Consolidated Service Test

CST4Q24 (RSU2412)

January 7, 2025

Prepared by: CST Team

As part of IBM's commitment to quality and continuous improvement, IBM established the Consolidated Service Test (CST) team consisting of cross product test representatives. CST enhances the way IBM tests and recommends maintenance packages for z/OS software, including the major subsystems. In the past, many of the key product families on the z/OS software stacks had different recommended maintenance strategies, with little or no coordination between them. CST has been put in place to address this issue so that you can obtain and install the recommended PTF service level from the CST Web site for z/OS and their key subsystems consolidated into one package. This means you will receive a tested level of service for all of the following products/tools:

- z/OS
- CICS Transaction Server for z/OS
- Db2 for z/OS
- GDPS/Metro and GDPS/MGM
- IMS
- IRLM
- JAVA
- WebSphere Application Server for z/OS
- IBM MQ for z/OS
- z/OS Management Facility

Note: For a complete list of products/tools and levels tested, please refer to the *What Service was Installed* section.

We provide these recommendations free of charge to all z/OS customers. Note that CST testing is performed in addition to existing test criteria and does not replace any current Quality Assurance processes performed by other products.

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What is the CST Environment?

3931 – A01 (A131)	Microcode at Driver 51 + MCL bundle S37 with CFCC P30718.013 (R25 srv lvl 02.65) • 9 LPARs running z/OS • 20 general processors shared amongst all 9 LPARs, 6 ICF processors and 6 zIIP processors • 1 GDPS control image with 8192M of Central Storage • 6 z/OS LPARs with 20480M of Central Storage • 2 z/OS LPARs with 204800M of Central Storage • 2 CFs with 40G storage at CFCC level 25 and 2 dedicated processors each
3931 – A01 (A320)	Microcode at Driver 51 + MCL bundle S34 with CFCC P30718.012 (R25 srv lvl 02.64) • 87 general processors, 8 zIIPs • 2 z/OS images running 20480M each • 2 z/OS images running 204800M each • 2 GDPS control images running 8192M each • 1 z/OS image running 10240M • 2 CFs with 40G storage at CFCC level 23 and 2 dedicated processors
8561 – T01 (T62)	Microcode at Driver 41 + MCL bundle S85 with CFCC P46603.008 (R24 srv lvl 00.30) • 64 general processors, 4 zIIPs • 4 z/OS images running 20480M each • 1 GDPS control image running 8192M • • 2 CFs with 40G storage at CFCC level 24 and 2 dedicated processors
DS7770 Virtual Tape Library	16 emulated 3490 addresses
DS8886 GNP21 (SQ45) DS8951 KYN10 (SQ73) DS8951 KWB00 (SQ74) DS8951 LMK21 (SQ59) DS8951 LMK61 (SQ60)	Microcode level is 88.58.3.0 Microcode level is 89.33.35.0 Microcode level is 88.33.45.0 Microcode level is 89.32.40.0 Microcode level is 89.32.40.0
GDPS	Configuration info: we simulate two logical sites; it is purely a logical designation.
Lan attached	• Both SNA and TCPIP
Data Sharing Groups	• 4 Way CICS/Db2 utilizing WAS/MQ and incorporating CICS Shared Temporary Storage CF Servers • 6-way Db2/CICS (Db2 V12R1M509) • 8-way Db2/CICS (Db2 V13R1M100) • 6-way -- Db2, CICS, IBM MQ, WAS, IMS (Db2 V12R1M509) • 3-way – Db2 (Db2 V12R1M100) • 3-way – Db2 (Db2 V12R1M506) • (2) 4-way Db2/CICS (Db2 V13R1M503, Db2 V13R1M502) • 8-way Db2 (Db2 V13R1M100) • 4-way -- Db2, CICS, IBM MQ, WAS, IMS (Db2 V13R1M502) • 6-way Db2/WAS (Db2 V12R1M509) • (2) 4-way Db2/WAS (Db2 V13R1M503, Db2 V13R1M502) • (2) 4-way Db2/WAS via CICS (Db2 V13R1M503, Db2 V13R1M502)

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	2-way Db2 for system back-up, restore and recovery testing (Db2 V13R1M503) 6-way Db2 V12R1M509 4-way Db2 V13R1M503 4-way Db2 V13R1M502 6-way CICS/VSAM-RLS and non-RLS (2) 4-way CICS/VSAM-RLS and non-RLS (2) 4-way TVS batch setup (2) 4 - Way CICS/VSAM workload using 3270 and CICS/Liberty Front ends 6-way IMS/TM (2) 4-way IMS/TM (2) 4-way IMS FastPath 4-way IMS/OTMA SMQ Cascading Transactions 6-way IMS/OTMA SMQ Cascading Transactions 6-way IMS/CICS (2) 4-way IMS/CICS 6-way IBM MQ/Db2 using Shared Queues (Note: Db2 used for Administration and Data Storage purposes) (2) 4-way IBM MQ/Db2 using Shared Queues and Clustering (Note: Db2 used for Administration and Data Storage purposes) - Background workloads to exploit CICS CF Servers (Shared Temporary Storage, Coupling Facility Data Tables and Named Counter Server)

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What Service was Installed:

NOTE: Refer to Appendix A for a list of the excluded maintenance due to unresolved PE fixes.

Product/Tool	Maintenance Level
- CICS TS 6.1 - CICS TS 6.2 - CICS TS 5.6	All service through the end of September 2024 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of November 2024.
- Db2 V12 - Db2 V13	All service through the end of September 2024 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of November 2024.
- GDPS V4.6.0 - GDPS V4.7.0	All service through the end of September 2024 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of November 2024
- IMS V15 - IMS V15.2 - IMS V15.3 - IMS V15.4 - IMS V15.5	All service through the end of September 2024 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of November 2024.
- IRLM 2.3	All service through the end of September 2024 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of November 2024.
JAVA Technology Edition - IBM 31-bit SDK for z/OS V8 - IBM Semeru Runtime Certified Edition for z/OS, Version 11 - IBM Semeru Runtime Certified Edition for z/OS, Version 17	All service through the end of November 2024 not already marked RSU.
WebSphere Application Server for z/OS V9 – Service level 9.0.5.21 V8.5 – Service level 8.5.5.26	All service through the end of November 2024 - Java 8, build 8.0.8.31 - pmz6480sr8fp31-20240822_01 All service through the end of November 2024 - Java 8, build 8.0.8.31 - pmz6480sr8fp31-20240822_01
- IBM MQ V9.4.0 LTS - IBM MQ V9.4.1 CD	All service through the end of September 2024 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of

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- IBM MQ V9.3.0 LTS	November 2024.
- z/OS V2R5 - z/OS V3.1	All service through the end of September 2024 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of November 2024.

Roll-out of CST4Q24:

   IBM recommends that the Customer stage the roll-out of the quarterly recommended service upgrade (RSU) by product on any single system, and not change all the major products (such as z/OS, Db2, IMS, CICS, GDPS, Java, IBM MQ, WebSphere Application Server for z/OS) all at once. Changing all the major products in a single system simultaneously complicates the tasks of problem diagnosis and back-out if a severe problem occurs.

   Additionally, IBM recommends that the Customer thoroughly test the maintenance level applied, including testing in a parallel sysplex application data sharing environment.

   IBM makes this recommendation based on our testing in the environment described in this report. Your environment and applications are likely to differ in numerous ways.   Therefore, your results may be different than ours.   The Customer must consider their environment, their maintenance philosophy and their production needs in making the final decision on what maintenance to apply, and how you roll this maintenance out in your environment.

What's New

As part of IBM's continuing efforts to provide Customers with suggestions on maintaining their z/OS systems for availability, we have provided a new document which describes a *z/OS Preventive Maintenance Strategy to Maintain System Availability.*

A link to the document can be found on the "Mission" page of the CST website:

http://www-03.ibm.com/systems/z/os/zos/support/servicetest/links.html

or can be directly accessed at:

https://www.ibm.com/support/pages/node/664965

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Highlights of CST4Q24

This quarterly CST focused on enhancements to the environment and workloads.   This included:

- Additional product(s)

- Additional tool(s)

- Additional product / tool scenarios

- Additional workloads / applications

- Workloads run continuously

- Service applied, as needed

Some highlights follow:

- CICS/TS
  - (In Progress) Working to enhance CICS environment to adopt zero trust.
  - (Completed) CICS environment upgraded to CICS/TS 6.2 from CICS/TS 5.6

- IMS
  - (Completed) Migration of IMS 15.4 to IMS 15.5
  - (In Progress) IBM z Pervasive Encryption – Setup and run IMS Workload with encrypted IMS datasets.

- MQ
  - MQ V9.2.0 LTS was removed from the CST environment as we only test N and N-1 versions of product releases. With the release of MQ 9.4.0, this causes 9.2.0 to be N-2, and no longer in scope of our testing.
- z/OS
  - z/OS V2R4 went out of support at the end of September 2024 & has subsequently been removed from the CST environment.

- CICS, Db2, GDPS, IMS, IBM MQ, WAS, and z/OS recovery scenarios performed

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Problems Encountered during CST4Q24:

The APARs listed in the table below represent the problems the CST team encountered during the quarterly test; however, if a problem was encountered and corrected for this recommendation, it will not be listed in the table below. The APARs listed below are either open, or their associated PTFs were not yet available for testing in the CST environment prior to this recommendation.

Customers should verify APAR status through normal means.

Note: Consolidated Service Test does not replace the regular service procedure. If a problem is encountered with product code, you should report the problem to IBM support.

CICS/TS 6.1	
PH64449	GRAPHQL UPDATES FOR DISPLAYING FIELDS CORRECTLY IN CICS EXPLORER
CICS Explorer	
APAR IJ53157	CICS EXPLORER HAS INCORRECT TYPE FOR "NATURE" AND "DEVICE" TERMINAL FIELDS

How is the Customer going to obtain and install the CST4Q24 level of service?
Please proceed to the CST website for the steps involved.

The URL is https://www.ibm.com/support/pages/ibm-zos-consolidated-service-test-and-rsu

For Questions and Comments
To submit questions or comments regarding Consolidated Service Test or the CST Web site, please use the feedback form on the CST web site (URL is:
http://www-03.ibm.com/systems/z/os/zos/support/servicetest/contact.html

Appendix A: Excluded Maintenance

- None