

z/VSE News Update, Hints & Tips

Ingolf Salm

salm@de.ibm.com

Ingolf's z/VSE Blog: <https://www.ibm.com/developerworks/mydeveloperworks/blogs/vse>

Trademarks

The following are trademarks of the International Business Machines Corporation in the United States and/or other countries.

IBM*
IBM Logo*

* Registered trademarks of IBM Corporation

The following are trademarks or registered trademarks of other companies.

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.
Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license therefrom.
Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.
Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.
INFINIBAND, InfiniBand Trade Association and the INFINIBAND design marks are trademarks and/or service marks of the INFINIBAND Trade Association.
Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.
UNIX is a registered trademark of The Open Group in the United States and other countries.
Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.
ITIL is a registered trademark, and a registered community trademark of the Office of Government Commerce, and is registered in the U.S. Patent and Trademark Office.
IT Infrastructure Library is a registered trademark of the Central Computer and Telecommunications Agency, which is now part of the Office of Government Commerce.

* All other products may be trademarks or registered trademarks of their respective companies.

Notes:

Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ratios stated here.
IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply.
All customer examples cited or described in this presentation are presented as illustrations of the manner in which some customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics will vary depending on individual customer configurations and conditions.
This publication was produced in the United States. IBM may not offer the products, services or features discussed in this document in other countries, and the information may be subject to change without notice. Consult your local IBM business contact for information on the product or services available in your area.
All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.
Information about non-IBM products is obtained from the manufacturers of those products or their published announcements. IBM has not tested those products and cannot confirm the performance, compatibility, or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.
Prices subject to change without notice. Contact your IBM representative or Business Partner for the most current pricing in your geography.

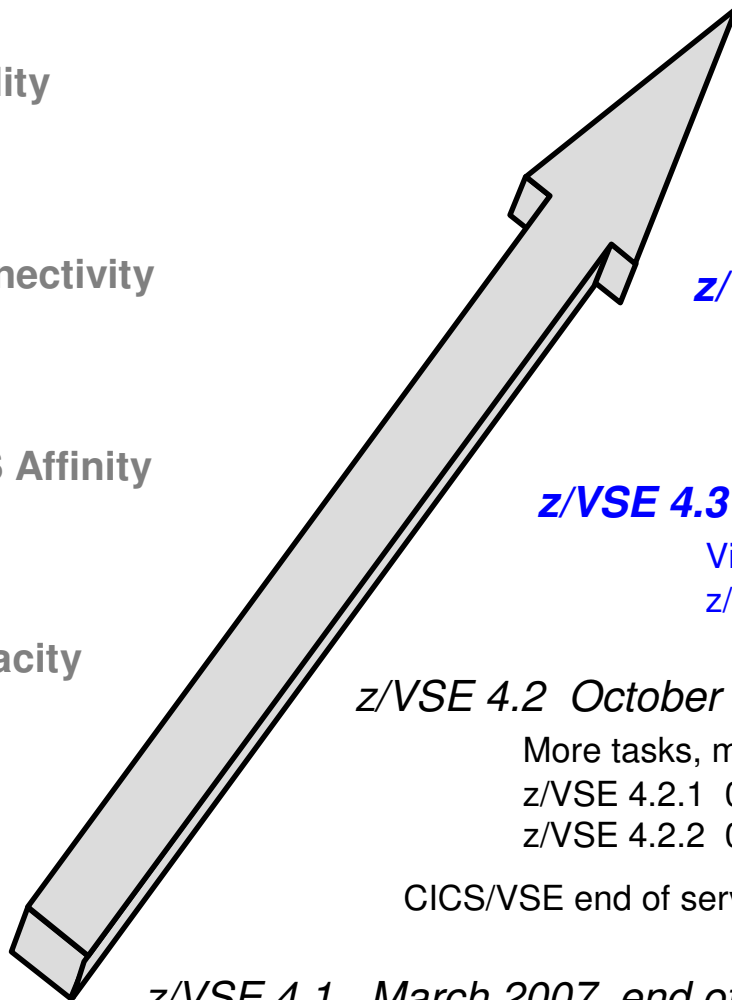
VSE Roadmap

Quality

Connectivity

z/OS Affinity

Capacity



z/VSE Statement of Direction (SOD)

Install from DVD
CICS Explorer update

z/VSE 5.1.1 (+ Enhancements) GA 06/14/2013

TS1140, 64 bit I/O, openssl and
database connector enhancements

z/VSE 5.1 GA 11/25/2011

64 bit virtual, zEnterprise exploitation, z9 or higher
z/VSE 5.1.1 06/2012: CICS Explorer, LFP in LPAR,
database connector

z/VSE 4.3 11/2010, end of service 05/31/2014

Virtual storage constraint relief, 4 digit cuus
z/VSE 4.3.1 08/2011

z/VSE 4.2 October 2008, end of service 10/31/2012

More tasks, more memory, EF for z/VSE 1.1, CPU balancing, SCRT on z/VSE
z/VSE 4.2.1 07/2009 - PAV, EF for z/VSE 1.2
z/VSE 4.2.2 04/2010 - IPv6/VSE 05/2010

CICS/VSE end of service 10/31/2012

z/VSE 4.1 March 2007, end of service 04/30/2011

z/Architecture only, 64 bit real addressing, MWLC – full and sub-capacity pricing

VSE Support for System z

VSE Release	z800 / z900	z890 / z990	System z9 / z10 / z196 / z114 / zEC12	VSE EoS
z/VSE V5.1	No	No	Yes	tbd
z/VSE V4.3	Yes	Yes	Yes	05/31/2014
z/VSE V4.2	Yes	Yes	Yes	10/31/2012
z/VSE V4.1	Yes	Yes	Yes	04/30/2011
z/VSE V3.1	Yes	Yes	Yes	07/31/2009
VSE/ESA V2.7	Yes	Yes	Yes	02/28/2007
VSE/ESA V2.6	Yes	Yes	Yes	03/2006
VSE/ESA V2.5	Yes	No	No	12/2003
VSE/ESA V2.4	Yes	No	No	06/2002
VSE/ESA V2.3	No	No	No	12/2001

z/VSE 5.1.2

- z/VSE 5.1.2 includes z/VSE V5.1 additional enhancements: Ann 03/02/2013, GA 06/14/2013
 - Support of zEC12, zBC12
 - Configurable Crypto Express4S
 - OSA Express4S / OSA Express5S (1000BASE-T)
 - Support of IBM System Storage
 - IBM System Storage TS1140 (3592 E07)
 - IBM System Storage TS7700 Virtualization Engine Release 3.0
 - IBM System Storage DS8870
 - IBM System Storage Storwize V7000 Release 6.4
 - 64-bit input/output (I/O) processing for applications
 - HiperSockets configurable input buffers

- z/VSE 5.1.2 – latest Recommended Service Level (RSL): June 18, 2013

z/VSE 5.1.2 ...

- z/VSE 5.1.2 includes z/VSE V5.1 additional enhancements ...
 - System dump support for memory objects
 - z/VSE Database connector enhancements
 - OpenSSL update
 - IPv6/VSE V1.1 enhancements
 - Secure Sockets Layer (SSL) for secure data transmission
 - Layer 2 support for OSA Express devices for IPv4 links
- Statement of general direction (SOD) of April announcement:
 - IBM intends
 - o in the future to enhance IBM CICS Explorer for IBM CICS Transaction Server for VSE/ESA to provide updates to CICS resources.
 - o to add functionality that allows initial installation of z/VSE without requiring a physical tape.
 - It is planned to reduce the AEWLC and MWLC list price of IPv6/VSE V1.1.

All statements regarding IBM's plans, directions, and intent are subject to change or withdrawal without notice.

64 bit virtual I/O for applications

- Available with z/VSE 5.1 APAR DY47419
- SYSCOM bit IJBIO64E in IJBIOFL1, if 64 bit virtual I/O support available

- I/O buffers can now be created above the bar (above 2 GB)
- I/O buffers in **private memory objects** supported only
- I/O control blocks to be allocated below the bar (in 31 bit storage)

- Supported for ECKD devices

- CCB macro with a new parameter: IDAW=FORMAT2
- CCB points to a Format-0 or Format-1 CCW
- CCW with IDA-flag and data address point to a single Format-2 IDAW containing a 64 bit virtual address.

- I/O buffer will be TFIXed by I/O Supervisor, not necessary to PFIX the I/O buffer

- Not supported for
 - FBA / SCSI devices
 - Tape devices
 - LIOCS

System Dump support for Memory Objects

- System dump may be taken in case of abnormal termination dependent on JCL options
 - New JCL option MODUMP, NOMODUMP
- If program running in 64 bit mode and registers hold 64 bit addresses
 - The dump routine will take 4K on either side of this address
- Memory object dumps are written to SYSLST only
 - Partitions dumps will be written to dump library or SYSLST dependent on OPTIONS
- New standard option: STDOPT SADMPSMO=YES|NO
 - Controls, if standalone dump should include **shared memory objects**
- (Standard) option STDOPT SADUMP=(n,m,o)
 - Controls, if standalone dump should include **private memory objects**

HiperSockets Configurable input buffers

- Available as APAR DY47394
- QDIO input queue buffers were set to 8 before
- More QDIO input buffers can improve performance
- In z/VSE you may increase the number of buffers to up to 64
- With a new configuration option you may select 8 (default), 16, 32 or 64 in the configuration file (IJBONCONF.PHASE)
- QDIO input buffers are allocated in 31 bit partition GETVIS space
- The buffers are to be PFIxed.
 - The limit for PFIx storage has to be defined with the JCL SETPFIx command
- QDIO input buffers are available for HiperSockets and OSA Express (CHPID OSD)

OpenSSL Update

- openssl support for z/VSE is available since z/VSE 5.1
- November 2012 updated with APAR DY47397

- openssl code level: openssl 1.0.0d
- z/VSE supports a subset of openssl functions

- IPv6/VSE and Linux Fast Path exploit openssl

- z/VSE supports the GSK (z/OS SSL API) and openssl API

z/VSE Database Connector (DBCLI) Enhancement

- DBCLI connection pooling
 - Connection pooling of database connections for DBCLI applications on CICS TS
 - Pooling and reusing existing connection
 - Instead to establish a new connection
 - CICS DBCLI application can request to use a connection pool by setting a new DBCLI environment variable
 - SSL connections are not supported

- If connection pooling is enabled
 - CONNECT function will first check if a matching connection is available (same host name/IP address, port, DB name, user-ID, password, ...)
 - If available, the connection will be reused
 - If no active connection available, a new connection is established
 - During DISCONNECT the connection is put back to the connection pool

z/VSE Statement of Direction (SOD)

- IBM CICS Explorer to provide updates to CICS resources
 - Update resources as you would do with transactions on your CICS terminal
 - Enable / disable CICS resources
 - Change selected CICS definitions
 -

- Initial installation of z/VSE without requiring a physical tape
 - Use an install image on a DVD or download it from the web (Shopz)
 - Create an installation disk
 - Base install z/VSE from installation disk

z/VSE 5.1 Migration Considerations

- Migrate to z/VSE 5.1.2 + Recommended Service Level (RSL) of June 2013
- VSE/VSAM
 - Migration of VSAM catalogs
 - Don't use Fastcopy to migrate VSAM catalogs
 - Flashcopy all VSAM volumes allocated to a VSAM catalog
 - Migrate all recoverable VSAM catalogs to standard VSAM catalogs
 - o **Before** the migration to z/VSE 4.3 or z/VSE 5.1
 - o PTF for “automatic” migration
- CICS/VSE
 - CICS Coexistence Environment removed
 - DL/I 1.12 replaces DL/I VSE 1.11 and DL/I DOS/VS 1.10
 - CICS/VSE 2.3
 - No DL/I support for CICS/VSE on z/VSE 4.3
 - No longer on base tapes
 - Not supported on z/VSE 5.1
 - End of service 10/31/2012
- See also Live Virtual Class on „z/VSE Release Migration Considerations”
 - Presentation is on <http://www-03.ibm.com/systems/z/os/zvse/education/#completed>

News related to z/VSE

- September: zBC12 GA
 - z/VSE Preventive Service Planning (PSP) bucket for details
 - ibm.com/vse -> About z/VSE Status -> z/VSE server support
 - OSA/SF configuration on HMC – OSA-Express 4S / 5S only
 - For CHPID type OSE

- July: z/VM 6.3 GA
- July: zBC12 announced
- July: z/VSE Collection Kit available
- July: IPv6/VSE decreased monthly workload license charges

- June: z/VSE 5.1.2 Recommended Service Level (RSL) available
- June: z/VSE 5.1.2, including z/VSE additional enhancements available
 - Now on DVD-ROM

- May: New z/VSE web page layout

- April: z/VM 6.1 end of service
- April: z/VSE 5.1 additional enhancements announced

APARs

- z/VSE 5.1.2 + Recommended Service Level (RSL)
- z/VSE 5.1 DY47482 (z/VSE 4.3 DY47478) – LISTCAT enhancement
 - Fixes IDCAMS LISTCAT loop for large number of datasets residing on one volume (more than 5000 per volume)
 - Provides part of the output followed by an error message
- z/VSE 5.1 DY47471 – Improved stand-alone dump program
 - Addresses several problems
 - Requires rebuild of stand-alone dump program on disk and/or tape
 - For disk includes reformat of the IJSYSDU dump file
- RPG PTF UX00777 – RPG RELOAD(YES) on CICS TS for VSE/ESA
- CICS TS for VSE/ESA 1.1.1 fix list ->
<http://www-01.ibm.com/support/docview.wss?uid=swg27015142>
- Product Status of Independent Software Vendors (ISVs)
<http://www-01.ibm.com/support/docview.wss?uid=swg27015142>

z/VSE Events

- Conferences
 - IBM System z Technical University in Orlando, Florida – October 21 – 25, 2013
 - WAVV 2014 in Covington, KY – April 13 – 16, 2014

- Live Virtual Classes (LVCs)
 - Language Environment for z/VSE – News, Tips and Enhancements - October 24, 2013

- See <http://www.ibm.com/vse> for details

Documentation related to z/VSE

- z/VSE Collection Kit July 2013
 - Available for download in IBM Publication Center
 - Electronic only, not on physical DVD

- Documentation of z/VSE releases
 - z/VSE Internet Library on <http://www.ibm.com/systems/z/os/zos/bkserv/vse.html>

- IBM Redbooks
 - Draft: Setup Linux on System z for Production, SG24-8137
 - Redbook page with new IBM System z mainframe Redbooks
 - zEC12 / zBC12 Technical Guide, SG24-8049 / SG24-8138
 - IBM System z Connectivity Handbook, SG24-5444

WAVV 2013 Requirements

- WAVV201201 - VSE/Power control of TCPIP printers
- WAVV201302 - Allow AR DUMP command to direct dump output to disk
- WAVV201303 - ICSF (z/OS cryptographic services) full support
- WAVV201304 - Allow z/VSE to run without a real tape attached
- WAVV201305 - Provide Better Way To Retrieve Current APAR's/PTF's
- WAVV201306 - TCPIP printer support or alternative for CICS application printing

z/VSE Requirements

- You may submit requirements at conferences (WAVV, GSE, ...)
- ... or via our z/VSE requirements page:
 - <https://www-03.ibm.com/systems/z/os/zvse/contact/requirement.html>
- ... or you may enter **CICS Transaction Server** requirements via the
 - Request for Enhancement (RFE) database:
 - <http://www.ibm.com/developerworks/rfe/>
 - Please select the following for z/VSE-CICS requirements:
 - *Brand = WebSphere*
 - *Product family = Transaction Processing*
 - *Product = CICS Transaction Server*
 - *Component = Runtime or Explorer*
 - *Operating system = IBM z/VSE*

Be Social with z/VSE



z/VSE Homepage:
www.ibm.com/zVSE

 **Twitter**
www.twitter.com/IBMzVSE

 **Ingolf's z/VSE Blog**
www.ibm.com/developerworks/mydeveloperworks/blogs/vse/



Join System z Advocates (Subgroup z/VSE)
www.linkedin.com

Read at the IBMs System z Blog
www-304.ibm.com/connections/blogs/systemz/

Connect at Facebook
www.facebook.com/IBMsystemz

Watch on YouTube
www.youtube.com/user/IBMSystemZ

More Information

... on VSE home page: <http://ibm.com/vse>

- Ingolf's z/VSE blog: <https://www.ibm.com/developerworks/mydeveloperworks/blogs/vse>
- **Hints and Tips for z/VSE 5.1:**
 - <http://www.ibm.com/systems/z/os/zvse/documentation/#hints>
- 64 bit virtual information:
 - IBM z/VSE Extended Addressability, Version 5 Release 1
 - IBM z/VSE System Macro Reference, Version 5 Release 1
- CICS Explorer: <http://www.ibm.com/software/htp/cics/explorer/>
- IBM Redbooks:
 - Introduction to the New Mainframe: z/VSE Basics
<http://www.redbooks.ibm.com/abstracts/sg247436.html?Open>
 - Security on IBM z/VSE – updated
<http://www.redbooks.ibm.com/Redbooks.nsf/RedbookAbstracts/sg247691.html?Open>
 - z/VSE Using DB2 on Linux for System z
<http://www.redbooks.ibm.com/abstracts/sg247690.html?Open>