/OS V2.3?

z/OS V2.3 offers full support for the z14 hardware capabilities designed to optimize high availability, performance, security, and operational flexibility can help organizations grow and to secure their most critical transaction environments.

Some highlighted new z/OS V2.3 capabilities include support for the following:

- Support for up to 170 configurable processors
- Improved cryptographic capabilities that can be leveraged to begin implementation of IBM's pervasive data encryption strategy
- The IBM zHyperLink Express feature.
- Cryptography enhancements available with the Crypto Express6s feature.
- Asynchronous Memory Clear using System Assist Processors (SAPs).
- Additional new I/O attachment options including the OSA-Express6S, RoCE Express2, and FICON Express 16S+ features.
- Coupling Facility Level (CFLEVEL) 22 and new Coupling link features
- The Guarded Storage Facility, exploited by IBM SDK for z/OS, Java Technology Edition, Version 8 (5655-DGG).
- The Instruction Execution Protection Facility
- IBM Virtual Flash Memory.

And more...

Enhancements related to the z14 server

What were some of the z14 enhancements that z/OS V2 can also benefit from?

The new z14 announcement extends IBM Z® leadership with:

- Performance and integration enhancements include new industry leading resilient and intelligent I/O such as the new FICON Express16S+ links that can help improve performance of I/O bound batch jobs
- IT economics
 - More total capacity with up to 170 configurable cores allows support for more work
 - Improved sharing capabilities for networking and cryptographic features and support for 85 LPARs
 - New instructions in Single Instruction Multiple Data (SIMD) which are designed to give a performance boost for traditional workloads using COBOL and new applications like analytics.
- Reliability and security
 - z/OS is designed to provide new policy-based encryption options that take full advantage of the improvements in the z14 platform and can help you build that intrinsic, fortified perimeter around your critical business data. These new capabilities include:
 - Enhanced data protection for many z/OS data sets, zFS file systems, and Coupling Facility list structures gives users the ability to encrypt data without needing to make costly changes to applications to imbed encryption APIs within applications.
 - New z/OS policy controls make it possible to use pervasive encryption to protect user data and simplify the task of compliance.
 - z/OS Communications Server includes encryption-readiness technology to enable z/OS administrators to determine which TCP and Enterprise Extender traffic patterns to and from their z/OS systems meet approved encryption criteria and which do not.

What were some of the key I/O and storage related announcements with the z14 server announcement that z/OS V2 can benefit from?

FICON Expresss 16S+

FICON Express16S+ which is designed with a boost in I/O rates and a reduction in single stream latency to help absorb large application and transaction spikes driven by large unpredictable analytic and mobile workloads.

RoCE Express2

10 GbE RoCE Express2 with 4x more virtual functions per adapter and a performance improvement.

IBM zHyperLink Express

Uses a direct connect short distance link (zHyperLink) to deliver low latency connectivity between z14 and FICON® storage systems. Working in conjunction with your existing FICON SAN infrastructure, zHyperLink Express delivers the next generation of I/O for IBM Z storage.

Can z/OS make use of the new larger memory configuration on z14 processors?

z/OS V2.3 with z14 processors supports up to 4 terabytes (TB) of available Redundant Array of Independent Memory (RAIM) real memory per z/OS image to help improve transaction response times, lower CPU costs, simplify capacity planning, enlarge in-memory buffer pools, helping you improve performance of DB2®, WebSphere® MQ®, batch, SAP and other workloads

z/OS V2.3 Memory Requirements for z14

IBM z/OS v2.3 with IBM z14 will require a minimum of 8GB of memory. When running as a z/VM® guest or on a IBM System z® Personal Development Tool, a minimum of 2GB will be required for v2.3. Many production systems will likely require much more than 8GB depending on the middleware and workloads. A migration health check will be introduced at V2.1, V2.2, and V2.3 to warn if the system is configured with less than 8GB.

Does the minimum memory requirement apply to machines previous to z14?

No. The memory requirement and associated WTOR is only for z/OS 2.3 running on z14. This includes running as a z/VM guest or on the IBM System z Personal Development Tool that simulates z14 features.

Why does z/OS require more memory on z14?

z/OS V2.3 on z14 utilizes more memory for performance improvements, allowing it to leverage new technologies for improved performance such as large page support and cache optimizations. Relying on a minimum, z/OS can optimize memory management algorithms to improve reliability and availability for both large and small configurations and enables IBM and vendors to rely on the additional memory to better provide performance and product features in the future.

What is the impact to continuing to IPL with less than the minimum?

While continuing with less than the required minimum will work in many cases, it leaves the system susceptible to availability impacts due to memory pressure of even small workload changes such as system dumps.

Coexistence, Support and Migration Planning

Can I migrate directly from z/OS V2.1 to z/OS 2.3?

Yes. However, remember that the migration actions associated with z/OS V2.2 must still be performed.

Which servers will be supported with z/OS Version 2.3?

z/OS Version 2.3 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 and IBM z14.

Does IBM expect different migration efforts to be required to upgrade to z/OS V2.3?

z/OS V2.3 is not expected to require special migration efforts differing substantially from those associated with prior upgrades. However, z/OS V2.3 will IPL only on an IBM zEC12 EC or zBC12 server, or newer server.

z/OSMF

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

There are many enhancements that are delivered with z/OS V2.3 including:

- A new z/OSMF plug-in, Sysplex Management, provides detailed views of sysplex infrastructure resources such as Parallel Sysplexes and z/OS systems, CFs and CF structures, CF structure connectors, couple data sets and policies, and coupling links.
- The z/OSMF WEBISPF plug-in is enhanced in z/OS V2.3 to allow single sign on within a sysplex. This eliminates the need to continuously log on and off as you navigate system to system.
- z/OS V2.3 z/OSMF contains a new function called Operator Consoles. This function provides an improved visualization of the z/OS operator consoles, including support for multiple systems in a sysplex.
- z/OS V2.3 adds a new Workflow Editor to z/OSMF to enable you to edit workflows in the UI instead of directly editing XML files.
- z/OSMF will support workflow extensions for IBM Cloud Provisioning and Management for z/OS.

For more information on the z/OS Management Facility, see: ibm.com/systems/z/os/zos/zosmf/

Pricing and Service

What is the Container Pricing for IBM Z pricing announcement?

IBM is introducing Container Pricing for IBM Z for qualified solutions running on IBM z14 and IBM z13™ servers. Container Pricing will provide simplified software pricing for qualified solutions, combining flexible deployment options with competitive economics that are directly relevant to those solutions.

Container Pricing can scale from collocated solutions within existing LPARs, through to separate LPARs, up to multiple-LPAR solutions, without directly impacting the cost of unrelated workloads. Additionally, Container Pricing will simplify pricing and billing on the IBM Z platform, by superseding a number of existing price offerings and by fully automating the billing process.

IBM initially announces three solutions that will be enabled with Container Pricing:

- The New Application Solution will provide a highly competitive stand-alone priced offering for new z/OS applications, such as CICS® TS or WebSphere applications. The New Application Solution is the strategic replacement for the current zCAP and IWP priced offerings.
- The Application Development and Test Solution will provide highly competitive stand-alone pricing for z/OS based development and test workloads. Modern DevOps tooling can be optionally added at uniquely discounted prices.
- The Payments Solution will provide a 'per payment' pricing option for IBM Financial Transaction Manager for z/OS deployments. This new offering directly ties operational cost to business value by basing the price on the number of payments processed, rather than capacity used to process them.

Container Pricing for IBM Z is planned to be available by year end 2017 and enabled in z/OS V2.2 and z/OS V2.3 with the PTFs for APARs associated with fix category IBM Function Pricing Infrastructure. z/OS will enhance both the Workload Manager capability of z/OS (z/OS WLM) and the Sub-Capacity Reporting Tool (SCRT) to support Container Pricing. This includes:

- The introduction of a new Tenant Resource Group capability within z/OS WLM to allow the metering and optional capping of workloads, along with the ability to map those workloads directly to Container Pricing.
- Enhancements to SCRT to capture eligible Container Pricing workloads, allowing for the billing of those solutions independently of traditional Sub-Capacity pricing.

JES

I am a JES3 customer, what actions do I have to take?

At this time there is no action required of any JES3 customer. The statement of direction issued with the z/OS 2.3 RFA is meant to assist you in long term planning. You can continue to use JES3 and it will continue to be supported and maintained with the function that is there today.

Why is IBM making this statement now about JES2 being strategic?

IBM would like to make sure that customers understand where we are investing so that they can make informed long-term choices with regards to features on z/OS.

Is JES3 being withdrawn from marketing or is service being discontinued?

At this time, there are no plans to either withdraw JES3 from marketing or discontinue service for JES3.

As a JES3 customer should I be considering migrating to JES2?

Over the last several releases of JES2 a number of significant improvements have been delivered to assist in reducing the effort of migration. For example, JES2 now supports 8 character Jobclass names, z/OS JCL now supports SYSTEM= on the job card as an alternative to the JES3 MAIN SYSTEM option, JES2 supports STARTBY and HOLDUNTIL as a replacement for deadline scheduling, and the JES3 FORMAT card is replaced with function on the JCL OUTPUT statement. In addition, a JES3 JECL translator is available in JES2 to translate the more commonly used JES3 JECL syntax into JCL and JES2 JECL. From a functional perspective JES2 has added facilities like spool migration and merge, dynamic checkpoint expansion and dynamic checkpoint tuning all to make management easier. In the future, we intend to support encryption of spool in JES2. IBM is open to implementing requirements that would make the migration even easier.

If I want to better understand the JES3 to JES2 migration effort where can I start?

There is a Redpaper which covers much of this here:

<http://www.redbooks.ibm.com/abstracts/sg248083.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

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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