Consolidated Service Test

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
- CICS Transaction Gateway for z/OS
- DB2 for z/OS
- Geographically Dispersed Parallel Sysplex (GDPS/PPRC) and XRC
- IMS
- IRLM
- JAVA
- WebSphere Application Server for z/OS
- WebSphere MQ for z/OS
- IBM DB2 Tools
- IBM Tivoli OMEGAMON
- InfoSphere Guardium S-TAP for IMS on z/OS
- z/OS Management Facility
- z/OS Problem Determination Tools

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.

2827 – H89 (P131)	Microcode at Driver 15F + MCL bundle 21 with CFCC H49559.011 (R19 srv lvl 2.14) • 8 LPARs running z/OS • 50 general processors shared amongst all 8 LPARs, 4 ICF processors, 6 zIIPs and 6 zAAPs logical processors • 1 GDPS control image with 4864 of Central Storage • 4 z/OS LPARs with 14848M of Central Storage • 6 z/OS LPARs with 10240M of Central Storage • 2 CFs with 25G storage at CFCC level 19 and 2 dedicated processors each
2964 - N96 (S92)	Microcode at Driver D22H + MCL bundle S03 with CFCC code N98780.002 • 2 LPARs running z/OS
2097- E40 (H87)	Microcode at Driver 79F + MCL bundle 79 with CFCC code N24403.017 (R16 srv lvl 4.11) • 26 General processors, 2 ICF processors, 2 zIIPS, 6 zAAPs • 4 LPARs running z/OS with 10240M of Central Storage 1 GDPS control images with 3840MB Central storage • 1 CF with 25G storage at CFCC level 16 and 2 dedicated processors
2817 - M66 (R01)	Microcode at Driver 93G + MCL bundle 73 with CFCC code N48162.023 (R17 srv lvl 10.31) • 42 General processors on all LPARs, 4 ICF processor • 1 z/OS Image with 4096M Central Storage • 2 z/OS Images with 10240M of Central Storage each • 2 CFs with 25G storage at CFCC level 17 and 2 dedicated processors each
2827 – HA1 (P03)	Microcode at Driver 15F + MCL bundle 6 with CFCC H49559.003 (R19 srv lvl 0.31) • 96 general processors, 2 zIIPS, 2 zAAPs • 2 z/OS images running 770048M each
2827 – HA1 (P286)	Microcode at Driver 15F + MCL bundle 17 with CFCC H49559.010 (R19 srv lvl 0.31) • 96 general processors, 2 zIIPS, 2 zAAPs • 2 z/OS images running 770048M each
Automated Tape Library (ATL)	3584 • 16 3592 tape drives, FICON-attached
Virtual Tape Server (VTS)	3494 B20 VTS • AIX with VTS CU • 32 emulated 3490 addresses in this VTS • 6 VTS 3590 drives (not directly accessible from z/OS) • 16 3590 tape drives are accessible from z/OS (FICON)
DASD (2107/242x) DS8000=2107 25030 (SQ00) DS8000=2421 Y2430 (SQ13) DS8000=2421 Y4360 (SQ14) DS8000=2421 FA820 (SQ18) DS8000=2421 FB240 (SQ19) DS8800=2421 XM550 (SQ31) DS8800 2421 XD070 (SQ32)	5 Enterprise Storage Server DS8000. Microcode level is 64.36.103.0 (R12p.9b140924a) Microcode level is at 64.36.75.0 (R12p.9b130317ab) 2 Enterprise Storage Server DS8800 Microcode level is R86.31.123.0 (R10g.4b140620a)

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/CTG/MQ and incorporating CICS Shared Temporary Storage CF Servers • 6-way DB2/CICS • 6-way -- DB2, CICS, WebSphere MQ, WAS, IMS • 3-way -- DB2 (DB2 V10CM) • 3-way -- DB2, JES3 DB2 Tools • (2) 4-way DB2/CICS • 4-way -- DB2, CICS, WebSphere MQ, WAS, IMS, OMEGAMON • 6-way DB2/WAS • (2) 4-way DB2/WAS • (2) 4-way DB2/WAS via CTG/CICS • 2-way DB2 for system back-up, restore and recovery testing • 6-way DB2V10 NFM • 3-way DB2 V10 CM • 4-way DB2V11 NFM • 4-way DB2V11 CM • 6-way CICS/VSAM-RLS and non-RLS • (2) 4-way CICS/VSAM-RLS and non-RLS • (2) 4-way TVS batch setup • 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 WebSphere MQ/DB2 using Shared Queues (Note: DB2 used for Administration and Data Storage purposes) • (2) 4-way WebSphere 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)

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

- CICS Transaction Gateway V9.0 (z/OS)	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015.
- CICS TS 5.1 - CICS TS 5.2 - CICS Interdependency Analyzer for z/OS V3.2	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015 .
- DB2 V10 - DB2 V11	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015 .
z/OS Problem Determination Tools - Application Performance Analyzer Version 12 Release 1 - Application Performance Analyzer Version 13 Release 1 - Debug Tool for z/OS Version 12 Release 1 - Debug Tool for z/OS Version 13 Release 1 - Fault Analyzer for z/OS Version 12 Release 1 - Fault Analyzer for z/OS Version 13 Release 1 - File Manager for z/OS Version 12 Release 1 - File Manager for z/OS Version 13 Release 1	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015.
- GDPS V3.10 - GDPS V3.11	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015 .
IBM Tivoli - IBM Tivoli Monitoring Services on z/OS V6.2.3/6.3.0 - IBM Tivoli OMEGAMON XE for CICS on z/OS V5.1.0 / V5.3.0 - IBM Tivoli OMEGAMON XE for CICS Transaction Gateway on z/OS V5.1.0 - IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V5.2.0 / V5.1.1 - IBM Tivoli OMEGAMON XE for IMS on z/OS V5.1.0 / V4.2.0 - IBM Tivoli OMEGAMON XE for Mainframe Networks V5.1.0 / V4.2.0 - IBM Tivoli OMEGAMON XE for Storage on z/OS V5.2.0 / V5.3.0 - IBM Tivoli OMEGAMON XE on	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015 .

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z/OS V5.1.0 / V5.3.0 -IBM Tivoli OMEGAMON XE for Messaging on z/OS V7.1.0 / V7.3.0	
- IMS V12 - IMS V13	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015 .
- IRLM 2.3	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015 .
IBM DB2 Tools DB2 Tools: - Administration Tool for z/OS V10.2 and V11.1 - High Performance Unload for z/OS V4.2 - Object Comparison Tool for z/OS V10.2 and V11.1	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015 .
- IBM 31-bit SDK for z/OS,Java 2 Technology Edition, V6, service level SR16 FP3 (PTF UI24691) - IBM 64-bit SDK for z/OS,Java Technology Edition, V6, service level SR16 FP3 (PTF UI24692) - IBM 31-bit SDK for z/OS,Java Technology Edition, V7, service level SR8 FP10 (PTF UI24695) - IBM 64-bit SDK for z/OS,Java Technology Edition, V7, service level SR8 FP10 (PTF UI24696)	All service through the end of May 2015 not already marked RSU.
InfoSphere Guardium S-TAP for IMS on z/OS V9.1	All service through the end of March 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of May 2015 .
WebSphere Application Server for z/OS V8.0 – Service level 8.0.0.xor z/kMlevClev(V8.0 – Service levTlevT24695)	

(P24695)

z/O:pJp

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, CTG, GDPS, Java, WebSphere MQ, WebSphere Application Server for z/OS, IBM DB2 Tools, IBM Tivoli OMEGAMON, InfoSphere Guardium S-TAP for IMS on z/OS and z/OS Problem Determination Tools) 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.

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 "links" page of the CST website:

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

or can be directly accessed at:

http://www-03.ibm.com/systems/resources/zos_preventive_maintenance_strategy.pdf

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
  - (Completed) Upgrade to CICS/TS 5.2 from CICS/TS 5.1
  - (Completed) Removal of CICS/TS 4.2 while upgrading to CICS/TS 5.1
- DB2
  - (Added) One 4 way was migrated to V11NFM
  - (Added) One 4-way was migrated to V11CM
  - (Added) One 6-way migrated to V10NFM
  - (Added) One 3-way migrated to V10CM9
  - (Added) 1 4-way V10NFM
  - (Added) 2-way to V11NFM
  - (Added) 3-way JES3 V10NFM

- IBM DB2 Tools:

  - DB2 Tools:
    - (Added) High Performance Unload V4.2 testing with DB2 V10 and V11
    - (Added) Administration Tool for z/OS V11.1 was tested with DB2 V10 and V11
    - (Added) Object Comparison Tool for z/OS V11.1 was tested with DB2 V10 and V11
    - (Added) Administration Tool for z/OS V10.2 was tested with DB2 V10
    - (Added) Object Comparison Tool for z/OS V10.2 was tested with DB2 V10

- IBM Tivoli
  - (Completed) We have installed and are testing the following:
  - IBM Tivoli Monitoring Services on z/OS V6.2.3 and 6.3.0
  - IBM Tivoli OMEGAMON XE for CICS on z/OS V5.1.0 and V5.3.0
  - IBM Tivoli OMEGAMON XE for CICS Transaction Gateway on z/OS V5.1.0
  - IBM Tivoli OMEGAMON XE for IMS on z/OS V4.2.0 and V5.1.0
  - IBM Tivoli OMEGAMON XE for Mainframe Networks V.4.2.0 and V5.1.0
  - IBM Tivoli OMEGAMON XE for Storage on z/OS V5.2.0 and V5.3.0
  - IBM Tivoli OMEGAMON XE on z/OS V5.1.0 and V5.3.0
  - IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V5.1.1 and V5.2.0
  - IBM Tivoli OMEGAMON XE for Messaging on z/OS V7.1.0 and V7.3.0

- WebSphere MQ

  - (Completed) Migration from WebSphere for MQ V7.1.0 to V8
  - (Enabled) 64 bit buffer pool for MQ V800 queue managers
  - (Enabled) 8 Byte log RBA for V800 queue managers

- GDPS
  - (In progress) Setting up BHS (Basic Hyperswap) to perform planned and unplanned hyperswaps
  - (In progress) Migrating 3.10 to 3.11 and 3.11 to 3.12
  - (Completed) Installation of GDPS/XRC 3.12

- z/OS:
  - (Completed) Installation of z13 processor into CST with all required service
  - (In progress) Planning to replace z10 2097 processor with z13 processor
- CICS, CTG, DB2, GDPS, IMS, WebSphere MQ, WAS, and z/OS recovery scenarios performed

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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.

OA47533	Abend0C4 in AOMDEXT after an IOS000I message was displayed for tape
OA47862	Abend0C4 RC11 in IGG0425P
OA47131	IGWIRPAD Abend0F4 RSN1419A084 or IEBPDSE RC8 RSN01188011 for double allocation errors
PI43509	False GEO112E GDPS takeover prompt for XDR managed system
OA47782	Abend0C4 in ERB3RTSR
OA47612	Abend9C4B4 RC0901 ANTU2500E IN MODULE ANTXIOLG
PI40992	MQ started a scheduled SDUMP but did not supply an ECB or SRB to capture in the dump
PI42456	Abend0C4 RC00000004 in CSQXSTBC
OA47867	Wait State in RSM RUCA stack overflow when RSM ctrace is active
OA48122	Abend0DB RC15 in IOSVSLIH after unplanned hyperswap

Please proceed to the CST website for the steps involved.

The URL is http://www-03.ibm.com/systems/z/os/zos/support/servicetest/

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)

: Excluded Maintenance

DB2 V10
Excludes (UI24674, UI25954

z/OS V2R1
Excludes (UA76085, UA76343, UA76639, UA76654)

z/OS V1R13
Excludes (UA76084, UA76177, UA76185, UA76342, UA76653)