IS01 z/VSE latest news
VS03 Aktuelles zu z/VSE

2016
10th European GSE / IBM TU
for z/VSE, z/VM, KVM and IBM Linux on z Systems

October 24-26 | Leipzig, Germany

Ingolf's blog: https://www.ibm.com/developerworks/mydeveloperworks/blogs/vse/?lang=en

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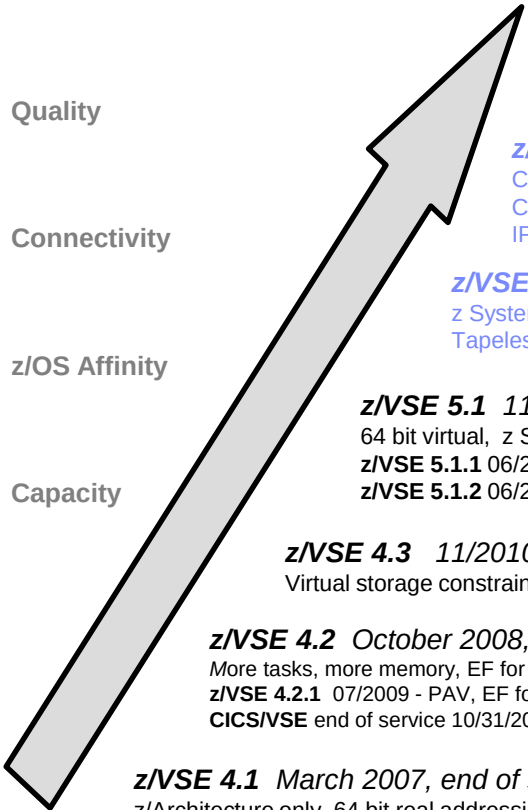
z/VSE Roadmap



z/VSE announcement: 04/2016 & 07/2016
z13s support, z/VSE Network Appliance,
SODs: z114 / z196 or higher, CICS TS for z/VSE 2.2

z/VSE 6.1 *Ann 10/ 05/2015, GA 11/27/2015*
CICS TS for z/VSE 2.1: CICS Explorer update,
Channels & Containers; TCP/IP for z/VSE 2.1,
IPv6/VSE 1.2, **z10 or higher**; z Systems exploitation

z/VSE 5.2 *Ann: 04/07/2014, GA 04/25/2014*
z Systems exploitation, z9 or higher, device support,
Tapeless installation, networking / security enhancements

z/VSE 5.1 *11/2011, end of service 06/30/2016*
64 bit virtual, z Systems exploitation, z9 or higher
z/VSE 5.1.1 06/2012: CICS Explorer, LFP in LPAR, database connector
z/VSE 5.1.2 06/2013: TS1140, 64 bit I/O, openSSL, db connector enhancements

z/VSE 4.3 *11/2010, end of service 10/31/2014*
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

z Systems server support

- z/VSE V5 supports IBM System z9 (z9 EC, z9 BC)

- z/VSE V5 and V6.1 support IBM z Systems servers:
  - IBM z13, IBM z13s
  - IBM zEnterprise EC12 (zEC12), IBM zEnterprise BC12 (zBC12)
  - IBM zEnterprise 196 (z196), IBM zEnterprise 114 (z114)
  - IBM System z10 (z10 EC, z10 BC)

- z/VSE V5 / V6 can run in an LPAR or as a z/VM guest on all supported z/VM releases ... in uni- or multiprocessor mode

z Systems server support …

- IBM eServer zSeries z890 Server **end of service** October 31, 2016
  http://www-01.ibm.com/common/ssi/printableversion.wss?docURL=/common/ssi/rep_sm/1/897/ENUS2086-_h01/index.html

- zBC12 / zEC12 **end of marketing** announcement
  http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=AN&subtype=CA&htmlfid=897/ENUS916-037&appname=USN

- Statement of general direction (SOD)

  – z/VSE 6.1 last release planned to support **z10 server** family of servers
    http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=897&letternum=ENUS216-312

  – z13 / z13s will be the last z Systems servers to support running an operating system in **ESA/390 architecture mode**

    - all 24-bit and 31-bit problemstate application programs originally written to run on the ESA/390 architecture will be unaffected by this change. See z13 announcement January 2015: http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=an&subtype=ca&appname=gpateam&supplier=897&letternum=ENUS115-001

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z/VSE on IBM z13 & z13s

- IBM z13 & z13s Toleration / Exploitation:

  – At GA toleration PTFs for z/VSE 5.1, 5.2, 6.1 were delivered
  see z13 PSP: http://www-01.ibm.com/support/docview.wss?uid=isg1_2964DEVICE_2964-ZVSE
  see z13s PSP: http://www-01.ibm.com/support/docview.wss?uid=isg1_2965DEVICE_2965-ZVSE

  – z/VSE
    - Can run in more LPARs (85)
    - Supports new Crypto Express5S in coprocessor and accelerator mode
      - Supports more than 16 domains with the new Crypto Express5S
    - Supports new FICON Express16S
      - ECKD and FCP-attached SCSI disks
    - Supports newest version of SCRT
    - Exploits z Appliance Container Infrastructure (zACI)
      new name: IBM Secure Service Container Infrastructure

z Systems server support …

VSE Release	z800 / z900 z890 / z990	z9	z10	z196 / z114 / zEC12 zBC12 / z13 / z13s	VSE EoM	VSE EoS
Future (SOD)	No	No	No	Yes	tbd	tbd
z/VSE V6.1	No	No	Yes	Yes	tbd	tbd
z/VSE V5.2	No	Yes	Yes	Yes	03/13/2017	tbd
z/VSE V5.1	No	Yes	Yes	Yes	05/23/2014	06/30/2016
z/VSE V4.3	Yes	Yes	Yes	Yes	06/25/2012	10/31/2014
z/VSE V4.2	Yes	Yes	Yes	Yes	10/26/2010	10/31/2012
z/VSE V4.1	Yes	Yes	Yes	Yes	10/17/2008	04/30/2011
z/VSE V3.1	Yes	Yes	Yes	Yes	05/31/2008	07/31/2009
VSE/ESA V2.7	Yes	Yes	Yes	Yes	09/30/2005	02/28/2007
VSE/ESA V2.6	Yes	Yes	Yes	Yes	03/14/2003	03/31/2006

z/VSE release / Hardware status: http://www-03.ibm.com/systems/z/os/zvse/about/status.html

Announcements: z/VSE 5.2 end of marketing

- z/VSE 5.2 end of marketing (eom) is planned for March 13, 2017
- The affected products are:
  - z/VSE 5.2
  - z/VSE Central Functions 9.2
  - CICS TS for VSE/ESA 1.1.1
  - IBM IPv6/VSE 1.1
  - IBM TCP/IP for VSE/ESA 1.5 Application Pak feature
- After end of marketing products can no longer be ordered.
- eom announcement: http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=AN&subtype=CA&htmlfid=897/ENUS916-094

Announcements (end of marketing / service)

- IBM 3592 Tape Controller Model C07 **end of marketing** announcement, effective June 17, 2016

  http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=897&letternum=ENUS916-074

- IBM TCP/IP for VSE/ESA 1.5.0 5686-A04 Feature S001G2C – **NFS** for IBM TCP/IP for VSE/ESA to be **withdrawn from service** on September 30, 2016

- IBM Advanced Communication Function/System Support Program (**ACF/SSP**) for VSE/ESA 4.x.x 5686-064 to be **withdrawn from service** on November 30, 2016

  http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=897&letternum=ENUS915-163

- IBM Advanced Communication Function/Network Control Program (**ACF/NCP**) 5648-063 **withdrawn from service** on August 31, 2016

  https://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=AN&subtype=CA&htmlfid=897/ENUS916-121&appname=USN

- See Software lifecycle web page for end of service / support dates

  http://www-01.ibm.com/software/support/lifecycle/index_z.html

z/VM support

- z/VM V5.4
  - z/VM 5.4 withdrawn from service December 31, 2017
    https://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=AN&subtype=CA&htmlfid=897/ENUS916-121&appname=USN
  - Operates on z800 / z900 or higher, up to zBC12 / zEC12, not supported on z13 / z13s

- z/VM 6.2 - End of service June 30, 2017
  - Supports z10 or higher

- z/VM 6.3 - End of service December 31, 2017
  - SOD: Last release planned to support z10 server family of servers

- z/VM 6.4
  - GA planned for November 11, 2016
  - Architectural Level Set (ALS) to z114 / z196
  - Availability announcement: https://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=AN&subtype=CA&htmlfid=897/ENUS216-075&appname=USN

Latest APAR news

- IBM TCP/IP for z/VSE 2.1 refresh
  - Demo mode removed.
  - If you don't have valid license keys (see my related blog entry), you may get messages:

    IPN110E Product key validation failed for Stack
    IPN103E TCP/IP Unable to initialize
  - Introduces TLS 1.1 support
  - APAR APAR PI56032 (PTF UI35475)

- openSSL refresh
  - Upgraded to openSSL 1.0.2H
  - Fixes some vulnerablilities
  - Bulletin added to z/VSE security and system integrity page for "Vulnerability in Triple DES (CVE-2016-2183)" - SWEET32 vulnerability
  - z/VSE 5.2 APAR DY47688 (PTF UD54209)
    z/VSE 6.1 APAR DY47689 (PTF UD54211)

- Some z/VSE connectors / tools updated (see z/VSE download page)

- New Sub-capacity Reporting Tool (SCRT) version
  - Available as classic (24.1.0) and Java version (24.10.0)
  - You need to use the latest available version of SCRT to report your utilization.

Upgrade to a supported z/VSE release

- Please upgrade to a supported z/VSE release
  to get the latest software service, hardware exploitation and functionality

- z/VSE 5.1 end of service since June 30, 2016.

- The only supported releases today are z/VSE 5.2 and 6.1
  - z/VSE 5.2
    - Supports processors z9 and higher
    - Can still be ordered until March 13, 2017
    - Fast Service Upgrade (FSU) from z/VSE 4.3 and 5.1 to z/VSE 5.2 supported
  - z/VSE 6.1
    - Supports processors z10 and higher
    - Requires an initial installation (FSU not possible)
    - Migration Pricing Option (MPO) for z/VSE 6.1,
      IBM TCP/IP for z/VSE 2.1, CICS TS for z/VSE 2.1
      http://www-03.ibm.com/systems/z/os/zvse/howtobuy/

- z/VSE release & hardware upgrade white paper available:
  http://www-03.ibm.com/systems/z/os/zvse/documentation/documents.html#articles

z/VSE 6.1 Overview

- Preview: May 11, 2015, GA ann.: 10/05/2015, GA 11/27/2015,
  Recommended Service Level (RSL) with cutoff June 30, 2016
  z/VSE 6.1 base and extended base updated in Shopz – includes RSL

- Hardware support
  - Architectural Level Set to IBM System z10 or later
  - IBM z13 / z13s support
    - Configurable Crypto Express5S
      - More than 16 crypto domain support
    - FICON Express16S for ECKD, channel to channel or FCP-attached SCSI
    - z/VSE Network Appliance, available since June 30, 2016
  - IBM System Storage options
    - Tape solutions
      - IBM TS7700 Virtualization Engine Release 4.0
        - IBM TS7760
    - Disk solutions
      - IBM System Storage DS8870 Release 7.5,
        DS8880 (DS8884, DS8886, DS8888)
        - As ECKD and FCP-attached SCSI disks
      - IBM FlashSystem V9000 for use with FCP-attached SCSI disks.

z/VSE 6.1 Overview …

- New CICS version: CICS TS for z/VSE 2.1 - fullfills Statement of Direction (SOD)
- Networking enhacements
  - IPv6/VSE 1.2 – new release
  - TCP/IP for z/VSE 2.1 – new version
- Connectors
  - MQ Client Trigger Monitor
- z/VSE 6.1 requires an initial installation,
  Fast Service Upgrade (FSU) from z/VSE V5 not supported
- z/VSE 6.1 will be delivered in English only
- Statement of direction:
  IBM plans to deliver future upgrades of z/VSE on DVD or electronically only.

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

CICS TS for z/VSE 2.1

- A new CICS TS version for z/VSE - The first major CICS TS update since 1999
  - GA Announcement 10/05/2015, GA 11/27/2015
  - Based on CICS TS for VSE/ESA 1.1.1
  - Fully compatible with CICS TS for VSE/ESA 1.1.1
  - A complete new build of CICS TS
  - No recompile or re-link of CICS applications required
  - New APIs described in CICS Enhancements Guide
  - Migration considerations described in z/VSE Release and Hardware Upgrade white paper http://www-03.ibm.com/systems/z/os/zvse/documentation/documents.html#articles
- Only available with z/VSE 6.1, replaces CICS TS for VSE/ESA 1.1.1
- CICS TS for VSE/ESA 1.1.1 still delivered with z/VSE 5.2

CICS TS for z/VSE 2.1 - Enhancements

- CICS Explorer update capability
- Channel & Container support - Lifts the 32K Commarea limitation
- CICS requirements
  - More current cypher suites (AES128/256) to CICS Web Support
  - Support for EXEC CICS INQUIRE SYSTEM OSLEVEL
  - Millisecond support in EXEC CICS ASKTIME
  - Millisecond option to EXEC CICS FORMATTIME
- CICS DDM (CICS Distributed Data Management) not supported

CICS Explorer

- z/VSE Version 5: CICS Explorer monitoring (GA 06/15/2016)
  - System management framework for CICS TS
  - Consists of CICS Explorer client and a CICS TS server extension
  - CICS Explorer client
    - Read-only capabilities; Eclipse-based user interface on workstation
    - Connects to CICS TS via TCP/IP - Communication via HTTP requests
    - One CICS Explorer client for z/VSE and z/OS
  - CICS Explorer server extension
    - Delivered as PTF for CICS TS for VSE/ESA 1.1.1

- z/VSE 6.1: CICS Explorer monitoring and update
  - CICS Explorer server extension integrated into CICS TS for z/VSE 2.1
  - Provides updates to CICS resources
    - Update and control CICS resources as
      you would do with transactions on your CICS terminal
    - Enable / disable CICS resources, change selected CICS definitions, …

Channels and Containers

- z/VSE ported channel and container APIs from CICS TS for z/OS 3.1

- Channels and containers lift the 32K Commarea limitation
  - Applicable for both LINK and XCTL, Distributed Program Link (DPL)
  - Local and transcation routing
  - START with data

- Language support is provided for C, COBOL, HLASM, and PL/I.

- Channels and Containers limitations
  - In 31 bit virtual storage only
  - No support for
    - External CICS Interface (EXCI), External Call Interface (ECI), CICS Web Support (CWS)

Channels and Containers

- Container
  - Named block of data designed for passing information between programs
    - Like named COMMAREAs
  - CONTAINER API
    - Created using (EXEC CICS) PUT CONTAINER, defines the size of the container
    - Read using (EXEC CICS) GET CONTAINER
    - Delete using (EXEC CICS) DELETE CONTAINER, to free storage
  - No CICS enforced size limitation
  - Containers are stored within the CICS EDSA (31 bit partition virtual storage)

- Channel
  - A group of Containers - no limit on the number of Containers in a Channel
  - A Channel is a sort of program interface
    - Passed on LINK, XCTL, pseudoconversational RETURN, and START commands
  - Non-persistent - non-recoverable resource similar to commareas

TCP/IP Connectivity for z/VSE

- TCP/IP stacks are provided by ISVs

- TCP/IP connectivity for IPv4 communication
  - IBM TCP/IP for VSE – licensed from CSI International
  - IBM IPv6/VSE – licensed from Barnard Software, Inc. (BSI)
  - Linux fast path (LFP)

- TCP/IP connectivity for IPv6 communication
  - IBM IPv6/VSE
  - Linux Fast Path

- All TCP/IP stacks can run concurrently within one z/VSE system
- IBM TCP/IP for VSE/ESA 1.5F and IBM IPv6/VSE 1.1 not supported on z/VSE 6.1

- Enhancements for for both TCP/IP stacks in z/VSE 6.1
  - IBM TCP/IP for z/VSE 2.1, IBM IPv6/VSE 1.2
  - Only supported on z/VSE 6.1

z/VSE 6.1 – IBM TCP/IP for z/VSE 2.1

- A new version of CSI's TCP/IP stack – only supported on z/VSE 6.1
  - Levelset based on TCP/IP for VSE 1.5F / 1.5G
  - Replaces IBM TCP/IP for VSE/ESA 1.5F on z/VSE 6.1
  - Requires a new license & key (old license keys not accepted)

- New white-list firewall
  - Access denied unless
    an IP address is specifically allowed to communicate with the VSE system.
  - Firewall shield loaded during TCP/IP startup (in fail or warn mode - for logging only)
    - Configuration phase contains a list of IP addresses
      - Firewall configuration phase can be reloaded
      - To each IP address range you may specify VSE ports (TCP or UDP)
        and if ICMP (Ping) is allowed
      - Example:
        FIREWALL ALLOW,IPV4BEG=039.101.062.131,IPV4END=039.101.062.131,
        TCPPORTS=PORTGRPA,UDPPORTS=NONE,ICMP=YES
  - FIREWALL commands for administration
    - ON, OFF, LOAD PHASE=<phase name>
    - WARN, FAIL, DEBUGON | DEBUGOFF, MSGON | MSGOFF, REPORT

z/VSE 6.1 – IBM TCP/IP for z/VSE 2.1 …

- Cross memory services for external partition socket requests
  - Socket requests allocated in partition GETVIS instead of system GETVIS
  - TCP/IP partition uses cross memory services (XPCC) to process socket request
  - New program ($BSOCKET) loaded into partition to process external socket request

- New utilities for automation and TN3270 services
  - TN3270 improved recovery
  - External TN3270 server, outside the TCP/IP partition (SERV3270 utility)
  - Multiple TN3270 servers can run at the same time

- Enhanced TLS/SSL cryptography
  - RSA-SHA256 signatures supported

- General Print Server (GPS) feature for IBM TCP/IP for z/VSE 2.1 since July 2016
  - Requires license and license key to use it
  - Application Pak license required

- IBM TCP/IP for z/VSE 2.1 refresh available since September 2016 (2.1.7+ level)
  - Demo mode removed, TLS 1.1 support

z/VSE 6.1 – IBM IPv6/VSE 1.2

- A new release of BSI's TCP/IP stack – IBM IPv6/VSE 1.2 only supported on z/VSE 6.1

- New (basic) firewall
  - Examines IPv4 packets and IPv6 Ethernet frames
  - Enabled by default
  - VSE Librarian member contains the firewall rules table
    - To disable the firewall, just delete / rename the VSE Librarian member
  - Source IP address, packet protocol, TCP or UDP port, ICMP can be accepted / denied
    - Example: IN IP ALLOW IP 192.168.1.0 255.255.255.0
  - If a packet is denied, it is dropped. A message will be written to SYSLST
  - Default firewall rules allow all packets to be processed by the stack
  - Only Inbound (IN) rules are processed
  - Firewall commands via MSG <syslog id>
    - MSG <syslog id>,D=FIREWALL,RELOAD
    - MSG <syslog id>,D=FIREWALL,LIST
    - MSG <syslog id>,D=FIREWALL,LOGLEVEL n (0=no logging, 4=message to SYSLST)

z/VSE 6.1 – IBM IPv6/VSE 1.2 …

- Automated OSA Express failover using hot swap devices for high availability
  - Automatically recover from OSA Express device failures by using a backup device
- Improved SSL support including TLS 1.2
  and Diffie Hellman (DH) / Elyptic Curve Cryptography (ECC) sockets
  - Update to the latest openSSL implementation
  - Support to establish up to 16 SSL sockets concurrently,
    can improve performance for applications that establish multiple connections
    to z/VSE including TN3270(E), CICS, and web services applications
- Virtual IP address support using virtual network devices
  - Multiple IP addresses can be defined for a single network interface
  - Virtual network interfaces share a single OSA Express device
- Improved stack CPU optimization

Configurable network buffers

- Configurable network buffers for HiperSockets and OSA Express devices
  - May improve TCP/IP performance
  - Up to 64 QDIO (Queued Direct I/O) buffers
  - To be configured in configuration file (IJBOCONF.PHASE)
  - Requires PFIXed partition 31 bit GETVIS space
  - For OSA-Express (CHPID OSD, OSX), HiperSockets (CHPID IQD)

- Configurable
  - input buffers for HiperSockets and OSA Express devices (since z/VSE 5.1)
  - output buffers for HiperSockets and OSA Express devices (z/VSE 6.1)

Linux Fast Path (LFP)

- Routes IPv4 or IPv6 socket request to Linux on z Systems or appliance
  - Without using the local TCP/IP stack on z/VSE
  - LFP daemon on Linux forwards the socket request to the Linux TCP/IP stack
- Included into the z/VSE base product – no additional charge

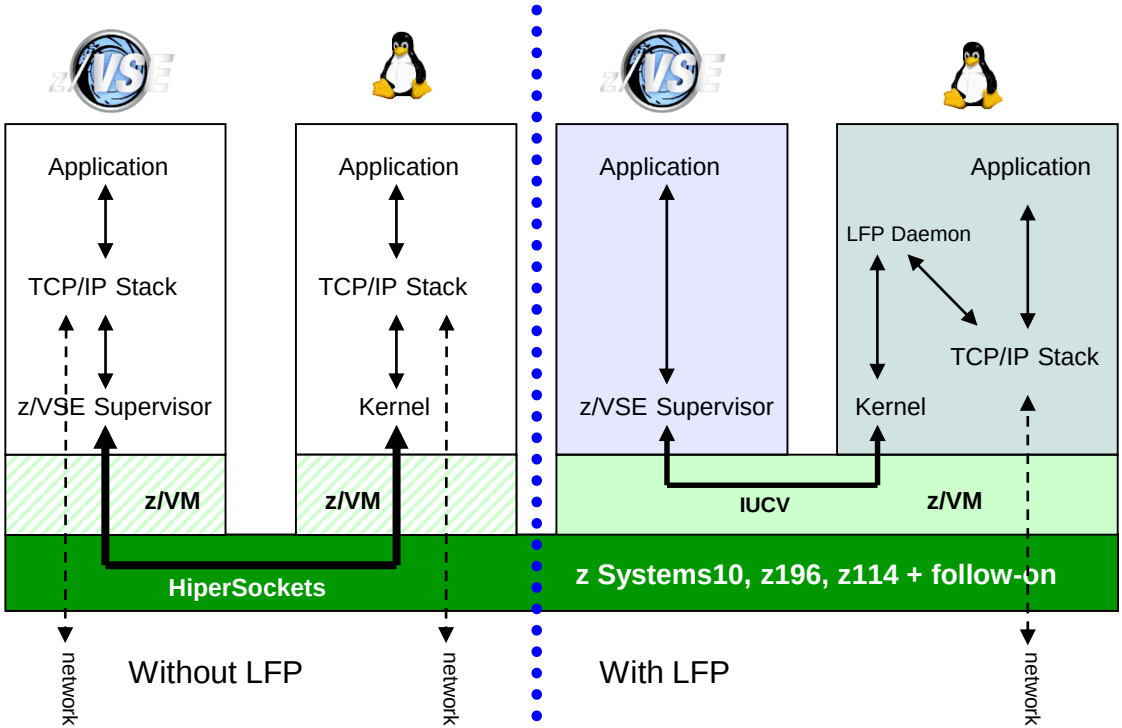
- LFP on z/VM
  - Uses a IUCV connection
    - z/VSE and Linux on z Systems guests on same z/VM
    - z/VSE and z/VSE z/VM IP Assist (VIA) guests on same z/VM

- LFP in LPAR
  - Uses HiperSockets connection
    - z/VSE and Linux on z Systems in separate LPARs
    - z/VSE and z/VSE Network Appliance in separate LPARs

- LFP is transparent to IBM socket APIs
  - Supported APIs: LE/C socket API, EZA socket / EZASMI interface, …
  - Transparent to IBM applications (DB2 client, Connectors, Power PNET)
  - No standard TCP/IP applications (Telnet, FTP, …) provided
    - IBM IPv6/VSE: TCP/IP applications can exploit LFP

Linux Fast Path in a z/VM-mode LPAR - z/VSE V5 and V6

Faster communication between z/VSE and Linux applications under z/VM



z/VSE Network Appliance (VNA)

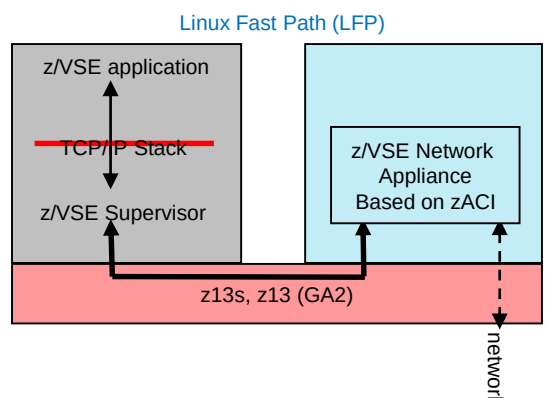
- New with z13 GA2 / z13s, available since June 30, 2016
- VNA acts as a router for z/VSE
- TCP/IP application uses Linux Fast Path (LFP) and connects through HiperSockets to VNA
- Based on z Appliance Container Infrastructure (zACI) delivered with z13 GA2 / z13s
- z/VSE is first exploiter of zACI / IBM Secure Service Container

- No Linux license,
  No TCP/IP stack required on z/VSE,
  No z/VM required to connect to the network

- Supported with z/VSE 6.1, 5.2,
  works with 5.1

- VNA for LPAR only

- zVSE - z/VM IP Assist (VIA) for z/VM guests



Connector enhancements

- MQ trigger monitor
  - Extends the IBM WebSphere MQ Client for VSE functionality
  - It monitors an IBM WebSphere MQ server running on any platform.
  - If a message arrives on a WebSphere MQ server queue, the trigger monitor may start a CICS program.

- IBM WebSphere MQ for z/VSE V3.0 withdrawn from service since September 30, 2015
  - Service extensions possible
  - The WebSphere MQ Client for VSE togther with the MQ trigger monitor can be used as an alternative.

z/VSE Version 6 announcement – what will be next ?

- Announced April 12, 2016
- Support of IBM z13s
  - Configurable Crypto Express5S
  - FICON Express16S
  - z/VSE Network Appliance (available since June 30, 2016)
- Support of IBM System Storage DS8880 (ECKD and FCP-attached SCSI devices)
- Migration Pricing Option (MPO) for
  - z/VSE 6.1
  - CICS TS for z/VSE 2.1
  - IBM TCP/IP for z/VSE 2.1
  - See http://www-03.ibm.com/systems/z/os/zvse/howtobuy/mpo.html
- Statements of general directions (SODs)
- More information is here:
  - https://www.ibm.com/developerworks/community/blogs/vse/entry/New_announcement_for_z_VSE_Version_6_What_will_be_next?lang=en

Migration Pricing Option (MPO)

- MPO can now be requested for all z/VSE 6.1 products with a new version
  - z/VSE 6.1 (available since GA), CICS TS for z/VSE 2.1, IBM TCP/IP for z/VSE 2.1
- In effect for SCRT reports since May 2016
  - SCRT now available as classic (24.1.0) and Java version (24.10.0)
  - Reports show combined concurrent peak MSUs for both versions in a row containg the name of the product with a suffix of „(ALL)“, e.g. TCP/IP for z/VSE (ALL).
- MPO can be used while migrating to the new version, up to 18 month
- Customers pay for the combined MSUs at the new version price.
- See z/VSE‘s MPO web page for more details.
  http://www-03.ibm.com/systems/z/os/zvse/howtobuy/mpo.html

z/VSE Version 6 announcement – what is next ? ….

- Statement of general direction (SOD)
  - High Performance FICON (zHPF)
  - Install from DVD stage 2 (FBA / SCSI)
  - CICS TS for z/VSE enhancements
    - CICS Explorer enhancements (define programs, files, etc.)
    - Channels & containers enhancements
  - Enhancements related to CICS TS for z/VSE – web services
    - z/VSE SOAP engine to exploit Channels and Containers.
    - new z/VSE Representational State Transfer (REST) engine with JSON support
  - Security enhancements
    - Basic Security Manager (BSM) enhancement
      - IUI dialog for batch resources (DTSECTAB security)
  - Product delivery of z/VSE on DVD and electronically only - for future z/VSE

http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=897&letternum=ENUS216-128

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

SOD: High Performance FICON support in z/VSE

- High Performance FICON (zHPF) for ECKD devices only
  - Channel programs are translated to zHPF commands
  - Transparent to applications

- z/VSE
  - Supports zHPF implementation phase 1
  - Translates a subset of CCW commands (define extent, locate record, TIC, …)

  - If transport mode I/O results in an I/O error, the request will be retried in command mode
  - z/VM 6.3 APAR to support phase 1 for z/VM guests

- Benefits
  - May improve I/O performance
  - Highly dependent on workload characteristics

SOD: Enhancements for SCSI device support

- **Tapeless installation**
  - Available since z/VSE 5.2 for ECKD
  - Tools provided to create an installation disk (supported in LPAR and z/VM guest)
  - Installation disk contains a boot program and the z/VSE base tape in AWS file format

  - Tapeless installation to be enhanced for installation disk on **FCP-attached SCSI devices**
  - Installation on ECKD, FBA and FCP-attached SCSI disks supported

  - Supports initial installation only

SOD: CICS TS for z/VSE enhancements

- Plan for a future release of CICS TS for z/VSE

- CICS Explorer enhancements
  - Definiton of new CICS resources (programs, files, transactions)
  - Change / delete existing CICS resources
  - Definition view of client for selected CICS resources

  - Monitor and control or update
    - Dynamic storage areas
    - Global temporary storage queue statistics

- CICS TS for z/VSE server enhancements
  - Support UTF-8 and UTF-16 in code page conversion using channels and containers
  - Add the APPEND parameter for PUT CONTAINER
    - to append the specified data to existing data in a container
  - Add the BYTEOFFSET parameter for GET CONTAINER
    - to retrieve data beginning at a specified offset in a container

SOD: Enhancements related to CICS TS for z/VSE

- z/VSE SOAP Engine to exploit channels and containers
  - Additional option to use channels and containers instead of CICS commarea
  - z/VSE as SOAP client
    - SOAP engine detects which area to be used
  - z/VSE as SOAP server
    - Commarea or channels & containers use dependent on
      - New option passed with message or in RULES
      - Default is Commarea

- New z/VSE REST Engine with JSON support
  - z/VSE implements Representational State Transfer (REST) engine
  - Allows clients to provide RESTful web services running in a CICS environement
  - JSON (JavaScript Object Notation) and XML supported

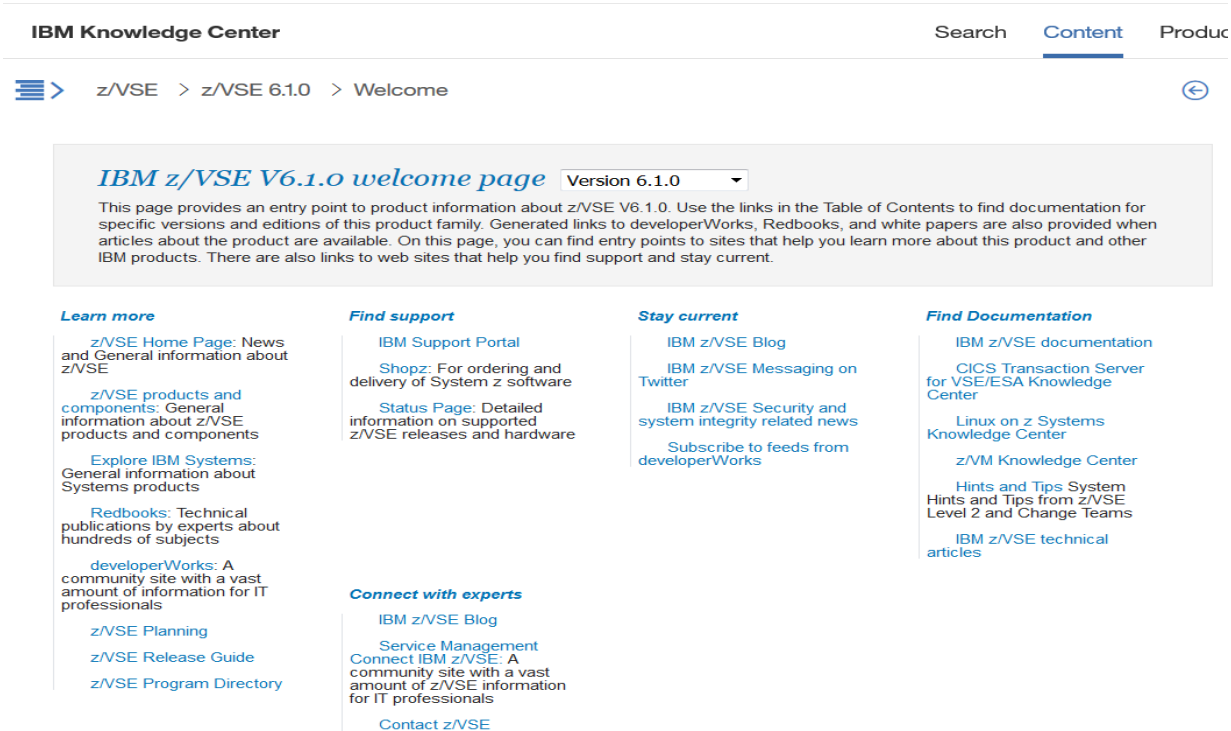
Latest z/VSE 6.1 announcement

- Announced July 19, 2016, available July 22, 2016
- General Print Server (GPS) feature for IBM TCP/IP for z/VSE 2.1
  - Requires license and license key to use it
  - Application Pak license required
- Availability of z/VSE Network Appliance for z13 and z13s servers
- IBM Storage options
  - IBM TS7700 R4.0
  - IBM TS7760
  - IBM TS8880 (TS8884, TS8886, TS8888)
- Statement of general direction (SOD)
  - Stabilization of z/VSE support for the IBM System z10® server family: z/VSE V6.1 is the last z/VSE release planned to support the IBM System z10 server family of servers.

http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=897&letternum=ENUS216-312

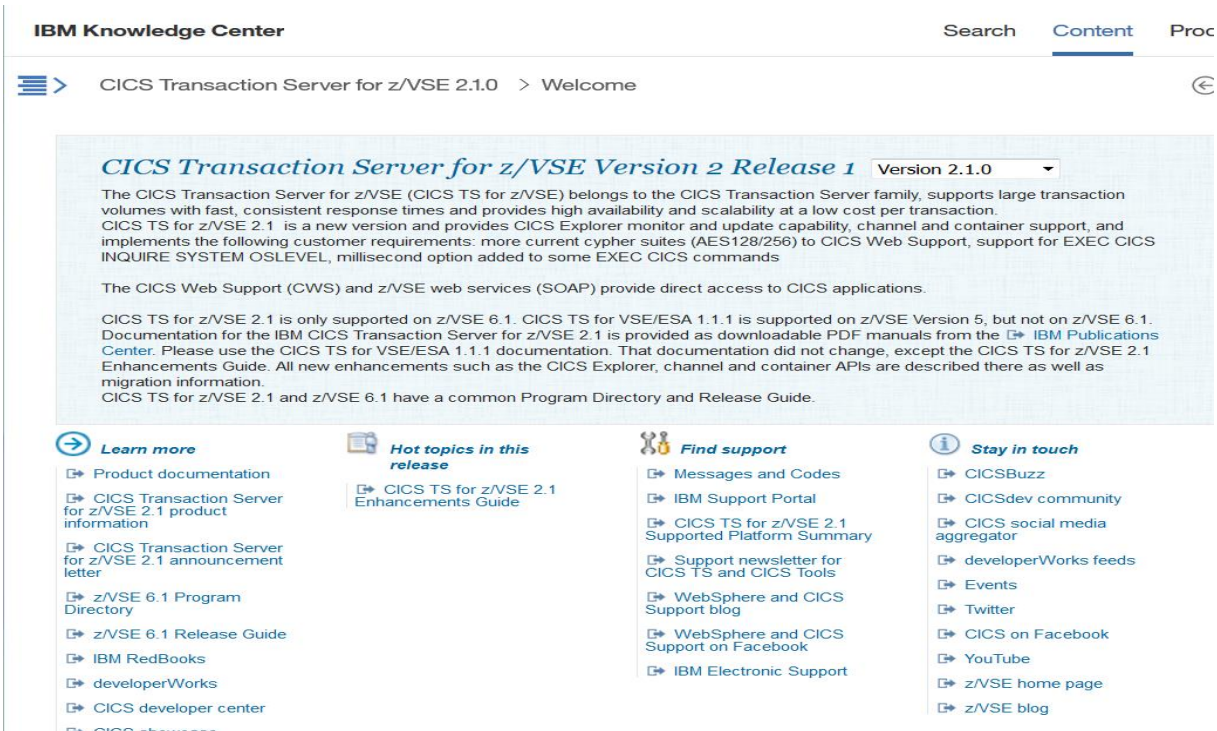
All statements regarding IBM's plans, directions, and intent are subject to change or withdrawal without notice.

z/VSE Knowledge Center



http://www-01.ibm.com/support/knowledgecenter/SSB27H/zvse_welcome.html
http://www.ibm.com/support/knowledgecenter/SSB27H_6.1.0/zvse_welcome_6.1.0.html

CICS TS for VSE Knowledge Center



http://www.ibm.com/support/knowledgecenter/SSB2JE_1.1.1/welcome.html
http://www.ibm.com/support/knowledgecenter/SSECAB_2.1.0/welcome.html

z/VSE live virtual classes (webcasts)

- *2016*
  - z/VSE Hardware exploitation
  - Tape-less z/VSE installation
  - z/VSE latest news
- *2015*
  - z/VSE 6.1 – a quick overview
  - Solution concepts to integrate z/VSE data and applications with your IT
  - VSE/VSAM Fundamentals, Hints & Tips and Best Practices
  - Preview announcement of z/VSE V6, and more
  - Analyzing CICS TS SOS problems in z/VSE
  - How to determine CICS wait time from CICS traces
  - Mobile access to existing z/VSE applications
- *2014*
  - z/VSE SCSI support and migration options
  - z/VSE VSAM enhancements
  - z/VSE connectors update
  - Introduction to tuning VSAM file performance under CICS TS in z/VSE
  - Tapeless initial installation
  - ***...***

  - Upcoming virtual classes and replays on http://www-03.ibm.com/systems/z/os/zvse/education/index.html

z/VSE Requirements

- You may submit requirements at conferences (GSE, zUniversity (Edge), VM Workshop, …)

- **z/VSE** requirements via the Request for Enhancements (RFE) database:
  - http://www.ibm.com/developerworks/rfe/

  – Please select the following for z/VSE requirements
    - *Brand = Servers and System Software*
    - *Product family = z Systems Software*
    - *Product = z/VSE*
    - *Component = General, z/VSE, VSE/AF, VSE/VSAM, VSE/POWER, VSE Unique Code, ...*
    - *Operating system = IBM z/VSE*
    - *Source = Share, IBM user group, IBM Conference, ..., Other*

- **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 = Servers and Systems Software*
    - *Product family = Transaction Processing*
    - *Product = CICS Transaction Server*
    - *Component = Runtime or Explorer*
    - *Operating system = IBM z/VSE*

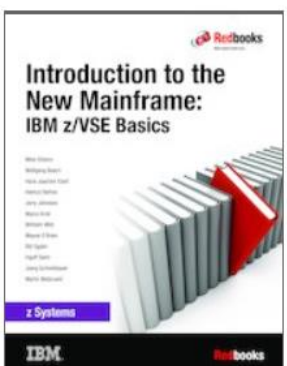
Updated IBM Redbook

http://www.redbooks.ibm.com/abstracts/sg247436.html?Open

IBM Redbooks › z Systems ›

Introduction to the New Mainframe: IBM z/VSE Basics

An IBM Redbooks publication



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Documentation related to z/VSE

- z/VSE documentation page - http://www-03.ibm.com/systems/z/os/zvse/documentation/

- z/VSE Collection Kit - November 2015
  - Available for download in IBM Publication Center
  - Electonic 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

- z/VSE Knowledge Center: http://www.ibm.com/support/knowledgecenter/SSB27H/zvse_welcome.html
- CICS TS for z/VSE Knowledge Center: http://www.ibm.com/support/knowledgecenter/SSECAB_2.1.0/welcome.html

- IBM Redbooks
  - Redbook page with new IBM System z mainframe Redboooks
    - zEC12 / zBC12 / z13 / z13s Technical Guides
    - IBM System z Connectivity Handbook, SG24-5444
  - More IBM Redbooks information on next page

- Technical articles: http://www-03.ibm.com/systems/z/os/zvse/documentation/documents.html#articles
  - z/VSE release & hardware upgrade
  - z/VSE SCSI Support and Migration Options
  - z/VSE z/VM IP assist
  - Parallel Access Volume (PAV) white paper

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 6.1:
  - http://www.ibm.com/systems/z/os/zvse/documentation/#hints

- 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
  - Enhanced Networking on IBM z/VSE
    http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg248091.html?Open

- Requirements: https://www-03.ibm.com/systems/z/os/zvse/contact/requirement.html

Thank You

Questions ?