

# IBM z/OS Version 2 Release 3 enhancements and statements of direction

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## At a glance

IBM<sup>(R)</sup>'s z/OS<sup>(R)</sup> V2.3 operating system delivers innovations designed to build the highly scalable and highly securable next-generation infrastructure needed. z/OS V2.3 delivers the performance, availability, scale, I/O support, and security to provide the infrastructure, on or off premises or provisioned as-a-service, that allows for instant reacting to business opportunities.

This z/OS V2.3 announcement describes new capabilities designed to support:

- Transparent cloud tiering
- IBM Cloud Provisioning and Management for z/OS
- z/OS platform software installation improvements

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## Overview

### Transparent cloud tiering

z/OS DFSMS plans to extend DFSMSHsm automatic migration to support DS8880 transparent cloud tiering. Through SMS management class policy, clients can define which data sets should migrate to cloud object storage. During the DFSMSHsm automatic migration window, DFSMSHsm will select eligible data sets that meet this policy criteria and invoke transparent cloud tiering to migrate these data sets to cloud object storage without the data passing through the Z processor. Additionally, SMS management class adds size-based criteria such that DFSMSHsm can be directed to take a specific action based on the size of a data set. These actions range from taking no action, performing a class transition between online storage tiers, or migrating a data set to a specific tier of storage, including disk, tape, or cloud.

Support will be provided through the following APARs:

- DFSMSHsm: OA52901
- AMS: OA52912
- SMS: OA52913
- ISMF: OA52914
- Naviquest: OA52929
- Catalog: OA53574
- DFSMSHsm V2R1 coexistence: OA54020

IBM plans to deliver this support by December 31, 2017.

## IBM Cloud Provisioning and Management for z/OS

Cloud Provisioning and Management for z/OS plans to deliver additional enhancements to the z/OS platform's cloud capabilities. These additional cloud capabilities are designed to enable you to:

- Provide CPU utilization metering and capping. A cloud service provider will now be able to meter the CPU utilization by a specific tenant to allow proper charge-back. Also, CPU utilization can now be capped, to prevent the possibility of runaway costs for a tenant.
- Join multiple templates into a composite template definition. Using the z/OSMF graphical user interface, a service provider will be able to define a composite template of different middleware types with appropriate connectivity across these components. Using the composite template, a consumer will be able to provision a complex environment that consists of multiple middleware services in a matter of minutes.
- Support moving a middleware instance from the system it is provisioned on to another system in the cloud domain. This enhancement is designed to allow dynamically provisioned instances to be relocated on other systems in the case of an orderly shutdown of the system where they are currently running.
- Define a shared resource pool. The shared resource pool can be used to obtain resources for any template that a cloud tenant can provision. This enhancement simplifies the administrator task of setting up a template for tenant use, which today requires template-specific resource pool definition.
- Build actions for the cloud service. This enhancement provides a web-based user interface to define actions during the process of creating a cloud service template.
- Simplify workflow creation by using Workflow Editor, the web-based GUI, to build workflow. Users will be able to define multiple variables in a single panel and will be able to copy steps or variables and rename steps or variables.

IBM plans to deliver these enhancements for IBM Cloud Provisioning and Management for z/OS on z/OS V2.3 by December 31, 2017, with PTFs for APAR PI88944, and on z/OS V2.2 soon thereafter.

### z/OS platform software installation improvements

As announced in Software Announcement [217-246](#), dated July 17, 2017, IBM and other leading industry software vendors have been collaborating on a variety of installation-related improvements. IBM intends to help drive z/OS platform-wide improvements in installation and deployment, along with functions that are intended to enable other software vendors to use them. Many of the functions designed to meet these requirements are now available in the z/OSMF component of z/OS V2.2 in PTFs, and more functions are planned. See the prior announcements for more detail.

Also, in z/OS V2.3, support is added for several additional z/OSMF Software Management functions along with changes to the ServerPac offering to further this strategy. These functions also fulfill some of the prior statements of direction made in Software Announcement [217-085](#), dated February 21, 2017.

The ServerPac offering infrastructure now supports ordering and delivery of products that are not SMP/E packaged. The products that are available today in the z/OS Standalone Products and Fixes ordering path in Shopz, including non-SMP/E-packaged products, are planned to begin to be made available in ServerPac starting in 2017. All are planned to be available in ServerPac by April 2018. As they are made available in ServerPac, they are planned to be removed from the z/OS stand-alone ordering path in Shopz. This new function is planned to allow you to order both SMP/E packaged products and those that are not packaged using SMP/E together or separately in a ServerPac package, and install them the same way using the same ServerPac installation process.

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## Statement of general direction

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### OpenSSH statement of direction

z/OS V2.3 plans to be the last release of the operating system to provide support in OpenSSH for the following functions. Many of these changes are being driven by the OpenSSH community as a response to providing improved security for the entire industry:

- SSH Version 1 protocol (also referred to as SSH-1).
- Running without privilege separation for sshd (SSH Daemon).
- Support for the legacy v00 OpenSSH cert format.
- Support for pre-authentication compression by sshd (SSH Daemon). SSH clients will either need to support delayed compression mode or otherwise compression will not be negotiated.
- Support for Blowfish and RC4 ciphers and the RIPE-MD160 HMAC (Hash Message Authentication Code).
- Accepting RSA keys smaller than 1024 bits.

In addition, z/OS V2.3 plans to be the last release of the operating system to have enabled at run time the following functions by default:

- Support for the 1024-bit Diffie Hellman key exchange, specifically diffie-hellman-group1-sha1
- Support for ssh-dss, ssh-dss-cert-\* host and user keys
- Support for MD5-based and truncated HMAC algorithms, specifically hmac-sha1-96
- Support for the Triple DES cipher, specifically 3des-cbc, in the SSH client's default algorithm proposal

### GDPS<sup>(R)</sup> SSC statement of direction

IBM intends to extend the capabilities of GDPS to the IBM Db2<sup>(R)</sup> Analytics Accelerator for z/OS, V7.1 deployment on IBM Z (Accelerator on IBM Z). The initial support will be in GDPS/ Multi-Target Metro Mirror. GDPS/MTMM consists of a multisite sysplex cluster with all critical data synchronously mirrored and provides Continuous Availability and Disaster Recovery (CA/DR) protection for customers with two sites separated by up to 200 fibre kilometers.

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## Reference information

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Software Announcement [117-044](#), dated July 17, 2017(z14)

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## Business Partner information

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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 217-536](#)

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## Corrections

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**(Corrected on November 21, 2017)**

Corrected title.