

Consolidated Service Test



CST3Q15 (RSU1509)

October 1, 2015

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
- 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.

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What is the CST Environment?

2964 – NC9 (S131)	Microcode at Driver 22H + MCL bundle S16 with CFCC N98780.005 (R20 srv lvi 00.20) <ul style="list-style-type: none"> • 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 20 and 2 dedicated processors each
2964 - N96 (S134)	Microcode at Driver 22H + MCL bundle S16 with CFCC code N98780.005 <ul style="list-style-type: none"> • 2 LPARs running z/OS
2817 - M66 (R01)	Microcode at Driver 93G + MCL bundle 73 with CFCC code N48162.023 (R17 srv lvi 10.31) <ul style="list-style-type: none"> • 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 42 with CFCC H49559.013 (R19 srv lvi 2.18) <ul style="list-style-type: none"> • 96 general processors, 2 zIIPs, 2 zAAPs • 2 z/OS images running 770048M each • 1 CF with 25G storage at CFCC level 19 and 2 dedicated processors
2827 – HA1 (P286)	Microcode at Driver 15F + MCL bundle 42 with CFCC H49559.013 (R19 srv lvi 2.18) <ul style="list-style-type: none"> • 96 general processors, 2 zIIPs, 2 zAAPs • 2 z/OS images running 770048M each • 1 CF with 25G storage at CFCC level 19 and 2 dedicated processors
Automated Tape Library (ATL)	3584 <ul style="list-style-type: none"> • 16 3592 tape drives, FICON-attached
Virtual Tape Server (VTS)	3494 B20 VTS <ul style="list-style-type: none"> • 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 86.31.167.0 (R10g.4b150316a)
GDPS	Configuration info: we simulate two logical sites, it is purely a logical

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	designation.
Lan attached	Both SNA and TCPIP
Data Sharing Groups	<ul style="list-style-type: none"> • 4 Way CICS/DB2 utilizing WAS/CTG/MQ and incorporating CICS Shared Temporary Storage CF Servers • 6-way DB2/CICS • 8-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)

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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 Transaction Gateway V9.0 (z/OS)	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015.
- CICS TS 5.1 - CICS TS 5.2 - CICS Interdependency Analyzer for z/OS V3.2	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015 .
- DB2 V10 - DB2 V11	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 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 June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015.
- GDPS V3.11 - GDPS V3.12	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 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 V5.3.0 / V5.2.0 - IBM Tivoli OMEGAMON XE for IMS on z/OS V5.1.0 / V4.2.0	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015 .

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<ul style="list-style-type: none"> - 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 z/OS V5.1.0 / V5.3.0 - IBM Tivoli OMEGAMON XE for Messaging on z/OS V7.1.0 / V7.3.0 	
<ul style="list-style-type: none"> - IMS V12 - IMS V13 	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015 .
<ul style="list-style-type: none"> - IRLM 2.3 	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015 .
<p>IBM DB2 Tools</p> <p><u>DB2 Tools:</u></p> <ul style="list-style-type: none"> - 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 June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015 .
<ul style="list-style-type: none"> - IBM 31-bit SDK for z/OS V710 - IBM 64-bit SDK for z/OS V710 - IBM 31-bit SDK for z/OS V8 - IBM 64-bit SDK for z/OS V8 	All service through the end of August 2015 not already marked RSU.
<p>InfoSphere Guardium S-TAP for IMS on z/OS V9.1</p>	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015 .
<p>WebSphere Application Server for z/OS</p> <p>V8.0 – Service level 8.0.0.10</p> <p>V8.5 – Service level 8.5.5.6</p>	<p>WAS 8.0 - All service through PTF UI24681</p> <p>WAS 8.5 - All service through PTF UI28580</p>
<ul style="list-style-type: none"> - WebSphere MQ V7.1.0 - WebSphere MQ V8.0.0 	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015 .
<ul style="list-style-type: none"> - z/OS V1R13 - z/OS V1R13H - z/OS V2R1 	All service through the end of June 2015 not already marked RSU. PE resolution and HIPER/Security/Integrity/Pervasive PTFs and their associated requisites and supersedes through the end of August 2015 .

Roll-out of CST3Q15:

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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.

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 "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

Highlights of CST3Q15

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:

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- DB2
 - (Added) One 8 way data sharing group with CICS
- Infosphere Guardium S-TAP for IMS on z/OS
 - (In Progress) We are in the planning stages of migrating from InfoSphere Guardium S-TAP for IMS on z/OS 9.1 to V10
- IBM Tivoli:
 - (Completed) Migration from IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V5.2.0 to V5.3.0
- JAVA:
 - (Completed) Migration from (IBM 31-Bit SDK for z/OS Java 6) and IBM 31-Bit and 64-Bit SDK for z/OS Java 7 to IBM 31 bit SDK for z/OS and IBM 64 bit SDK for z/OS for 7.1.0 and IBM 31 bit SDK for z/OS and IBM 64 bit SDK for z/OS for 8
- WebSphere MQ
 - (Completed) Migration from WebSphere for MQ V7.1.0 to V8
- GDPS
 - (In progress) Setting up BHS (Basic Hyperswap) to perform planned and unplanned hyperswaps
 - (Completed Migration of 3.10 to 3.11 and 3.11 to 3.12
- z/OS:
 - (In Progress) Migration to z/OS V2R2 preparation
- CICS, CTG, DB2, GDPS, IMS, WebSphere MQ, WAS, and z/OS recovery scenarios performed

Problems Encountered during CST3Q15:

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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.

CICS/TS 5.1.0	
PI48818	AbendAEIP at CICS PLTPI time an EXEC CICS ENABLED(MYLIBRARY) ENABLE was issued
CICS/TS 5.2.0	
PI48009	Abend0C4 program check protection exception in DFHDDDI
PI44428	Logger message DFHLG0772 reflects DASDONLY NO when you are using DASDONLY YES
CICS/REXX	
OA48382	CICS/Rexx supplied program CICSECX2 has incorrect information in it's header
DB2 V11	
PI40687	Utilities run as stored procedures receive Abend04E-00E50098 when WLM is cancelled or soft-cancelled
PI49071	Abend04E RC00E4030F in DSNURLOG during REORG on HASH table space with HASH overflow index
PI45050	Abend04E RC00E4D5D2 in DSNUBADR
GDPS 3.12	
PI48322	Abend0C1 for started task GEOXCFST for ENF listener GEOEX641 in IEFENFNM
PI37280	Transaction XDRSINOCKPT failed for VM System
Z/OS V1R13	
OA48591	Security vulnerability in module ERBDSM3S
Z/OS V2R1	
OA48814	Abend0A3 during shutdown for PFA
OA48858	Overlay of PSAPCCAV
OA48572	AbendC0D RC41000210 and possible data loss when SCM evacuation or defragmentation processes page table
OA48854	Predictive Failure Analysis (PFA) Abend378 RC14 at PFA shutdown in AIRHMESA and AIRHMEJS

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How is the Customer going to obtain and install the CST3Q15 level of service?

Please proceed to the CST website for the steps involved.

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

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

Added on 9/23/15 from MVSBUILD.CST15Q2.FILEBB

DB2 V10 Exclude:
(UI26969)

DB2 V11 Exclude:
(UI26970)

z/OS V2R1 Excludes:
(UA76713, UA76715, UA76972, UA77456)