



IBM System z

Technical University 2011

z/VSE Update

zDG03

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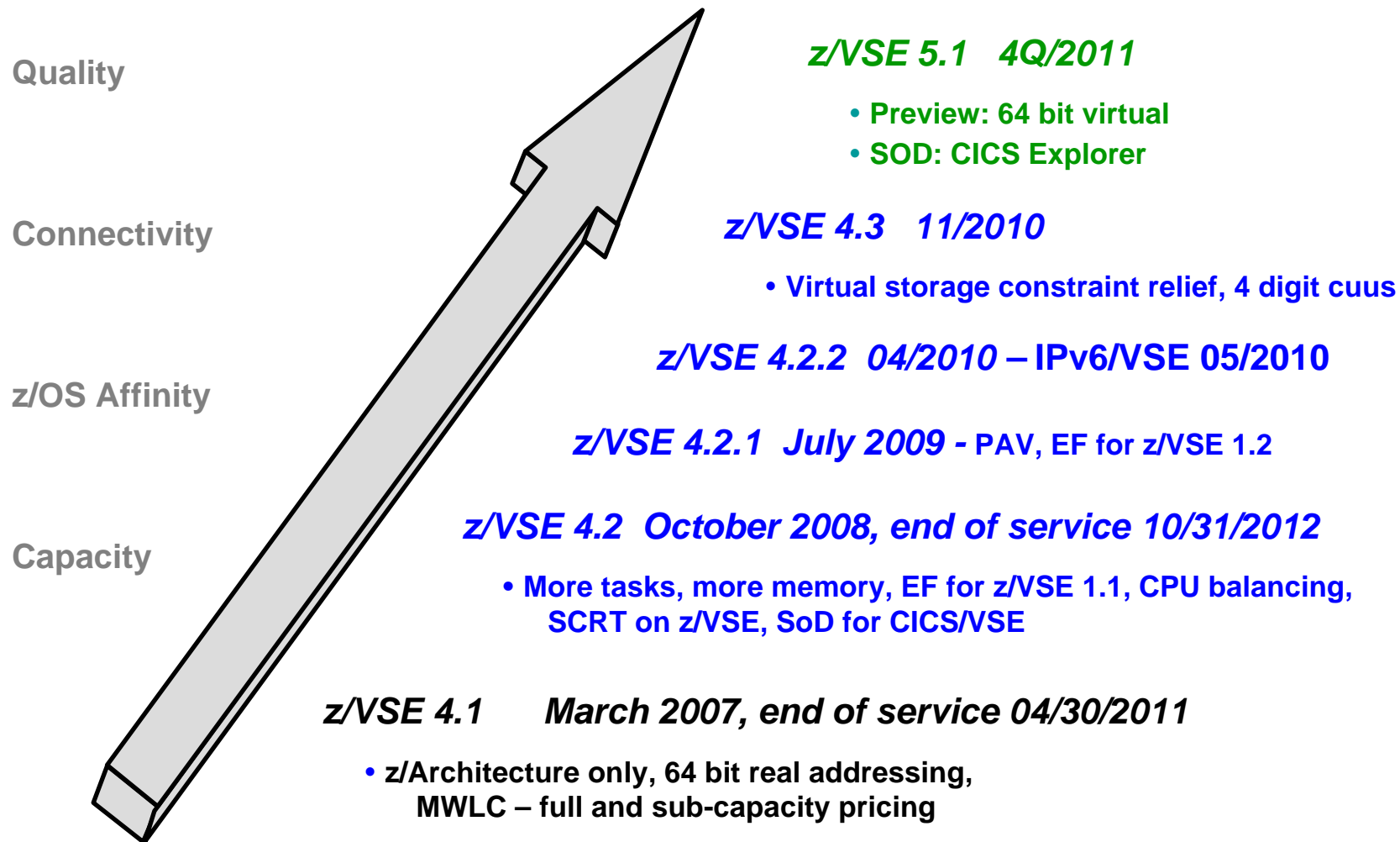
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Agenda

- Roadmap
- VSE strategy
- z/VSE 4.3 key functions
- z/VSE 5.1 Preview

VSE Roadmap



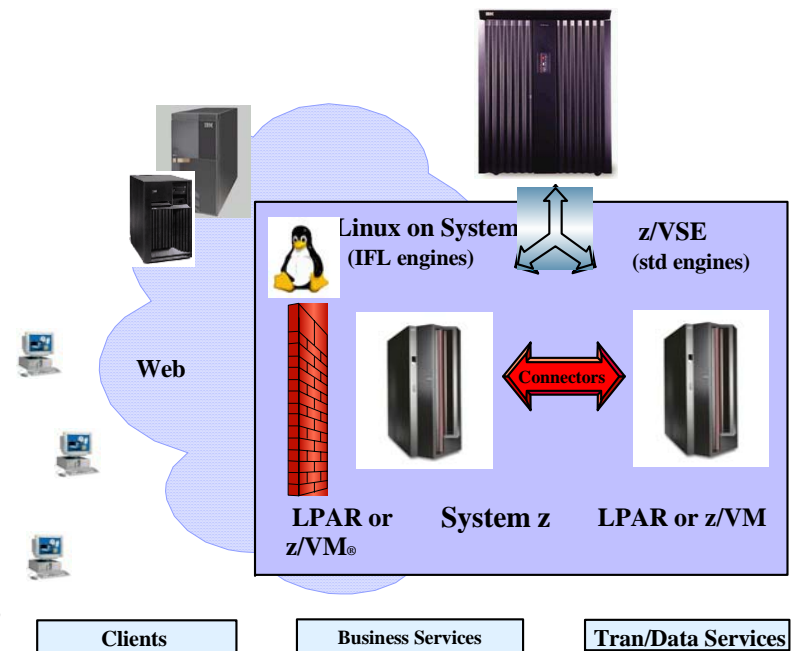
VSE Strategy

- Helps **Protect** your existing investments in core VSE programs, data, equipment, IT skills, *plus* business processes, end user training, etc.
 - modernize, i.e. extend VSE resources to Web
 - exploit IBM servers, storage, and software

- **Integrate** VSE with the rest of your IT based on open and industry standards
 - IBM middleware
 - VSE connectors and web services

- **Extend** with Linux on System z
 - infrastructure consolidation/simplification
 - add new infrastructure and/or line-of-business applications

Why Not Think Inside the Box?



z/VSE 4.3

- Announced: 10/2010, GA: 11/26/2010
- z/VSE 4.3.1 GA: 08/12/2011

- IBM System z10 / z196 / z114 exploitation
 - Dynamically add of CPUs
 - Large (1 megabyte) page support
 - Static power saving mode for SCRT (z196)

- Virtual storage constraint relief for 24 bit (CICS) programs

- 4 digit device addresses (CUUs)

- Basic Security Manager (BSM) will allow to protect MQ resources

- Monitoring agent based on SNMP (Simple Network Management Protocol)

- Linux Fast Path

- Midrange Workload License Charges (MWLC) with sub-capacity mode
 - Sub-Capacity Reporting Tool (SCRT) – available with z/VSE 4.1 and later (z9 / z10 / z196 only)

- FSU from z/VSE 4.1 and 4.2

Requirements addressed in z/VSE 4.3

- MR1120076646 - Provide 24-bit GETVIS-shortage relief by moving additional VSE/VSAM control blocks (including the CLWA) and executable code into 31-bit area
- MR0719046030 WAVV200413 - Move large system modules in 31-bit SVA
- WAVV200715 - Allow 4 digit cuu for compatibility
- MR0426071917 - Enhance cuu range from 3 to 4 digits
- MR0411056737 - Port z/OS LE changes to CEEFETCH Macro
- MR0511075750 - LIBR CATALOG from SYSLNK
- MR0626082059 - LIBR RENAME with DATE=OLD
- MR0729082910 - VSE Connectors - Support Numeric Decimal Data with decimal points
- MR071707545 - BSM XREF Service
- WAVV200820 - Audit enhancements - integrate DTSECTAB
- WAVV200830 - Job Control Commands (JCCs) and Job Control Statements (JCSs) whose effect extends beyond the end of the current VSE job should be subject to security checks.
- MR0071008 - Redirection of Power Punch Entries
- WAVV200721 - Cancel job output when output limit
- WAVV200721 - Flush Power jobs when output limit is exceeded
- MR0525093425 - API for AMDSB
- MR0820095815 - Enhancement to SHOWCB macro
- WAVV200841
- MR1027084841 - Summary list for record mapfile



VSE Support for System z

VSE Release	z800 / z900	z890 / z990	System z9 / z10 / z196 / z114	VSE EoS
z/VSE V5.1 (GA 4Q/2011)	No	No	Yes	tbd
z/VSE V4.3	Yes	Yes	Yes	tbd
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

Hardware Support

- Crypto Express3
 - Available on z10, z196 and z114 (Crypto Express3 only), supported with z/VSE 4.2 and later

- AP (adjunct processor)-queue adapter-interruption facility
 - May accelerate the SSL throughput
 - Available on Crypto Express2 or Crypto Express3 feature

- FCP subchannel attached SCSI disks
 - Supported as system and data device
 - Following devices supported with z/VSE 4.2 and later
 - IBM XIV Storage System
 - IBM Storwize V7000 Midrange Disk System

- IBM System Storage SAN Volume Controller

Hardware Support

- IBM System Storage DS6000 Series – end of marketing since June 2010
- IBM System Storage DS8000 Series
 - Remote Mirror and Copy feature (RMC)
 - Supported through ICKDSF, supported with z/VSE 4.1 or later
 - Full disk encryption
 - Transparent to z/VSE, supported with z/VSE 4.1 or later
 - Solid State Disks
 - Supported with z/VSE 4.1 or later
 - FlashCopy Consistency Group
 - Allows to create a consistent point-in-time copy across multiple volumes
- IBM System Storage TS7700 Virtualization Engine
 - z/VSE 4.1 or later supports the TS7700 Release 1.7
 - as standalone system in transparency mode
 - z/VSE 4.2 with PTFs or later supports the TS7720 disk-only virtual tape
 - z/VSE 4.3 exploits TS7700 WORM volumes
- IBM System Storage TS7680 ProtecTIER Deduplication Gateway for System z
 - Combines a virtual tape library solution, inline data deduplication and disk-based storage option

Large Pages for Dataspaces

- Better exploitation of large processor storage, may improve performance
- No configuration options required
- Transparent to applications
- Large pages (1 MB page frames) for dataspace
 - Supported on z10, z114 and z196
- Will always be used during dataspace allocation, if enough real storage is available
- 1 MB frames are not pagable
- If real frame shortage:
 - 1 MB frames will be broken up into 4K frames and paged out
- Enabled SYSDEF DSPACE, query 1 MB frame usage: QUERY DSPACE, MAP REAL
- Not supported in z/VM guests

```

query dspace
AR 0015          DSIZE  MAX  PARTMAX  COMMAX  VDISK  DFSIZE
AR 0015 DEFINED:  20480K  256   16      20     1    960K
AR 0015 ACTUAL:   6880K   7     4       4     1
AR 0015
AR 0015 AREA DSPS  AREA DSPS  AREA DSPS  AREA DSPS  AREA DSPS  AREA DSPS
AR 0015 BG    1  FB    4  F3    2
AR 0015
AR 0015 MFRAME(31):  0 ( 0)
AR 0015
AR 0015 1I40I  READY
    
```

Dynamic Add of logical CPUs

- Ability to dynamically add and remove logical central processors (CPUs) without preplanning
- Logical processor add from HMC/SE
- Supported on z10, z114 and z196 (standby CPUs)
- Allows adding CPUs to LPAR without re-IPL of the z/VSE system
- Capacity of the z/VSE V4.3 system may be in-/decreased dependent on workload needs
- New SYSDEF TD parameters to manage the additional CPUs
- Standby CPUs are not used for the LPAR CPU share calculation
- Standby CPUs can be added to the CPU configuration
 - SYSDEF TD,STARTSBY: will set standby CPU online and active
 - SYSDEF TD,STOPSBY: CPU will set back into standby state
- Not supported in z/VM guests

4 digit CUUs

- Ease of use and infrastructure simplification
 - In mixed environments running z/VSE together with z/VM, Linux on System z or z/OS
 - Removes the requirement for a z/VSE specific IOCDs configuration
 - Provides more flexibility

- 4 digit CUUs transparent to applications and most system programs
 - Implemented via mapping to 3 digit CUUs during IPL
 - z/VSE will only use 3 digit CUUs after IPL complete
 - Exception: z/VM DIAG instruction use 4 digit CUUs

4 digit CUUs

- IPL ADD extended to 4 digit CUUs, IUI dialogs allow to define mapping
 - Will provide the mapping to 3 digit CUUs,
 - e.g. ADD <4digit CUU> as <3 digit CUU>

```
BG 0000 ADD 1030 AS 004,3277
BG 0000 ADD 1810 AS 005,3490
BG 0000 ADD 1FF0 AS 006,1050A
BG 0000 ADD 3000 AS 007,ECKD
BG 0000 ADD 6400 AS 008,ECKD
```

- QUERY Command and IUI dialogs show CUU mappings

```
query io,cuu=all
AR 0015  VSE ADDR    PHYSICAL ADDR  DEVICE CLASS
AR 0015      001      1000    TERMINAL
AR 0015      002      1010    TERMINAL
AR 0015      003      1020    TERMINAL
AR 0015      004      1030    TERMINAL
AR 0015      005      1810    TAPE
AR 0015      006      1FF0    TERMINAL
AR 0015      007      3000    DASD
```

- z/VSE uses 3 digit CUUs after IPL complete

CICS Considerations

- z/VSE 4.3 will no longer offer CICS/VSE 2.3 as part of the z/VSE 4.3 base
 - Fulfills the statement of direction in announcement from October 9, 2007
 - Coexistence environment removed which includes DL/I V1.10
 - Migration from CICS/VSE to CICS TS on z/VSE 4.2 or earlier
 - Most migration inhibitors should be removed with recent improvements
 - Basic Security Manager (BSM) enhancements
 - More tasks
 - Virtual constraint relief

CICS Considerations ...

- CICS/VSE 2.3
 - Not supported on z/VSE 5.1
 - End of service: 10/31/2012

- DOS/VS RPG II compiler support for CICS TS
 - Allows RPG programs implemented for CICS/VSE V2.3 to run with CICS TS
 - Will be available on z/VSE 4.2 (z/VSE 4.1) via PTF (see Info. APAR II4447)

- New DL/I VSE 1.12 release
 - Optional product of z/VSE 4.3 (the only DL/I release)
 - Provides constraint release (DL/I resources moved above the 16 MB line)
 - Replaces DL/I VSE 1.11 and DL/I DOS/VS 1.10

Security Enhancements

- Lightweight Directory Access Protocol (LDAP)
 - Sign-on support for CICS TS introduced with z/VSE 4.2
 - LDAP client on z/VSE, LDAP server running on a non-z/VSE system
 - Connected via TCP/IP network
 - LDAP sign-on enables users to z/VSE with long company-wide userids / passwords
 - Userids/passwords can be up to 64 character
 - Allows centralized management of userids
 - Password rules and password renewal can be enforced via LDAP server
 - z/VSE 4.3: Sign-on support for batch jobs, new IUI dialog for the LDAP support

- Basic Security manager (BSM)
 - Security for WebSphere MQ for z/VSE V3 to protect MQ resources
 - Includes DTSECTAB resources into SMF logging and reporting
 - BSM cross reference reports
 - Selected JCL statements can be protected by BSM

Encryption Facility for z/VSE

- Optional priced feature for VSE Central Functions V8
- Supports the use of SAM files, VSE/VSAM files, VSE library members, tapes, virtual tapes as input or output
- Requires CP Assist for Cryptographic Function (CPACF)
 - no charge feature, only on z890, z990, z9, z10, z114 and z196 servers
- Extends affinity between z/VSE and z/OS
 - Function roughly equivalent to EF for z/OS 1.1
 - Compatible with EF for z/OS V1.1 (Encryption Facility System z format)
 - EF for z/VSE tapes can be read by EF for z/VSE, EF for z/OS, EF for z/OS Java Client, and Decryption Client for z/OS,
 - EF for z/OS V1.1 and EF for z/OS Java client tapes can be read by EF for z/VSE

Encryption Facility for z/VSE ...

- EF for z/VSE 1.2
 - Announced: 04/2009, GA: 07/2009
 - Supports z/VSE 4.2 and later
 - Supports openPGP standard
 - Optional compression using ZIP or ZLIB algorithms

- EF for z/VSE complements z/VSE support for IBM TS1120 / TS1130 tape
 - TS1120 / TS1130 preferred solution for high volume backup/archive
 - EF option for limited backup/archive and/or exchange with partners with no TS1120/TS1130

TCP/IP Connectivity for z/VSE

- TCP/IP connectivity for IPv4 communication
 - TCP/IP for VSE/ESA 1.5 – licensed from CSI International
 - IPv6/VSE – licensed from Barnard Software, Inc. (BSI)
 - Linux fast path (LFP)
 - EZA socket interface, new function calls
 - LE/C socket API

- TCP/IP connectivity for IPv6 communication
 - IPv6/VSE
 - EZA socket interface, new function calls

- All TCP/IP stacks can run concurrently within one z/VSE system

- z/VM queue-I/O assist for real networking devices
 - Performance assist for OSA-Express adapters and HiperSockets

IPv6/VSE

- Announced: 04/06/2010, GA 05/28/2010, updated 08/2011

- Full function IPv4 (with November update) and IPv6 stack with applications
 - MWLC with sub-capacity option for IPv6/VSE product
 - Supported releases: z/VSE 4.2 plus PTFs, z/VSE 4.3 or z/VSE 5.1
 - Optional Product of z/VSE 4.3 and z/VSE 5.1

- IPv6 solution for z/VSE
 - Includes the IPv6 stack, IPv6 APIs and IPv6-enabled applications
 - IBM's EZA Assembler interfaces support IPv4 and IPv6 communication
 - Extends 32 bit addresses (used in IPv4) to 128 bit addresses
 - To meet requirements of governmental agencies for products

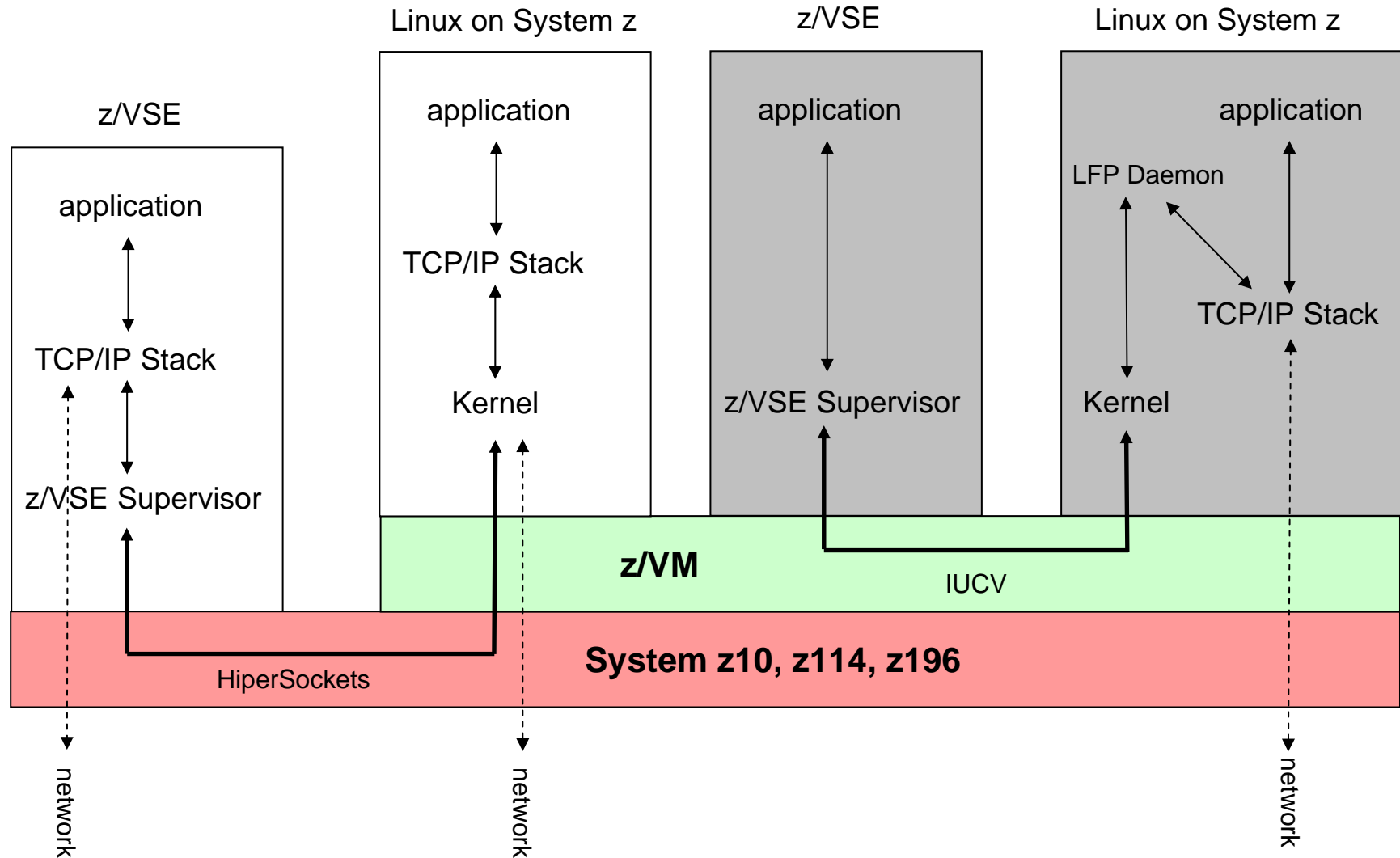
IPv6/VSE - Functionality

- IPv6/VSE's dual stack support: allows IPv6-enabled applications to transparently communicate with partners via either IPv6 or IPv4 network
- IPv6 tunneling: encapsulates IPv6 datagrams within IPv4 packets allows communication with IPv6 networks, even if local infrastructure is IPv4
- IPv4 and IPv6 enabled applications:
 - FTP server, FTP client
 - Batch FTP client
 - TN3270E server
 - NTP client / server to query time of day to synch TOD clock
 - System logger client to log e.g. z/VSE messages to Linux
 - Batch email client
 - Batch LPR + TN3270E / FTP / DIRECT printer sessions
 - Batch remote execution client
 - Batch PING
 - GZIP data compression
 - REXX automation
 - DBCS support: FTP client / server, LPR, batch email client, GZIP

Linux Fast Path (LFP)

- Provided with the z/VSE 4.3 base product – no additional charge
- LFP uses an IUCV connection between z/VSE and Linux on System z
 - Both – z/VSE and Linux – need to be z/VM guests of the same z/VM
 - Routes IPv4 socket request to Linux on System z
 - Without using the local TCP/IP stack
 - LFP daemon on Linux forwards the socket request to the Linux TCP/IP stack
 - Will run best in **z/VM mode LPAR** (z/VM 5.4 or higher)
 - Available on z10, z114 and z196
 - Linux on System z on IFL, z/VSE on standard processors
- 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)
 - IPv6/VSE TCP/IP application (Telnet, FTP, ...) can exploit LFP
- System requirements:
 - z/VM 5.4 or higher
 - Linux on System z distribution (min. SLES 10 SP3 or RHEL 5.5)

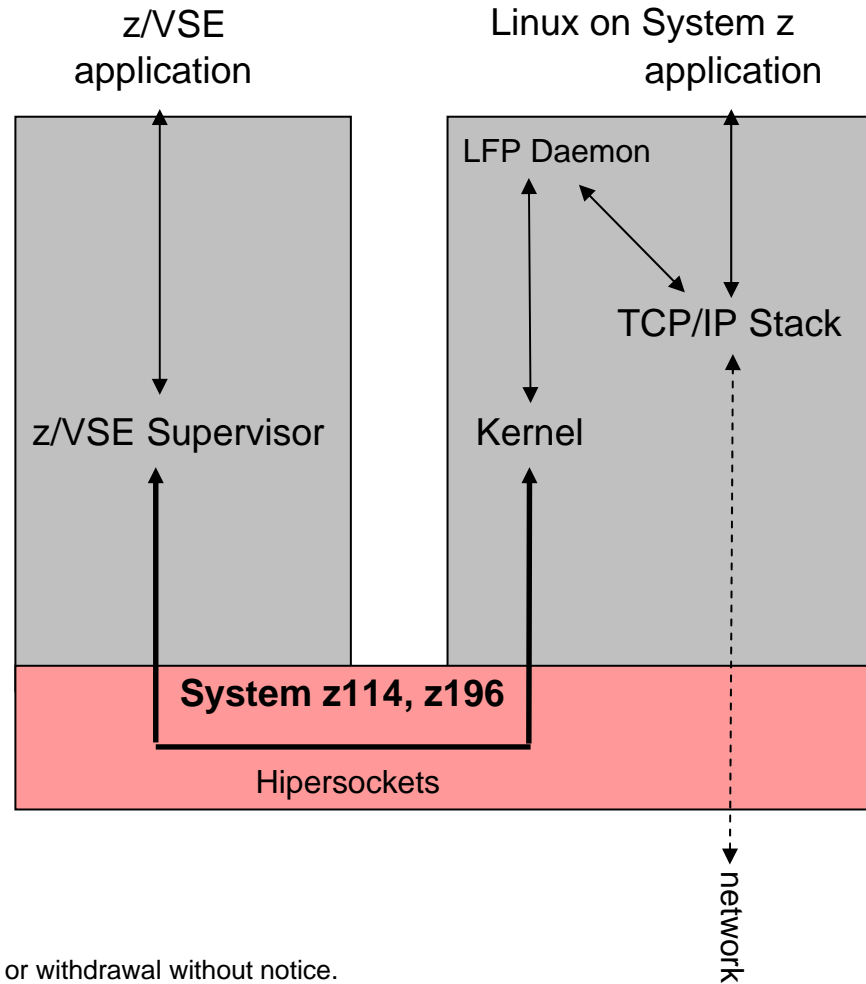
Linux Fast Path (LFP) ...



Linux Fast Path (LFP) ...

HiperSockets Completion Queue:
 IBM plans to support transferring HiperSockets messages asynchronously, in addition to the current synchronous manner on z196 and z114. This could be especially helpful in burst situations. The Completion Queue function is designed to allow HiperSockets to transfer data synchronously if possible and asynchronously if necessary, thus combining ultra-low latency with more tolerance for traffic peaks. HiperSockets Completion Queue is planned to be supported in the z/VM and z/VSE environments.

See IBM Hardware Announcement 111-136, July 12, 2011



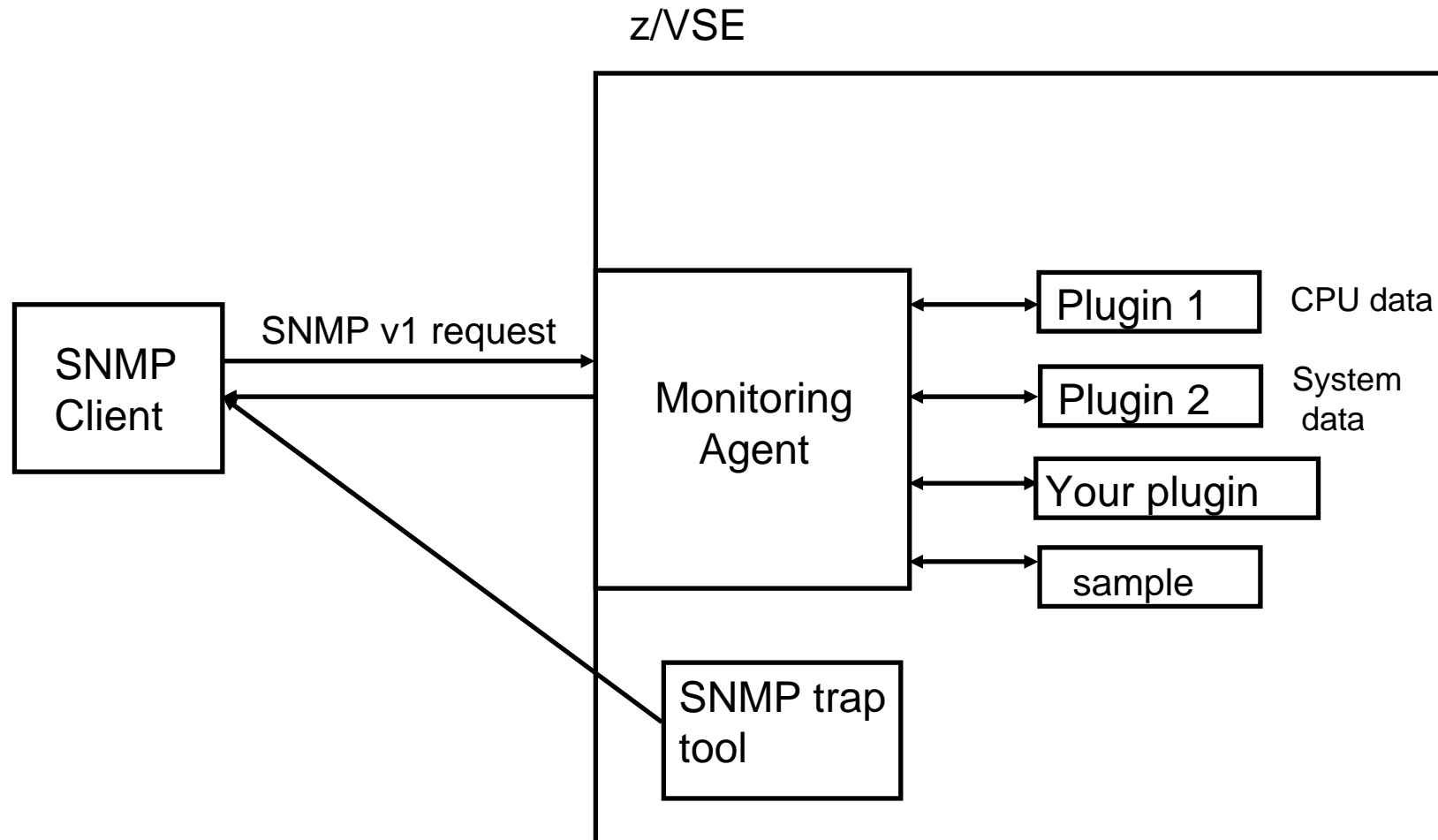
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Connectors

- E-business Connectors
 - Supports decimal datatypes such as PACKED and ZONED with implied positions
 - VSAM redirector support for CICS TS subtasking

- SNMP Connector
 - SNMP (Simple Network Management Protocol) V1 protocol
 - Allows to monitor system events on a network
 - Clients can retrieve z/VSE specific system and performance data
 - Performance monitors may collect the data for planning purposes

SNMP Connector ...



Enhancements for z/VSE Components

- Language Environment
 - Support of BEAR (break-event-address register) feature for debugging
 - PL/I multitasking for improved performance
 - LE/C TCP/IP socket API multiplexer for multiple TCP/IP stacks

- VSAM enhancements
 - Constraint relief: control blocks and buffers moved to 31 bit storage
 - New DLBL option: BUFDAT=RMODE31
VSE/VSAM data buffers to be allocated in 31-bit Partition GETVIS
 - GETVIS subpools for VSAM storage
 - SHOWCB macro shows new fields and attributes

Enhancements for z/VSE Components ...

- POWER enhancements
 - Direct punch to VSE library
 - Allow to cancel jobs whose output exceeds a defined limit
 - New display time operand to show job start time and date
 - Restart PNET passiv TCP/IP connection

- Librarian enhancements
 - Allows to catalog OBJ-type members from SYSLINK
 - LIBR RENAME enhanced to keep to original timestamp

- Additional Floating Point (AFP) support

Virtual Storage Constraint Relief

- Control blocks and system routines moved above 16 MB
 - Transparent to applications

 - I/O control blocks moved to SVA (31 bit)
 - New IODEV parameter:
 - o IODEV=1023 (default) – all I/O control blocks in SVA (24bit)
 - o IODEV=1024 – I/O control blocks moved to SVA (31 bit), such as PUBX, channel queue entries, ...

 - VSAM: most control blocks / routines moved to 31 bit area

 - DL/I: control blocks and routines moved to 31 bit area

- SVA (24 bit): size reduced by 1 MB in z/VSE environments

64 bit Addressing in z/VSE 4.3

- Processor storage support up to 32 GB
- 64 bit real addressing only, introduced with z/VSE 4.1
- Virtual address/data space size remains at max. 2 GB
- 64 bit virtual addressing not supported
- 64 bit addressing mode not supported for applications or ISVs
- Implementation transparent to user applications
- Performance: 64 bit real can reduce / avoid paging
- Many z/VSE environments can run without a page dataset (NOPDS option)
- 64 bit register support for programs

z/VSE V5.1 - Preview

- Preview: 04/12/2011, planned GA 4Q2011
- 64-bit virtual addressing
- Introduces Architectural Level Set (ALS) that requires System z9 or later
- zEnterprise (z114 / z196) exploitation
 - Support Static Power Save Mode for MWLC clients with subcapacity option (z196 only)
 - 4096-bit RSA keys with Crypto Express3 for enhanced security
 - Support of OSA-Express (CHPID OSX) for zEnterprise BladeCenter Extension (zBX) to participate in an Intra Ensemble Data Network (IEDN) in z/VM guest or LPAR
- Exploitation of IBM System Storage options
 - Copy Export function of TS7700 Virtualization Engine for disaster recovery
 - IBM Storwize V7000 Midrange Disk System (z/VSE 4.2 and later)
 - IBM XIV (z/VSE 4.2 and later)
- Fast Service Upgrade (FSU) from z/VSE 4.2 and z/VSE 4.3

z/VSE V5.1 - Preview

- Networking enhancements
 - IPv6 support to be added to Fast Path to Linux on System z function

- IPv6/VSE
 - Large TCP window support, can increase throughput
 - 64 bit virtual exploitation, large TCP window storage allocated above the bar

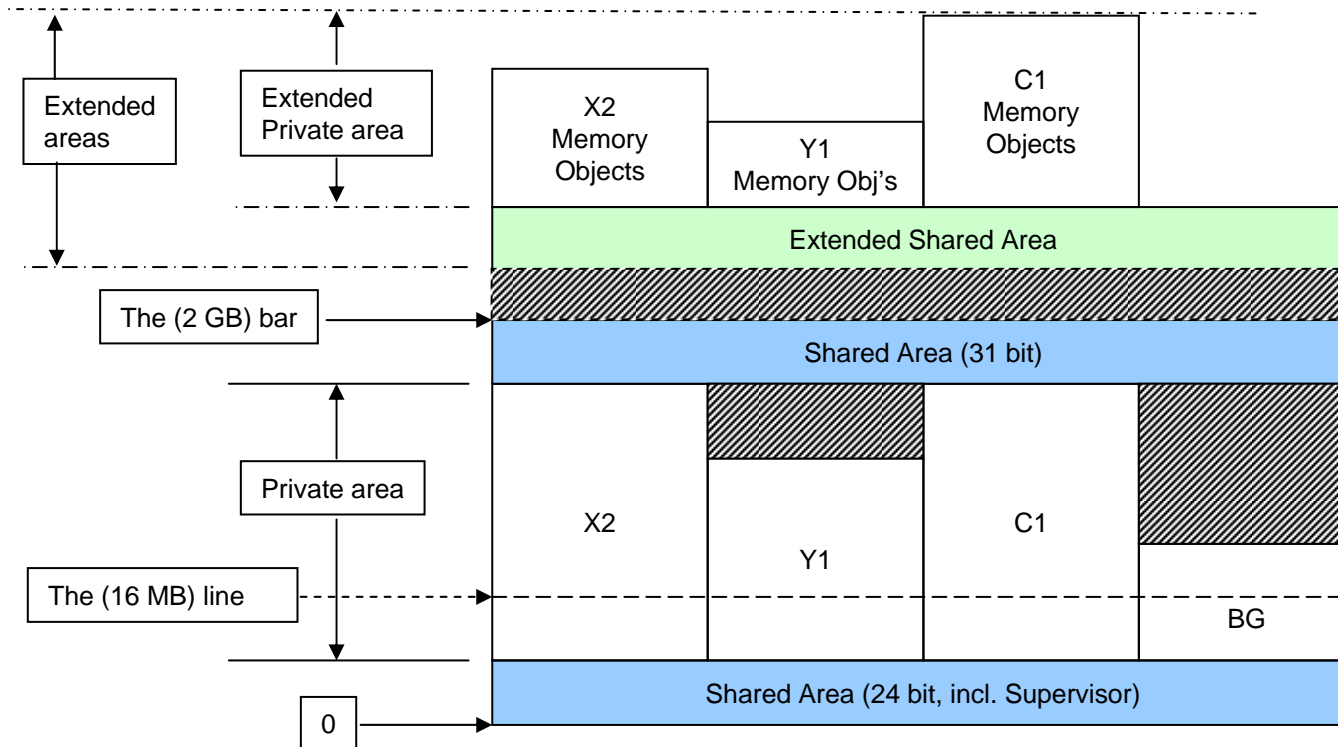
- CICS SOD:
 - IBM intends to provide CICS Explorer capabilities for CICS TS for VSE/ESA, to deliver additional value.

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z/VSE 5.1: 64 bit virtual

- Support 64 bit virtual addressing
- 64 bit area can be used for **data only**
 - No instruction execution above the bar
- **z/OS affinity:** APIs (IARV64 services) - to manage memory objects – compatible with z/OS
 - Private memory objects for use in one address space
 - Shared memory objects to be shared among multiple address spaces
- Maximum VSIZE still limited to 90 GB
- Advantages:
 - Eases the access of large amounts of data
 - E.g. instead of using and managing data spaces
 - Reduces complexity of programs
 - Data contained in primary address space
 - Chosen design has no dependencies to existing APIs, minor impact on existing system code

z/VSE 5.1: 64 bit virtual - Address Space Layout



z/VSE 5.1: 64 bit virtual - Considerations

- Memory objects can be allocated for data only.
RMODE 64 is not supported. Interrupt handlers do not support execution above the bar.

- High level languages (COBOL, PL/I, C, RPG, ...) do not support AMODE 64.
 - High Level Assembler support only.

- LOAD / CDLOAD and the linkage editor do not support AMODE 64.
- Space switching Program Calls (ss-PCs) are not supported in AMODE 64.
- All z/VSE system services (Supervisor, VSAM, BAM, DL/I, ...) to be called in AMODE 24 / 31.
- Data areas for system services including I/O buffers to be allocated below the bar.

- The Supervisor code continues to use the short form of the PSW (8 byte).

- 64 bit addressing is not supported in ICCF pseudo partitions.
- CICS services **do not** support 64 bit registers or AMODE 64.

CICS TS for VSE/ESA SOD

- SOD: IBM intends to provide CICS Explorer capabilities for CICS TS for VSE/ESA, to deliver additional value.
 - New face to CICS
 - Integration point for CICS tooling
 - System management tools
 - Eclipse-based user interface on workstation
 - Connects to CICS TS via TCP/IP
 - Communication via HTTP requests

The screenshot displays the IBM CICS Explorer BETA application window. The main area shows a table of CICS jobs. The table has the following columns: Region, Job Name, MVS Syst..., Task Count, CICS Status, CICS TS L..., Total CPU, Page In C..., Page Out ..., and I/O Count. One job is listed: PRODCI... CICS2, with a task count of 4 and a status of ACTIVE. The status 'ACTIVE' is highlighted in green. The interface also includes a left-hand tree view showing 'PRODCICS (1/1)' and 'PRODCICS (PRODCICS)', a top menu bar with options like Explorer, Edit, Project, Operations, Administration, RTA, WLM, Search, Window, and Help, and a bottom status bar indicating 'CNX0100I Connected user SYSA to hos...boeblingen.de.ibm.com on port 27283'.

Region	Job Name	MVS Syst...	Task Count	CICS Status	CICS TS L...	Total CPU	Page In C...	Page Out ...	I/O Count
PRODCI...	CICS2	?	4	ACTIVE		0000:00:0...	?	?	?

IBM CICS Explorer BETA

Explorer Edit Project Operations Administration RTA WLM Search Window Help

CICSplex Expl CICSplex Rep

Server: CIC2

Regions ISC/MRO Connections Terminals Files Transactions Terminal Definitions TD Queues

CNX0211I Context: PRODCICS. Resource: TERMNL. 66 records collected at 11.04.2011 16:47:22

Region	Name	Network ...	Acquire S...	Service St...	ATI Status	TTI Status	Session S...	User ID	Transacti...
PRODCI...	-AAJ	TMPLE1	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAK	TMPLE1	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAL	TMPLE1	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAM	TMPLE2	RELEASED	✓ INSER...	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAN	TMPLE3	RELEASED	✓ INSER...	ATI	TTI	NOCREATE	CICSUSER	
PRODCI...	-AAO	TMPLE3	RELEASED	✓ INSER...	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAP	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAQ	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAR	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAS	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAT	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAU	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAV	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAW	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAX	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	-AAY	TMPLE3	RELEASED	OUTSERVICE	ATI	TTI	CREATE	CICSUSER	
PRODCI...	A000	D3010001	ACQUIRED	✓ INSER...	ATI	TTI	CREATE	CICSUSER	
PRODCI...	CBRF	CBRF	RELEASED	✓ INSER...	ATI	TTI	NOCREATE	CICSUSER	
PRODCI...	CERR		NOTAPPLIC	✓ INSER...	NOATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CNSL		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO01		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO02		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO03		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO04		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO05		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO06		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO07		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO08		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO09		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO10		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	
PRODCI...	CO11		NOTAPPLIC	✓ INSER...	ATI	TTI	NOTAPPLIC	CICSUSER	

Events Properties Error Log

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CICS SM

Regions ISC/MRO Connections Terminals Files Transactions Terminal Definitions TD Queues

CNX0211I Context: PRODCICS, Resource: LOCFILE, 14 records collected at 11.04.2011 16:47:34

Name:

Region	Name	Status	Open Status	Add	Browse	Delete	Read	Update	LSR Pool ID
PRODCI...	BSTCNTL	✓ ENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	0
PRODCI...	DFHCSD	UNENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1
PRODCI...	EZACACH	✓ ENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1
PRODCI...	EZACONF	✓ ENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	NOTUPDA...	1
PRODCI...	IESCNTL	✓ ENABLED	OPEN	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1
PRODCI...	IESLDUM	✓ ENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1
PRODCI...	IESPRB	✓ ENABLED	OPEN	ADDABLE	NOTBRO...	NOTDELET...	READABLE	UPDATABLE	1
PRODCI...	IESROUT	UNENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1
PRODCI...	IESTRFL	✓ ENABLED	OPEN	NOTADDA...	NOTBRO...	NOTDELET...	READABLE	NOTUPDA...	1
PRODCI...	INWFILE	✓ ENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1
PRODCI...	RFSDIR1	✓ ENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1
PRODCI...	RFSDIR2	✓ ENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1
PRODCI...	RFSPOL1	✓ ENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1
PRODCI...	RFSPOL2	✓ ENABLED	CLOSED	ADDABLE	BROWSABLE	DELETABLE	READABLE	UPDATABLE	1

Events Properties Error Log

Name:

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CICSplex Explore CICSplex Reposit Server: CIC2

Regions ISC/MRO Connections Terminals Files Transactions Terminal Definitions TD Queues

CNX0211I Context: PRODCICS. Resource: LOCTRAN. 259 records collected at 11.04.2011 16:47:05

Region	Name	Status	Use Count	Program	Priority	Transactio...	Purgeability	Dumping	Routing
PRODCICS	cler	✓ ENABLED	0	CEL4RTO	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	disc	✓ ENABLED	0	CLIENT01	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	emai	✓ ENABLED	0	CLIENT01	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	ftp	✓ ENABLED	0	FTP01	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	iccf	✓ ENABLED	0	DTSICCF	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	lpr	✓ ENABLED	0	CLIENT01	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	newc	✓ ENABLED	0	EDCCNEWC	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	ping	✓ ENABLED	0	CLIENT01	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	rexe	✓ ENABLED	0	CLIENT01	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	ropc	✓ ENABLED	0	EDCYCROP	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	teln	✓ ENABLED	0	TELNET01	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	trac	✓ ENABLED	0	CLIENT01	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	APVU	✓ ENABLED	0	INWPCCOM	20	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	ARPS	✓ ENABLED	0	DFH\$ARPS	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	CATA	✓ ENABLED	1	DFHZATA	255	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CATD	✓ ENABLED	0	DFHZATD	255	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CATR	✓ ENABLED	1	DFHZATR	255	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	CCIN	✓ ENABLED	0	DFHZCN1	254	DFHCOMCL	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CDTS	✓ ENABLED	0	DFHZATS	255	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CEBR	✓ ENABLED	0	DFHEDFBR	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	CECI	✓ ENABLED	0	DFHECIP	1	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CECS	✓ ENABLED	0	DFHECSP	1	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CEDA	✓ ENABLED	0	DFHEDAP	1	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CEDB	✓ ENABLED	0	DFHEDAP	1	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CEDC	✓ ENABLED	0	DFHEDAP	1	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CEDF	✓ ENABLED	0	DFHEDFP	1	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CEDX	✓ ENABLED	0	DFHEDFP	1	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CEGN	✓ ENABLED	0	DFHCEGN	255	DFHTCL00	PURGEABLE	TRANDUMP	STATIC
PRODCICS	CEHP	✓ ENABLED	0	DFHCHS	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	CEHS	✓ ENABLED	0	DFHCHS	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	CEMS	✓ ENABLED	0	DFHEMSP	1	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC
PRODCICS	CEMT	✓ ENABLED	0	DFHEMTP	255	DFHTCL00	NOTPURGE...	TRANDUMP	STATIC

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More Information

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

- Hints and Tips for z/VSE V4.2: <ftp://ftp.software.ibm.com/eserver/zseries/zos/vse/pdf3/zvse41/hint9mm2.pdf>
- z/OS manuals describing 64 bit address spaces and IARV64 services:
 - SA22-7614-07: z/OS V1R11.0 MVS Programming Extended Addressability Guide
 - SA22-7610-17: z/OS V1R11.0 MVS Programming Authorized Assembler Services Reference Vol 2 (EDTINFO-IXGWRITE)
 - SA22-7607-15: z/OS V1R11.0 MVS Programming Assembler Services Reference Vol 2 (IARR2V-XCTLX)
 - SA22-7605-11: z/OS V1R11.0 MVS Programming Assembler Services Guide
 - Corresponding online books are at <http://www-03.ibm.com/systems/z/os/zos/bkserv/r11pdf/#zsys>
- IBM Redbooks:
 - Introduction to the New Mainframe: z/VSE Basics
<http://www.redbooks.ibm.com/abstracts/sg247436.html?Open>
 - Security on IBM z/VSE
<http://www.redbooks.ibm.com/redpieces/abstracts/sg247691.html>
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