lattwein Computersprachen
...wir bringen Ihren IBM Rechner ins Netz!

Aktuelles zu z/VSE, z/VM and Linux on Z

47. COURSE-Tagung vom 18.-19. Februar 2019 in Wiesbaden

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19th February 2019

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Agenda

- **z/VSE**
- z/VM
- Linux on IBM Z
- Anhang
  - z/VSE Homepage
  - Migration auf z/VSE V6

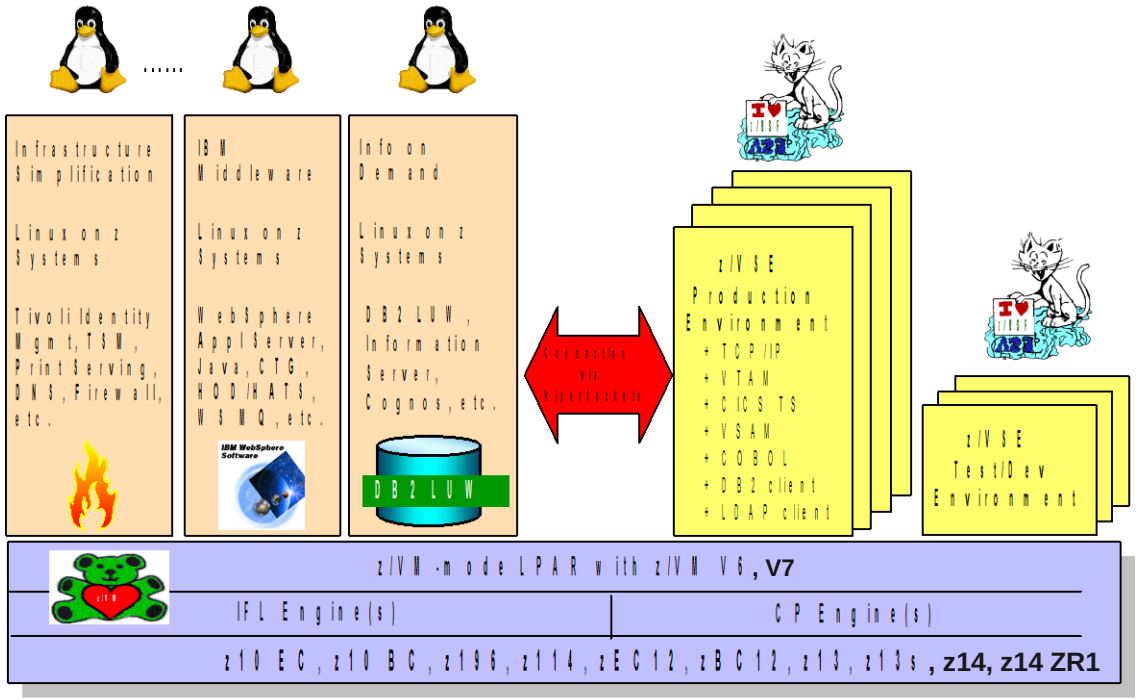
z/VSE Strategy

Protect existing z/VSE investments

Integrate using middleware and z/VSE connectors

Extend with Linux on IBM Z technology & solutions

- **Hybrid Environment** leveraging z/VSE, z/VM, and Linux on IBM Z



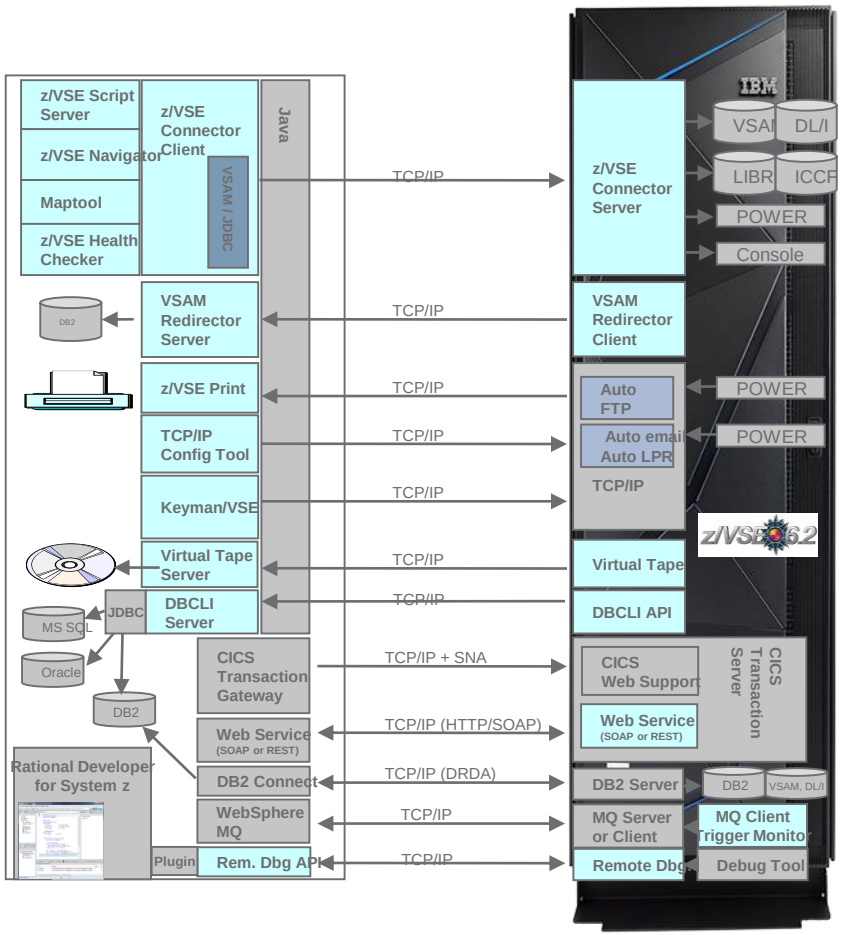
z/VSE Connectors

- GUI to z/VSE: z/VSE Navigator
- z/VSE Health Checker
- z/VSE Monitoring: SNMP Agent

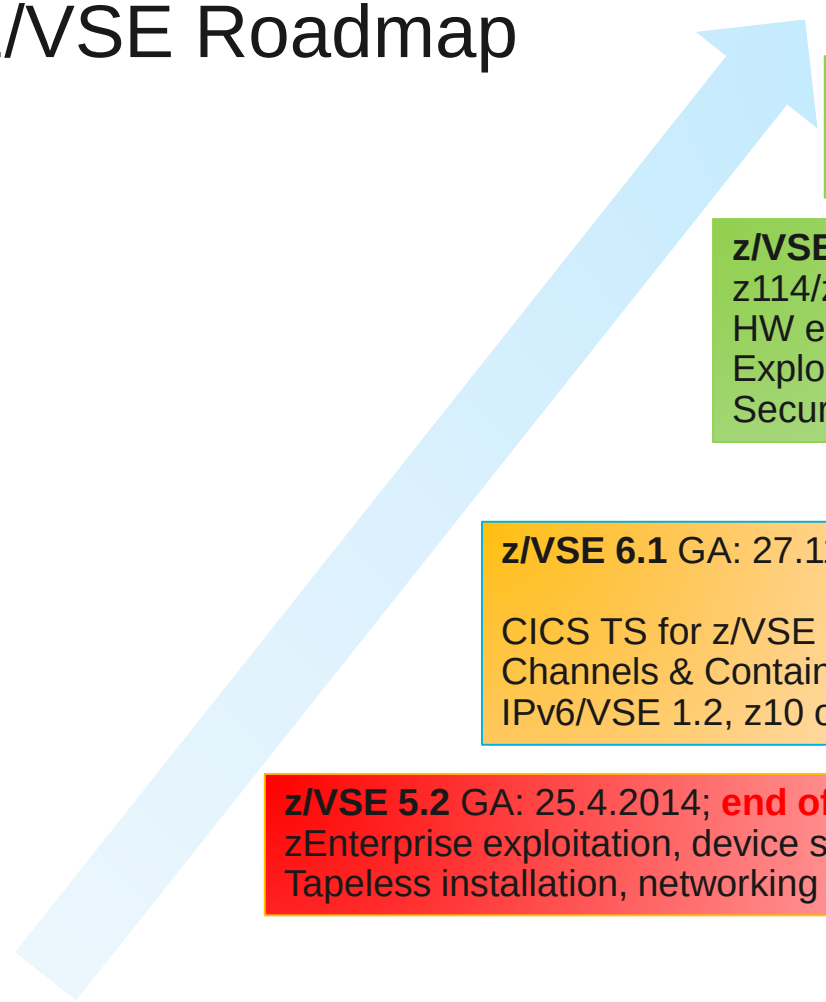
- Synch. of VSAM or DB2 data
- Integration of SQL DBs via DBCLI API
- 3270 -> Web : CICS Web Support
- Webservices (SOAP and REST)

- LAN Printer enablement
- Virtual Tape Server

- Operation/Workflow Integration with z/VSE Script Server
- GUI Development Env.



z/VSE Roadmap



z/VSE Continuous Delivery
DL/I 1.12.1 with support for >4GB, ICKDFS PAV
HW enablement, Networking, Security

z/VSE 6.2: **GA: 1.12.2017**
z114/z196 or newer, Migration Pricing Option
HW exploitation, CICS TS V2.2 (HTTP 1.1) & CICS Explorer, RESTfull Engine, Easy of use, Networking and Security enhancements

z/VSE 6.1 GA: 27.11.2015 **end of marketing: 1.12.2017**
end of service: 30.6.2019
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 newer; z Systems exploitation

z/VSE 5.2 GA: 25.4.2014; **end of service: 31.10.2018**
zEnterprise exploitation, device support
Tapeless installation, networking / security enhancements

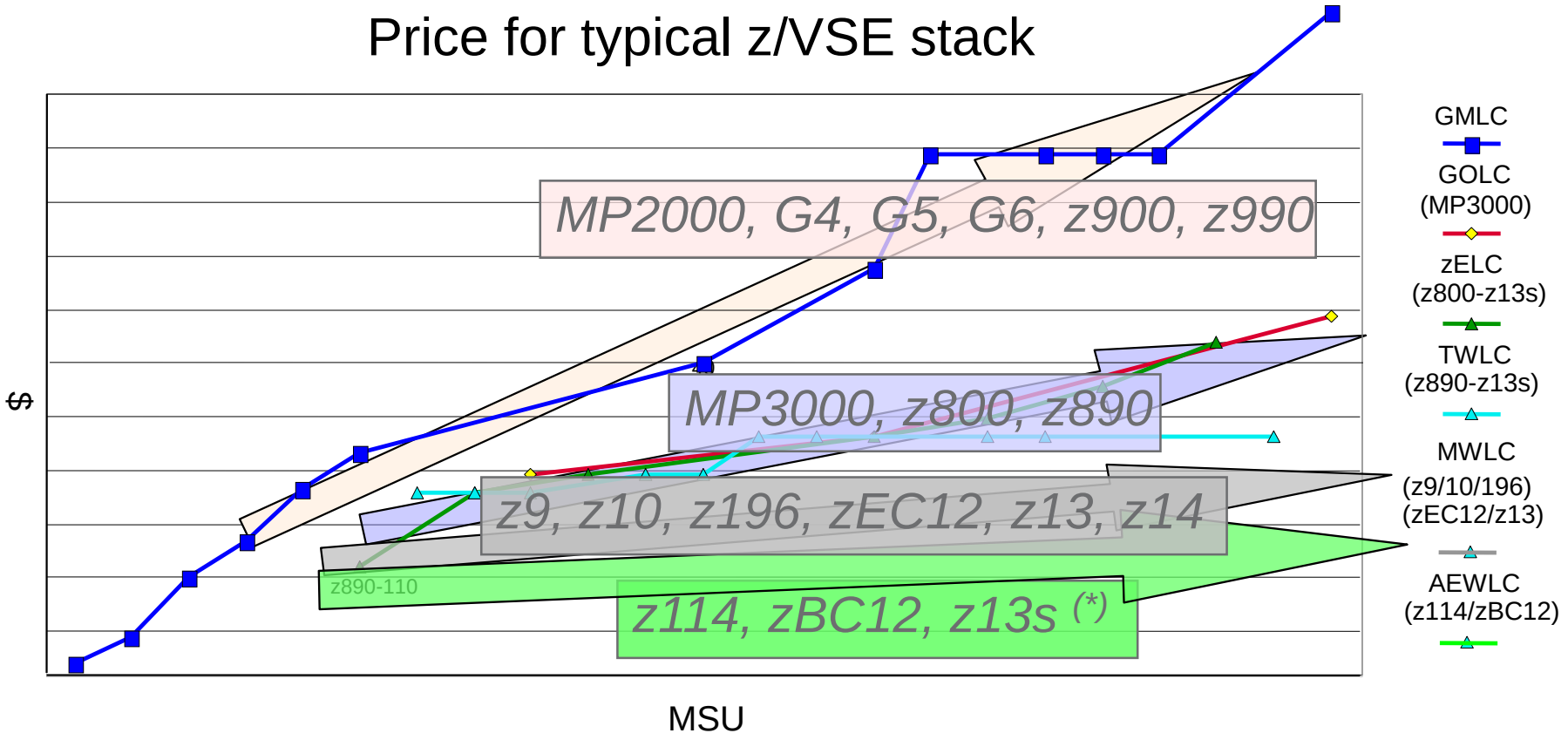
z/VSE 5.1 GA: 11.2011; **end of service: 30.6.2016**
64 bit virtual, zEnterprise exploitation, z9 or newer
z/VSE 5.1.1 GA: 6.2012: CICS Explorer, LFP in LPAR, database connector
z/VSE 5.1.2 GA: 6.2013: TS1140, 64 bit I/O, openSSL, db connector enhancements

z Systems support (or not)

VSE Release	z900 / z800	z990 / z890	z9 EC (eos 10.2017) / z9 BC (eos 1.2019)	z10 EC / z10 BC (eos 12.2019)	z196 / z114 / zEC12 / zBC12 / z13 / z13s	z14
z/VSE 6.2	No	No	No	No	Yes	Yes
z/VSE 6.1 (eos 6.2019)	No	No	No	Yes	Yes	Yes
z/VSE 5.2 (eos 10.2018)	No	No	Yes	Yes	Yes	Yes
z/VSE 5.1 (eos 6.2016)	No	No	Yes	Yes	Yes	Yes restricted
z/VSE 4.3	Yes	Yes	Yes	Yes	Yes	Yes restricted
z/VSE 4.2	Yes	Yes	Yes	Yes	Yes	Yes restricted
z/VSE 4.1	Yes	Yes	Yes	Yes	Yes	Yes restricted
z/VSE 3.1	Yes	Yes	Yes	Yes	Yes	No
VSE/ESA 2.7	Yes	Yes	Yes	Yes	Yes	No
VSE/ESA 2.6	Yes	Yes	Yes	Yes	Yes	No
VSE/ESA 2.5	Yes	Yes	No	No	No	No
VSE/ESA 2.4	Yes	No	No	No	No	No
VSE/ESA 2.3	Yes	No	No	No	No	No

z/VSE release / Hardware status: ftp://public.dhe.ibm.com/eserver/zseries/zos/vse/pdf3/zVSE_Status.pdf
ftp://public.dhe.ibm.com/eserver/zseries/zos/vse/pdf3/zVSE_Status_Unsupported.pdf

z/VSE Software Pricing Metrics



(*) The entry models of these servers, capacity settings A01 or 110, are priced using zELC.

Typical z/VSE stack consists of z/VSE Operating System, LE, CICS TS, VTAM, TCP/IP, DB2

AEWLC Technology Transition Offerings

- Technology Update Pricing for z14 Model ZR1 (TU6)
  - For stand-alone **z14 Model ZR1** servers
  - AEWLC **pricing reduction till 18%**
  - For more details, see announcement link
- Technology Update Pricing for z13s (TU4)
  - For stand-alone **z13s** servers
  - AEWLC **pricing reduction till 13%**
  - For more details, see announcement link
- Technology Update Pricing for zBC12 (TU2)
  - For stand-alone **zBC12** servers
  - AEWLC **pricing reduction till 5%**
  - For more details, see announcement link
- For more information about AEWLC see this link

Multi-Version Measurement (MVM)

- Multi-Version Measurement (MVM) was announced Feb. 14th 2017 and the earliest billing effective date is June 1st, 2017. See details here
- MVM allows clients to selectively deploy new software versions for an unlimited duration, providing more flexible control over their program upgrade cycles
- MVM can be use for:
  - Programs reporting **Sub-Capacity**
    - MVM enables the **combining of all the versions MSUs** to calculate the **latest version billable charges on the same machine**
    - **MVM requires SCRT V24.2.0 or SCRT V24.11.0.** Which are planned to be **available April 10th. Report** can be generated **May 2nd and submitted till May 9th.**
  - Programs **not** eligible for **Sub-Capacity**
    - MVM enables to **charge Full Capacity MSUs only** for the **latest** licensed **version** and charges for **any earlier versions** of the program are **waived**
- MVM replaces Single Version Charging (SVC), the Migration Pricing Option (MPO) and the IPLA Migration Grace Period
  - It simply **takes away the time limit**
  - If pre-MVM **time limit expired before May 31st**, 2017, must **request in writing to IBM** that MVM be applied

IBM Sub-Capacity Reporting Tool

- **Enables** z/VSE customers to **report and pay** only for the **MSUs used**
- For z/VSE **AEWLC** eligible products
- **IBM's policy** requires SCRT reports to be created using the **most current Version** of SCRT. However, IBM does **not require a specific Release or Modification level.**
  - The **Classic version** of SCRT is **no longer supported after October 2017** when SCRT V25 became available
  - **Currently only Java version available and supported**
- For **Java SCRT** and z/VSE **best practices and automation**, please see Using SCRT (Java Version) with z/VSE - Best Practices (PDF, 430KB)
- Latest **V26.1.0** (GA October 10th 2018) **– needed for reports from November 2018 on!**
- For more information on IBM SCRT see this link

Need something else?

- You may submit requirements at conferences (GSE, Tech. Univ., VM Workshop, ...)
  - IBM Systems Technical University, Worldwide 2018/2019
  - SVA Mainframe DayZ, February 19th – 20th in Wiesbaden, Germany
  - German GSE, March 25th – 27th in Bremen, Germany
  - VM Workshop, June 26th – 29th in Richmond, VA, US
  - International GSE, 4Q 2019 tbd
- 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 = z/VSE
- 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 System Software
    - Product = CICS Transaction Server

z/VSE in the internet

- z/VSE Homepage: www.ibm.com/vse
- Redbook: Introduction to the New Mainframe: IBM z/VSE Basics
  - http://www.redbooks.ibm.com/abstracts/sg247436.html?Open
- Redbook: Migration to CICS Transaction Server for z/VSE V2.1
  - http://www.redbooks.ibm.com/abstracts/sg248390.html?Open
- Redbook: Security on IBM z/VSE
  - http://www.redbooks.ibm.com/abstracts/sg247691.html?Open
- z/VSE Knowledge Center:
  - http://www-01.ibm.com/support/knowledgecenter/SSB27H/zvse_welcome.html
- CICS TS for z/VSE Knowledge Center:
  - http://www-01.ibm.com/support/knowledgecenter/SSB2JE_1.1.1/welcome.html
- Ingolf‘s z/VSE blog:
  - www.ibm.com/developerworks/mydeveloperworks/blogs/vse/
  - Use „Tags“ to search for topics
- VSE-L discussion list:
  - https://groups.google.com/forum/?fromgroups#!forum/bit.listserv.vse-l

Agenda

- z/VSE
- **z/VM**
- Linux on IBM Z
- Anhang
  - z/VSE Homepage
  - Migration auf z/VSE V6

z/VM V7.1 is here!

IBM Europe Software Announcement
ZP18-0376, dated August 7, 2018

IBM z/VM V7.1 Continuous Delivery model enables clients to exploit new and innovative z/VM capabilities at their own pace while helping to assure higher availability of their applications

Table of contents

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2 Key prerequisites
2 Planned availability date
2 Description
6 Product positioning
8 Statement of general direction
9 Program number
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28 Announcement countries
29 Corrections

At a glance

IBM(R) z/VM(R) V7.1 offers a new release delivery and new function support cadence that gives clients an enhanced level of predictability for lifecycle management of their z/VM systems.

- Integrates the Single System Image (SSI) function into the base, at no additional cost, and withdraws the SSI feature.
- Increases the level of engagement with the z/VM user community.
- Enhances the dump process to reduce the time required to create and process dumps.
- Upgrades to a new Architecture Level Set. This requires an IBM zEnterprise(R) EC12 or BC12, or later
- Provides the base for additional functionality to be delivered as service after general availability.
- Enhances the dynamic configuration capabilities of a running z/VM system with Dynamic Memory Downgrade support.

http://www-01.ibm.com/common/ssi/ShowDoc.wss?docURL=/common/ssi/rep_ca/6/877/ENUSZP18-0376/index.html&request_locale=en

z/VM Release Status Summary

z/VM Level	GA	End of Service	End of Marketing	Minimum Processor Level	Maximum Processor Level	Security Level
7.1	09/2018			IBM System zEC12 & zBC12®		
6.4	11/2016			IBM System z196 & z114®	-	EAL 4+ OSPP-LS FIPS 140-2 [1]
6.3	7/2013	**12/2017**[2]	11/2016	IBM System z10®	-	EAL 4+ OSPP-LS FIPS 140-2
6.2	12/2011	**6/2017**[3]	7/2013	IBM System z10®	z13	-
5.4	9/2008	**12/2017**[4]	3/2012	IBM eServer zSeries 800& 900	zEC12	-

[1] Statements of Direction in the z/VM 6.4 announcement letter; Evaluation work in progress
[2] Announced February 3, 2015
[3] Announced February 2, 2016
[4] Announced August 2, 2016

z/VM Continuous Delivery Release Model

Starting with z/VM V7.1 and current z/VM V6.4

24-Month Release Cycle

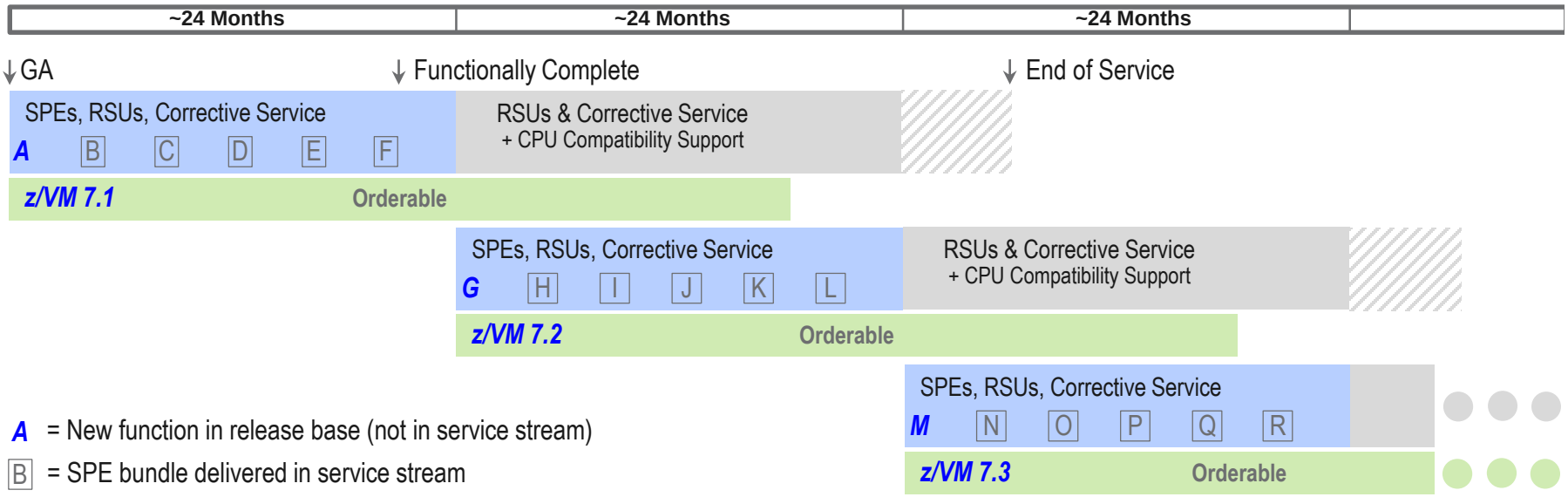
Highlights:

- z/VM Release GAs: Every 2 years in 3rd Quarter of even years
- Releases remain orderable 18 months after GA of next release
- Last 6 months of release life cycle overlaps next two releases
- In service, roughly 4.5 years.

Clients are encouraged to "stay current" and move to a new release ASAP
- Where applicable, product design decisions will favor the client who stays current

Clients can migrate from one "service only" release to another if required

Clients can run new release in test environment on prior release at any time



z/VM Version 6 Release 4
Designed for Clients of Today and Tomorrow

See http://www.vm.**ibm.com**/zvm640/

- ALS z114/z196
- Scalability and TCO
  - More VMs in single footprint
  - Real LPAR Mem. to 2 TB, guest 1TB
  - Dynamic SMT without outage
  - ***** POST-GA *****
  - **z/VM Sub-capacity pricing**
  - **Better paging with HyperPAV and zHPF**
  - **EAV minidisk enhancement**
  - **n-way processor scalability enhancement**
  - **Multi-VSwith Link Aggregation Global**
  - **z-Thin Provisioning - Extent Space Efficient**

- Management of Diverse Workloads
  - Mem., scheduler, RAS SCSI
  - Free up paging space
  - Guest Large Page, TX, SIMD
  - ***** POST-GA *****
  - **Tuning influencing parking processors**
  - **Inst. Exec. Protection, Pause-less GC,**
  - **zHPM with support resource pools**

- Installation and Migration:
  - Upgrade in Place
  - DPM

- Automation and SYSPROG effectiveness:
  - CP Env. variables
  - Extra info on Shutdown
  - CMS Pipelines integration
  - Cloud Deployment model/Provisioning
  - Query PTF, Local Mods, Disk conf. info
  - EXPLORE FCP (SCSI SAN Discovery)
  - ***** POST-GA *****
  - **Dump time enhancement (dropping page table guests)**
  - **Adobe Indexed PDF Collection**
  - **FCP Monitor Enhancements**
  - **Perf. Toolkit HyperPAV support**
  - **IBM Infrastructure Suite for z/VM and Linux on Z**

- Security
  - Default VLAN ID disable with an ESM
  - TLS 1.1/1.2 default
  - DirMAint to RACF Connector
  - RSCS TCPNJE traffic encrypted
  - ***** POST-GA *****
  - **RACF Sec. Policy enhancement.**
  - **TLS/SSL Server with HW Crypto enablement**
  - **Network Security NICDEFs from user directory**
  - **FTP client firewall friendly**
  - **Encrypted Paging**

- Other:
  - SET DIALDROP command
  - ***** POST-GA *****
  - **Enable dynamically change of distributed IUCV policy**

Future new function: http://www.vm.ibm.com/newfunction/
Closed new function PTFs: http://www.vm.ibm.com/service/vmnfapar.html

Current z/VM Continuous delivery model

Notify me

http://www.vm.ibm.com/newfunction/

New Function APARs

New function in progress	Target date	Last updated
4TB Main Memory Support *	TBD	May 29, 2018
Automatic STANDBY Memory for Guests *	3rd Quarter 2019	December 11, 2018
Centralized Service Management	3rd Quarter 2020	December 13, 2018
CPU Measurement Facility Host Sampler Exploitation	TBD	December 12, 2018
Dynamic Crypto	3rd Quarter 2019	December 13, 2018
Dynamic Memory Downgrade	TBD	December 11, 2018
EAV Paging *	2nd Quarter 2019	December 13, 2018
Fast Minidisk Erase *	TBD	December 11, 2018
Group Memory Limiting *	TBD	July 23, 2018
More than 64 Logical Processors *	2nd Quarter 2019	December 13, 2018
MSS Multi-Target PPRC Exploitation *	3rd Quarter 2020	July 23, 2018
Multifactor Authentication for z/VM *	TBD	April 9, 2018
SSI Eight Member Clusters	TBD	June 21, 2018
TLS / SSL Client Certificate Verification *	2019	December 11, 2018
VSwitch Priority Queuing	March 2019	December 13, 2018
ZHPM Application *	TBD	March 8, 2018

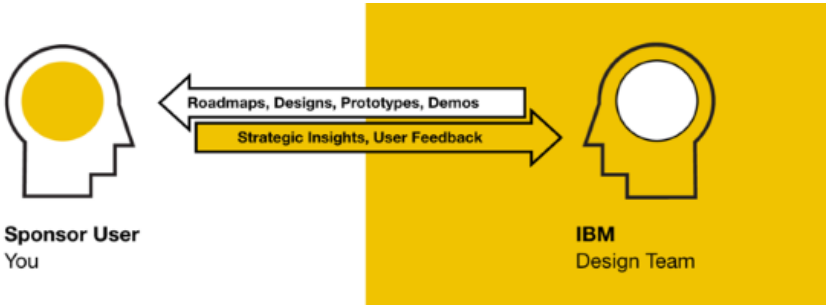
* Denotes the z/VM team is seeking Sponsor Users. See New Function APAR for more information.

Available new function	Date released	Last updated
Dump Scalability	September 21, 2018	September 25, 2018
Elliptic Curve Support	December 13, 2018	January 28, 2019
Encrypted Paging	December 15, 2017	March 19, 2018
ESM Authorization and Auditing of SMAPI Requests	September 27, 2018	October 16, 2018
Extended Address Volume Minidisk Support	August 25, 2017	September 30, 2017
FCP Monitor Enhancements	April 2, 2018	April 9, 2018
Firewall Friendly FTP Client	August 23, 2017	September 30, 2017
Guest Exploitation for the Instruction Protection Facility	December 11, 2017	February 12, 2018
Guest Support for the Guarded Storage Facility	December 11, 2017	February 12, 2018
High PR/SM LPAR Management Time Relief	October 23, 2017	November 30, 2017
NICDEF Security Controls	August 4, 2017	September 30, 2017
Perfkit Support for HyperPAV Paging	April 13, 2018	April 18, 2018
Processor Scalability Efficiency Enhancements	August 23, 2017	September 30, 2017
RSCS Query System Service	December 4, 2018	December 11, 2018
Support for ZHPM CPU Resource Management	April 11, 2018	April 11, 2018
VSwitch Link Aggregation Load Balance Enhancements	December 15, 2017	December 14, 2017
z-Thin Provisioning	March 28, 2018	March 30, 2018

– Characteristics of a New Function APAR

New Function Information	
Name	The simple name of the project.
Description	A brief summary of what changes, who it effects, and why you would care.
Status	Along with the current status, this will give indication of key changes since the last iteration of this page.
Target availability	Depending on the project, where it is in the cycle, and other factors, this will list TBD, a quarter, a month, or, in cases where it has become available, a date. This is not a commitment and as more is learned about the work and priorities the target availability date will likely be adjusted.
Compatibility	This will describe how compatible an item is. In most cases, this will say 'No known incompatibilities'. It is not meant to list all details like a migration guide, but to give some indication of what to expect.
Enablement	This will briefly describe how enablement is managed for this Small Product Enhancement. Can it be enabled or disabled? What is the default? Can it be done dynamically? Is it on a virtual machine basis or system wide basis? It is not meant to describe all details of that process, but to give an idea of what's involved. Will also give indication of whether an IPL of the z/VM system is required, or just recycle of virtual machines or new CMS modules.
Effect	Describes what effect enabling the code may have beyond the compatibility statement above. Such as may slightly elongate logoff time or CCW translation code paths changed. These are basically meant to be hints as to how the system may respond or behave differently.
ISV impact	Indicates any impacts to ISV related products that are known, such as "If using a directory manager product, see vendor for required updates."
Linux or hardware interaction	Indicates whether a special level of Linux or hardware is required because of an interaction or dependency.
Release(s)	Indicates the releases planned for this enhancement.
Service details	See below for the IBM service information.
APAR	Information and link to the Authorized Program Analysis Report.
PTF	Information and link to the Program Temporary Fix.
RSU	Information and link to the Recommended Service Upgrade.

z/VM Sponsor Users



- Who are they? Customers and/or Vendors who want to directly help the IBM z/VM team design a product that will specifically meet Customer's and/or Vendor's needs …. MIGHT BE YOU ;-)
- Expectations:
  - Kickoff call to discuss the line item and gather feedback (1-1.5 hours)
  - Design approach review call to discuss the product after taking into account the initial feedback (1 hour)
  - Email exchange may take place if clarification or additional information is needed (1-2 hours)
  - Product showcase (1 hour)
  - Beta testing (time varies based on line item)
- More information: http://www.vm.ibm.com/sponsor_user/

IBM z/VM Council

http://www.vm.ibm.com/sponsor_user/zvm_council.html

Activities

- User Research
- New Project Introduction
- Sponsor User Recruitment
  - Design
  - Test
- Client Playbacks
- Project Proposal Definition and Prioritization

Membership

- **Open to any client** with a Customer Feedback Program Agreement in force
  - Evergreen agreement
  - Covers all company employees
- Each participant must have an IBM ID – https://idaas.iam.ibm.com

Client Membership Requirements

- Participate regularly and actively
- Sponsor at least one project per year
  - Participate in client playbacks
- Prioritize project proposals
- Complete assigned homework

Community

- Council communication mechanism

Meetings

- Approximately monthly, telephone and Web conference

Management Structure

- IBM Executive sponsor
- IBM Business leader
- Client Leaders
  - Help create agenda
  - Represent client viewpoints and interests
- IBM Leaders
  - Create agendas, schedule and facilitate meetings, manage Community

To Join the Council

- Identify colleagues who will participate
  - Ensure they have IBM IDs
- Send e-mail to Kerry Wilson - mailto:kerryw@us.ibm.com
  - Include participant names and e-mail addresses
  - Kerry will verify your company has a User Feedback Program Agreement in force or send a copy to sign and return
  - When agreement in place, participants will be added to meeting invitations and community

Need something else?

- You may submit requirements **preferably at the z/VM Council Community**
- Also at conferences (SHARE, GSE, Tech. Univ., VM Workshop)
- Or using the Request for Enhancements (RFE) database:
  - http://www.ibm.com/developerworks/rfe/
  - Please select the following for z/VM requirements:
    - Brand = Servers and System Software
    - Product = z/VM
- More information about z/VM can be found through the official web site:
  - http://www.vm.ibm.com
  - http://www.vm.ibm.com/news/

Agenda

- z/VSE
- z/VM
- **Linux on IBM Z**
- Anhang
  - z/VSE Homepage
  - Migration auf z/VSE V6

Linux on IBM z Systems Distributions (1/3)

- SUSE:
  - **SUSE Linux Enterprise Server 11**
    - GA 24.3.2009; Kernel 2.6.27 (**SP4: 3.0**); GCC 4.3.3 (SP4 4.3.4)
    - **SLES 11 SP4**: GA 15.7.2015; EOS 31.3.2019; LTSS: 31.3.2022
  - **SUSE Linux Enterprise Server 12**
    - GA 27.10.2014; Kernel 3.12; GCC 4.8
    - **SLES 12 SP4**: GA 12.12.2018; **Kernel 4.12**; GCC 4.8
    - Last SP EOS 31.10.2024; LTSS: 31.10.2027
  - **SUSE Linux Enterprise Server 15**
    - GA 16.07.2018; Kernel 4.12; GCC 7.0
    - Last SP EOS 31.07.2028; LTSS: 31.07.2031
  - https://www.suse.com/support/policy.html
  - https://www.suse.com/lifecycle/

Linux on IBM z Systems Distributions (2/3)

- Red Hat:
  - **Red Hat Enterprise Linux AS 5**
    - GA 15.3.2007; Kernel 2.6.18; GCC 4.1
    - RHEL 5.11: GA 16.9.2014; EOS 31.3.2017; ELS: 30.11.2020
  - **Red Hat Enterprise Linux AS 6**
    - GA 9.11.2010; Kernel 2.6.32; GCC 4.4
    - **RHEL 6.10**: GA 20.6.2018
    - Last Update EOS 30.11.2020; ELS: 30.6.2024
  - **Red Hat Enterprise Linux AS 7**
    - GA 9.6.2014; Kernel 3.10; GCC 4.8
    - **RHEL 7.5**: GA 10.4.2018
    - Last Update EOS 30.6.2024; ELS: tbd

  - https://access.redhat.com/support/policy/updates/errata/
  - https://access.redhat.com/articles/3078

Linux on IBM z Systems Distributions (3/3)

- Ubuntu:
  - **Ubuntu Server 16.04 LTS**
    - GA 21.4.2016; Kernel 4.4; GCC 5.3
    - **Ubuntu Server 16.04.5** GA 2.8.2018
    - EOS 4.2021
  - **Ubuntu Server 18.04 LTS**
    - GA 26.4.2018; Kernel 4.15; GCC 7.3
    - **Ubuntu Server 18.04.2** GA 14.2.2019
  - **Ubuntu Server 18.10**
    - GA 18.10.2018; Kernel 4.18; GCC 8.2
    - EOS 6.2019
  - Ubuntu Lifecycle:
    - http://www.ubuntu.com/info/release-end-of-life
    - https://wiki.ubuntu.com/Kernel/LTSEnablementStack?_ga=1.219828057.1549132454.1460845469
- Others:
  - Debian, Slackware
    - Support may be available by some third party

IBM tested and supported Linux distributions

● **Certified by Linux partner, tested by IBM**

◐ **Certified by Linux partner, not yet tested by IBM**

Overview shows Linux distributions in service.

Extended support is available for Linux distributions that are out of service.

	Emperor II	Rockhopper II	Emperor	Rockhopper			
	z14 M0x	z14 ZR1	z13	z13s	zEnterprise – zEC12, zBC12	zEnterprise – z196, z114	System z10, System z9
RHEL 7	●	●	●	●	●	●	
RHEL 6	●	●	●	●	●	●	●
RHEL 5			●		●	●	●
SLES 12	●	●	●	●	●	●	
SLES 11	●	●	●	●	●	●	●
Ubuntu 18.04	◐	◐	◐	◐	◐		
Ubuntu 16.04	●	●	●	●	●		

Last update 08/16/2018

See https://www.ibm.com/it-infrastructure/z/os/linux-tested-platforms for latest updates and details.

Linux on Z related IBM SW news

- IBM Db2 V11.1.3.3
- IBM Db2 Warehouse (Docker on prem)
- IBM MQ V9.1.1 for Multiplatforms
- IBM Spectrum Scale V5.0.2
- IBM Cloud Private V3.1.2
- IBM Secure Service Container for IBM Cloud Private
- IBM Data Science Experience Local V1.2.1

Linux on IBM Z resources

- Official IBM website: https://www.ibm.com/it-infrastructure/z/os/linux
- Technical references: https://www.ibm.com/developerworks/linux/linux390/index.html
- Linux on IBM z Systems **Knowledge Center**:
  - **The central location for finding and organizing information about IBM products**
  - **How to get there:**
    - Search for “IBM Knowledge Center”
    - or go directly to https://www.ibm.com/support/knowledgecenter/
  - **How to get to Linux on IBM z Systems stuff:**
    - Search for “Linux z” within IBM Knowledge Center
    - or go directly to https://www.ibm.com/support/knowledgecenter/linuxonibm/liaaf/lnz_r_main.html
  - **Highlights**:
    - Mobile enabled
    - Not only pdf, but also full text view and search
    - Classified by topics
    - Direct links to related information like Redbooks, Whitepapers,…

THANK YOU!

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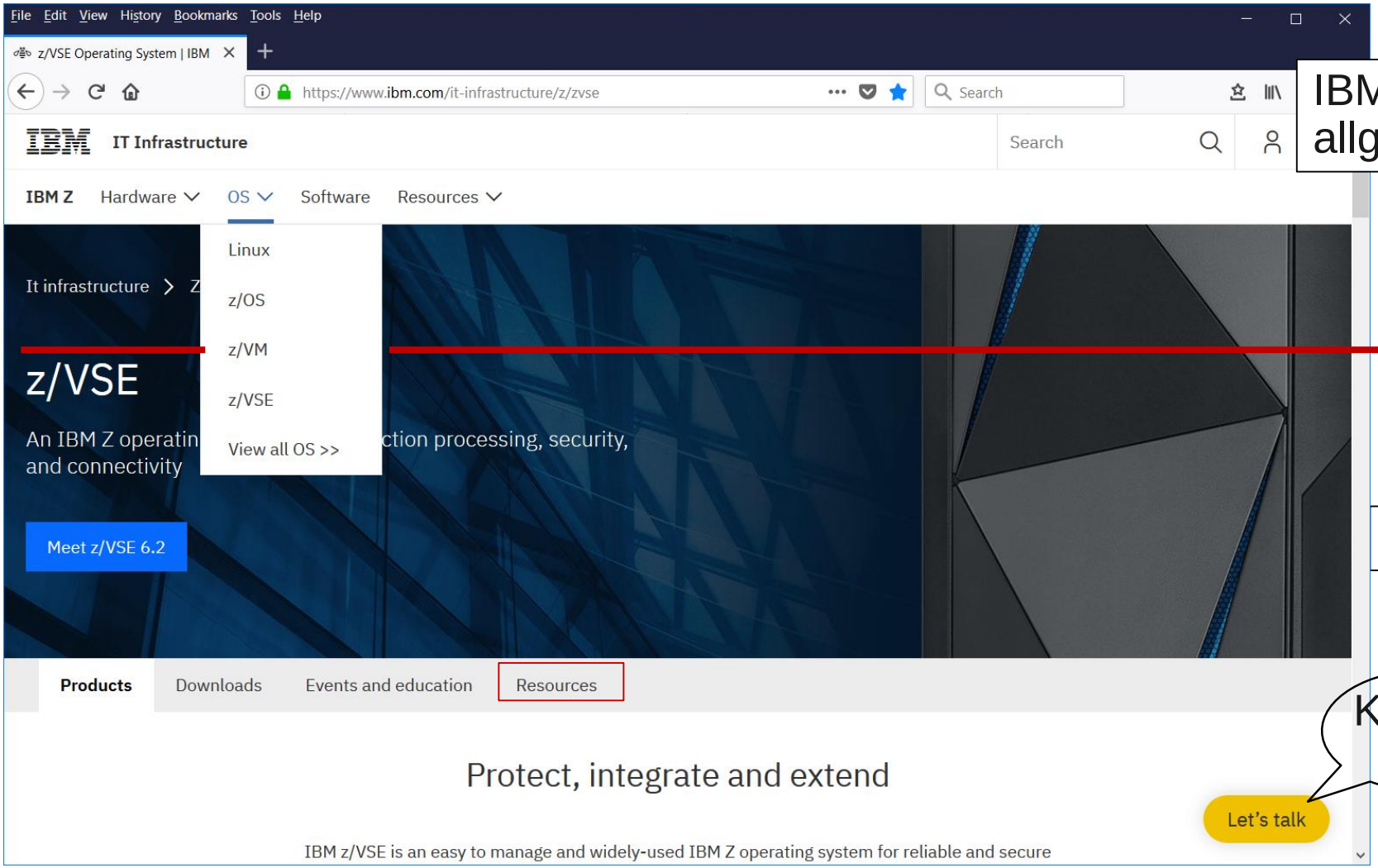
- z/VSE
- z/VM
- Linux on IBM Z
- **Anhang**
  - **z/VSE Homepage**
  - Migration auf z/VSE V6

z/VSE Homepage - 1 : https://www.ibm.com/zvse/

https://www.ibm.com/it-infrastructure/z/zvse



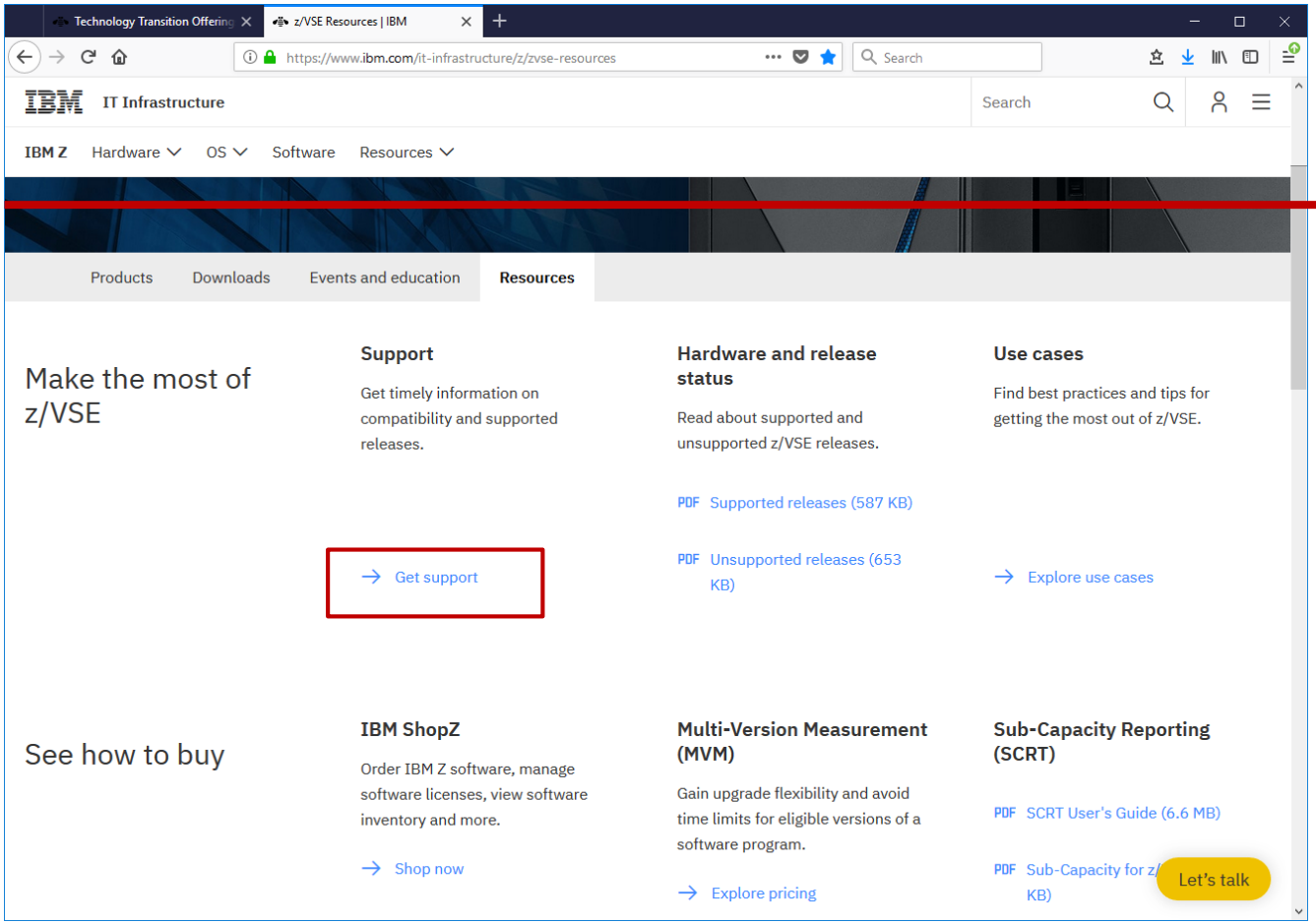
IBM allgemein

z/VSE

Kontact z/VSE

z/VSE Homepage - 2 : https://www.ibm.com/zvse/

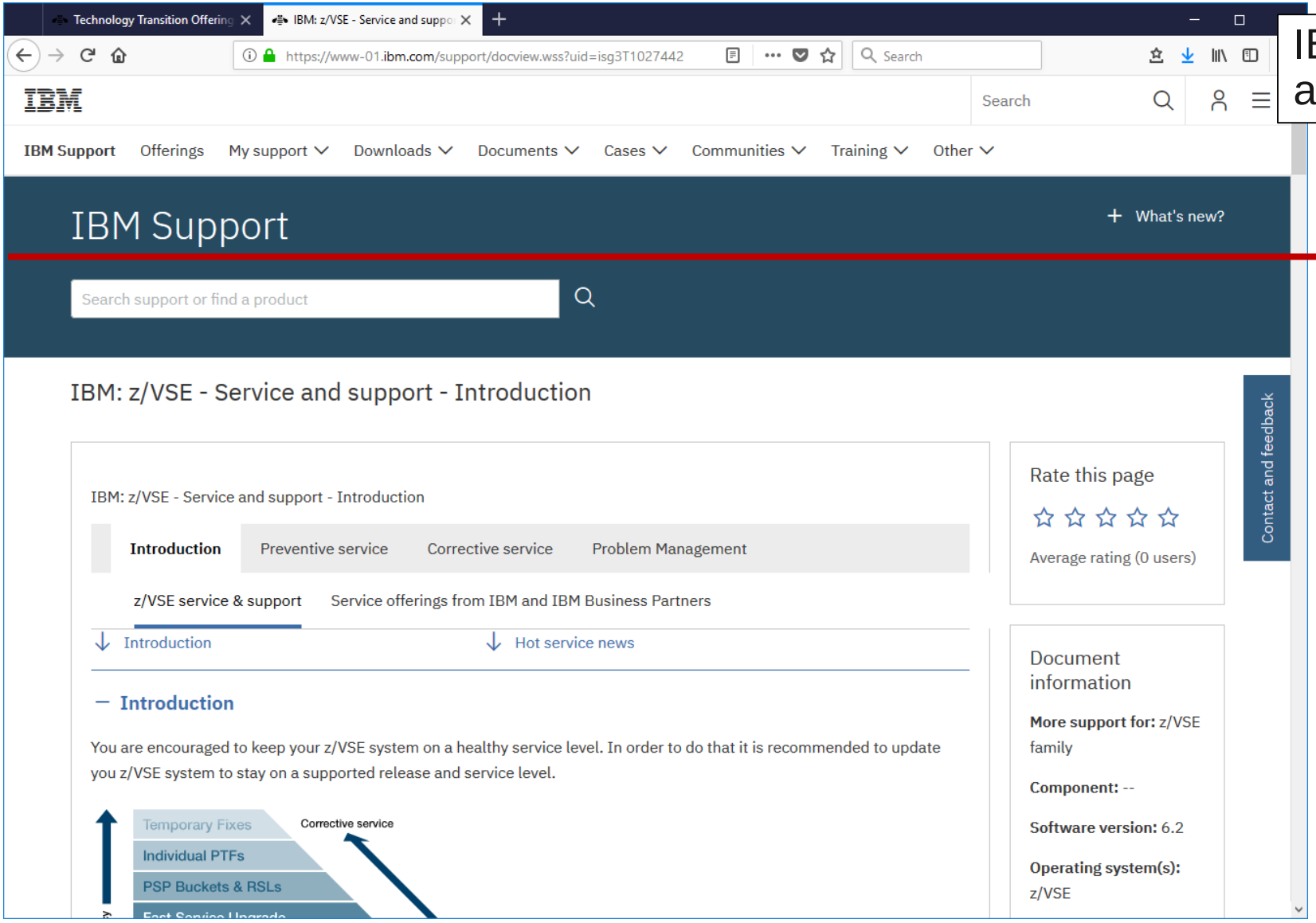
- Die meisten Verweise aus dem bisherigen Abschnitt rechts unter **„Browse z/VSE“** finden Sie nun unter z/VSE → **Resources:** https://www.ibm.com/it-infrastructure/z/zvse-resources
  - oft auch als PDF-Datei



IBM allgemein

z/VSE

z/VSE Homepage - 3 : https://www.ibm.com/zvse/



IBM allgemein

z/VSE

z/VSE Homepage - 4 : https://www.ibm.com/zvse/

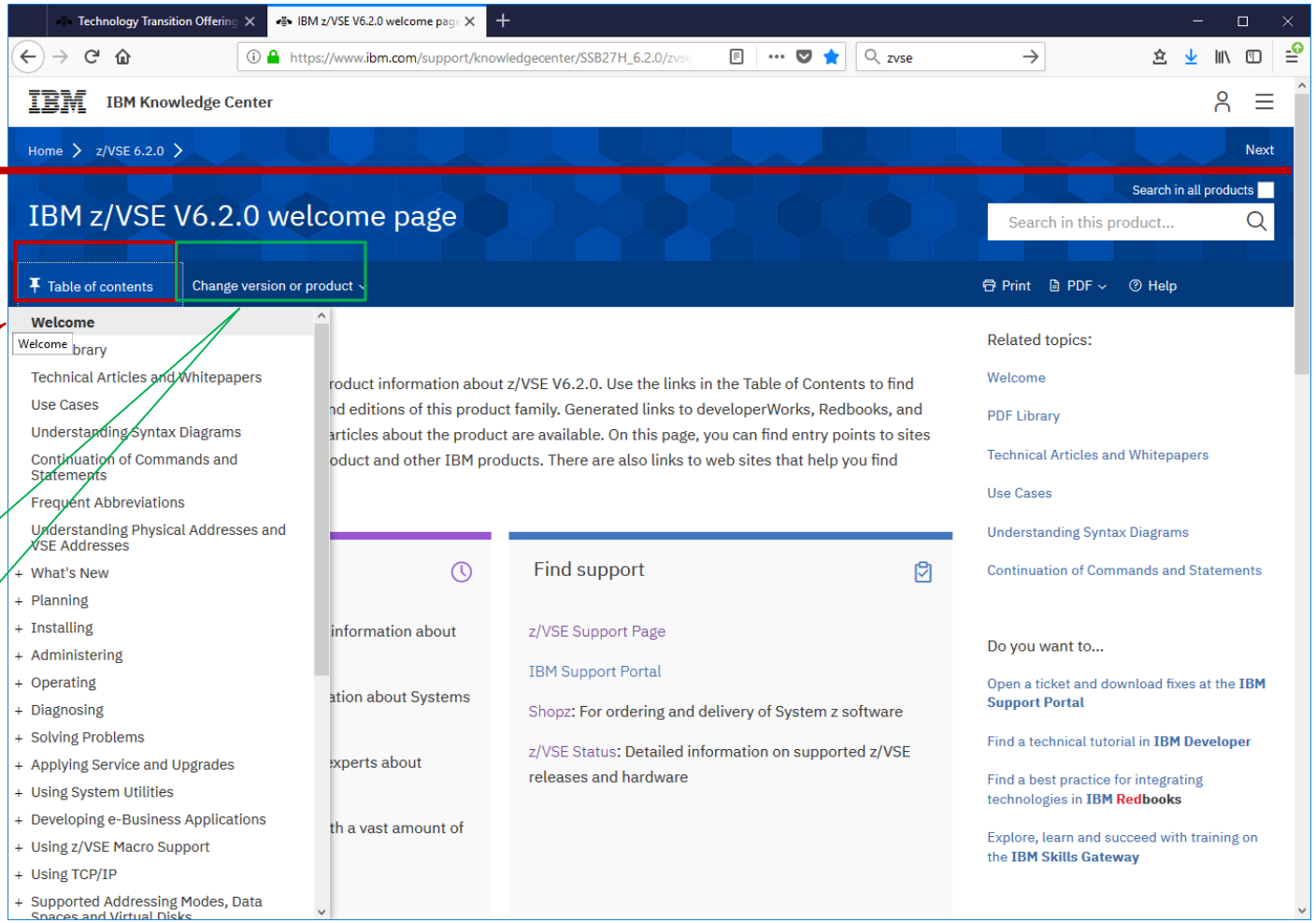
- Ein guter Einstieg für Informationen ist auch die „z/VSE V6.2.0 Welcome Page“ im IBM Knowledge Center: https://www.ibm.com/support/knowledgecenter/SSB27H_6.2.0/zvse_welcome_6.2.0.html

IBM allgemein

z/VSE

„Table of contents“: guter Überblick über einzelne Bereiche

„ Change version“: verzweigt auch auf z/VSE V6.1.0 und z/VSE V5.2.0



Agenda

- z/VSE
- z/VM
- Linux on IBM Z
- **Anhang**
  - z/VSE Homepage
  - **Migration auf z/VSE V6**

Migration auf z/VSE V6: neue IBM-Lizenzen

Für z/VSE V6 brauchen Sie **neue Lizenzen** für

z/VSE V6 (5686-VS6)	bisher	z/VSE Central Functions V9/8 (5686-CF9/8/n)
CICS TS for z/VSE V2 (5655-VSE)	bisher	CICS TS for **VSE/ESA V1.1.1** (5648-054)

Und wenn Sie über IBM lizenziert haben, auch für

IBM TCP/IP for **z/VSE** V2 (5686-CS1)	bisher	**IBM** TCP/IP for **VSE/ESA V15F** (5686-A04)
und das General Print Service (GPS)-Feature.		

Für **IBM** TCP/IP for z/VSE V2 brauchen Sie auch **neue IBM-KEYs**!

- **IBM SW-Lizenzen gelten immer pro Version des SW-Produktes (neue Produktnummer)**
- Es gibt keine neue Version / Produktnummer bei IBM Optional Products
- Für z/VSE gibt es **Multi-Version Measurement (MVM)**
  - MVM ersetzt ~~**Migration Pricing Option (MPO)**~~ und ~~**Single Version Charging (SVC)**~~
- es wird nur ein Preis für die Produktfamilie (und zwar für die neuste SW-Version) berechnet
- z/VSE V6 bestellen Sie über IBM ShopZ: https://www-03.ibm.com/software/shopzseries/ShopzSeries.wss?action=login

Migration auf z/VSE V6

Migration auf z/VSE V6.2 von

- z/VSE V5.x , V4.x,… → Neuinstallation ist zwingend
- z/VSE V6.1 → Fast Service Upgrade (FSU) möglich

Beachten Sie die Installationshinweise

Neuinstallation der z/VSE-Basis

- Plattenwechsel auf größeres Modell oder anderen Devicetyp möglich
- CICS Transaction Security nur noch über BSM Control File möglich
  DTSECTXN wird im z/VSE V6.2 NICHT mehr unterstützt
- NOPDS im z/VSE defnieren
- VSAM-Kataloge, Libraries, etc erweitern
- Aktuellen Service einspielen (Service-Stand auf Base Tape: 10.05.2017)
  - Recommended Service Level (RSL) – alle verfügbaren PTFs vom 10.01.2019
  - Preventive Service Planning (PSP) – HIPER PTFs, suche „zvse620“ bei http://www14.software.ibm.com/webapp/set2/psearch/search?domain=psp
- …

Anpassen an eigene Anforderungen und Anwendungen einpflegen

- CICS TS , VSAM- Kataloge, TCP/IP, …..

Informationen zu z/VSE V6.x + Migration

- **Release Guide:** z/VSE V6.x - Überblick
- „**Program Directory** for z/VSE V6.x and CICS TS for zVSE V2.x" (GI11-9706-00)
- **„Hot service news"** auf z/VSE-Homepage http://www-03.ibm.com/systems/z/os/zvse/support/#news
- **Installation** für Neuinstallation
- **System Upgrade and Service** für FSU
- „**z/VSE Version (Release) and Hardware Upgrade**" (allgemeine Hinweise)
  – ftp://public.dhe.ibm.com/eserver/zseries/zos/vse/pdf3/zVSE_Release_and_Hardware_Upgrade.pdf
- Migrationserfahrungen/–hinweise auch in Vorträgen auf den GSE-Tagungen,

  z.B. Frühjahr 2018: **VS02 – Erste Erfahrungen mit z/VSE V6 (Migrationserfahrungen)**

- **z/VSE Collection Kit** in PDF-Format **(SK3T-7750) ,** z.B. über IBM Publications Center
  – enthält auch Dokumentation über frühere z/VSE Versionen /Release

Zum Systemverständnis: u.a

- **Panning,** u.a
  - Predefined System Environment (in Chapter 4)
  - Migrating From Earlier Releases (Chapter 6)
- **Administration,** u.a.
  - Modifying Predefined Environments (Startup-Jobs)
  - Security Migration
- **CICS TS for z/VSE V2.2 Enhancement Guide** (SC34-2685-01)
  - Part 10. Migration to CICS Transaction Server for z/VSE 2.2

Fragen beantworte ich gerne
im Anschluss der Veranstaltung

oder später → melden Sie sich einfach bei mir:

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Vielen Dank für Ihre Aufmerksamkeit!