



E54

Wellness and VSE -

how you can improve the health of your VSE system

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updated

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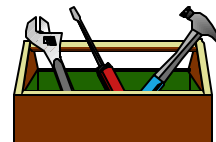
Content

- Ways to keep a VSE System up-to-date
- Preventive service - corrective service
- Recommended Service Level and how to make best use of it
- Applying maintenance over the internet
- VSE service information on the internet
- ShopzSeries for VSE users
- Working with the IBM VSE remote support
- Frequently observed migration and other problems
- Hints and tips

For an updated version of this presentation visit the VSE Homepage:
<http://www-1.ibm.com/servers/eserver/zseries/os/vse/>

Priority One: Keep your System on a Supported Level

- to make sure that support is available when you need it!



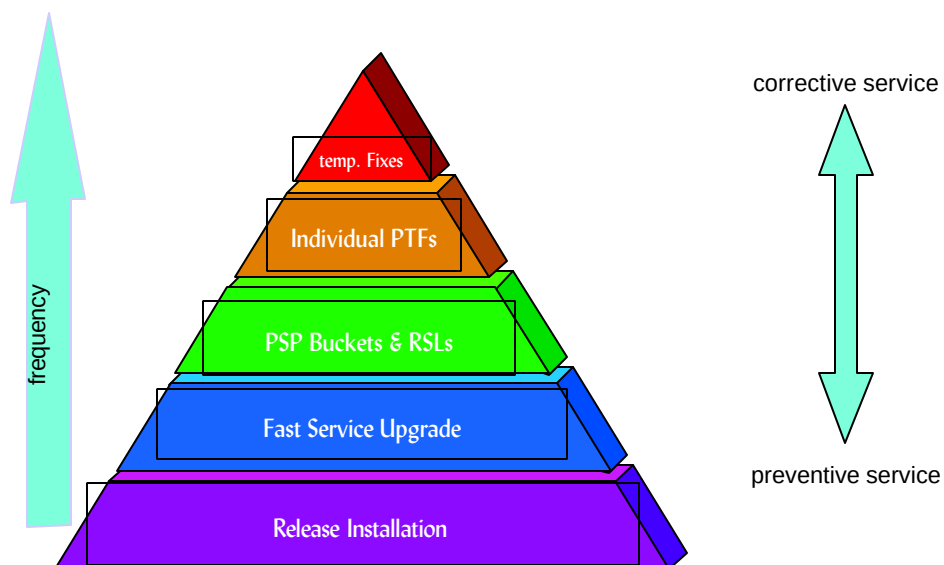
- Plan ahead sufficient time for release migration
- IBM announces end-of-service dates at least 12 month ahead
- Customers are informed by letter, and please check out the VSE home page
- From VSE/ESA 2.5 upward migration via FSU procedure possible
- Consult your software vendors for upgrades and specific information

End of Service Dates

	End of Marketing	End of Service
VSE/ESA 1.4	12/1999	01/31/2001
VSE/ESA 2.1/2.2	12/1997	01/31/2001
VSE/ESA 2.3	06/2000	12/31/2001
VSE/ESA 2.4	09/30/2000	06/30/2002
VSE/ESA 2.5	12/13/2001	12/31/2003
VSE/ESA 2.6	03/13/2002 ¹⁾	03/31/2006
VSE/ESA 2.7	tbd	tbd

1) VSE/ESA 2.6.3 orderable as service option of VSE/ESA 2.7 until early November 2004

Measures to Keep Your System Up-to-Date



Recent VSE/ESA Refresh Levels

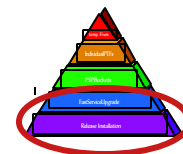


VSE/ESA	PTF level (gen.)	Available from	...until
2.5.2.	06/18/2001	08/10/2001	12/11/2001
2.6.0.	10/13/2001	12/14/2001	06/13/2002
2.6.1.	03/12/2002	06/14/2002	12/12/2002
2.6.2.	10/21/2002	12/13/2002	03/13/2003
2.6.3.	06/30/2003	09/12/2003 ¹⁾	11/16/2004
2.7.0.	12/13/2002	03/14/2003	09/11/2004
2.7.1.	06/30/2003	09/12/2003	03/19/2004
2.7.2.	01/26/2004	03/19/2004	11/16/2004
2.7.3.	09/20/2004	11/19/2004	tbd.

1) Available as service option of VSE/ESA 2.7 until Nov. 16, 2004

- ▶ execute `splevel.proc` or `'sir'` command to display the installed refresh level
- ▶ Refresh level VSE/ESA 2.7.2 is current at this point in time
- ▶ always apply newest PTF bucket (PSP) and/or RSL on top
- ▶ check out the VSE home page for up to date service related news
- ▶ download the Program Directory from the VSE home page

VSE Refreshes



- are a complete set of install tapes including base and optional products
- are to be used for
 - ▶ base installation (from scratch)
 - ▶ Fast Service Upgade (FSU) of an existing system
 - from a previous release (limitations) to a new release
 - or to move to a higher refresh level within a given release
- have applied **all** PTFs available until cut off date
- have undergone a basic regression test by IBM
- are orderable until a new refresh level or new release becomes available

Use ShopzSeries to order a VSE refresh

<https://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp>



PSP Buckets

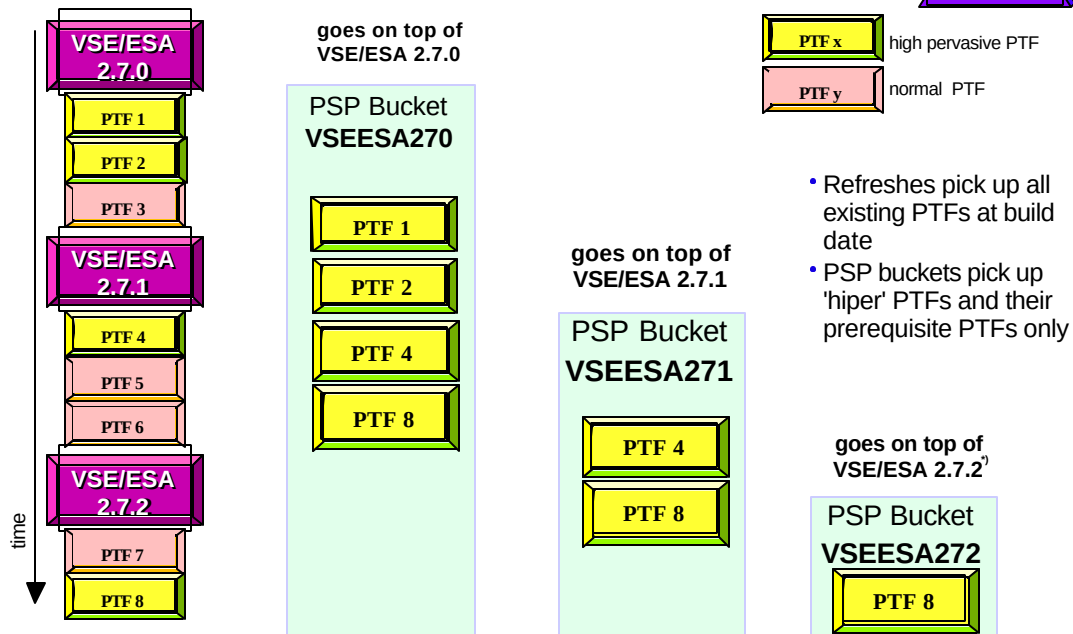
- are a list of PTFs solving high impact or pervasive (HIPER) APARs
- are available for each refresh level, content is different
- are permanently maintained and kept up to date by the product change teams
- are divided into subsets for the individual components
- can be ordered thru IBM service or via the Internet (see later in this pres.)
- are delivered as a cumulative PTF tape or file
- should be installed with the interactive user interface (IUI dialogs)

PSP bucket names (called UPGRADE) are related to the release and refresh level they are based on: e.g. [VSEESA263](#), [VSEESA271...](#), [VSEESA272](#),....

PSP = Preventive Service Planning



PSP Buckets and Refreshes - the Difference



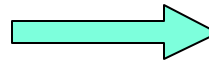
Structure of a PSP Bucket



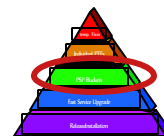
- There is a subset for each base- and optional product

Select the subset you want to view.

UPGRADE	SUBSETS	ABSTRACT
VSEESA272	chg/index	V. 2, R. 7, M. LEVEL 2 of VSE/ESA
VSEESA272	HLASM/489	HLASM V. 1, R. 4, M. 0
VSEESA272	ACCNTL/H06	VSE/ACCESS CONTROL V. 1, R. 2, M. 1
...		
...		
...		
VSEESA272	IBMLANG/75K	LE/VSE BASE V. 1, R. 4, M. 3
VSEESA272	CICS/B0P	CICS/VSE V. 4, R. 1, M. 1
VSEESA272	VSEESA/75C	VSE Central Functions V. 6, R. 7, M. 0
VSEESA272	DB2/2NN	DB2/VSE V. 7, R. 0, M. 0
VSEESA272	VTAM/FE6	ACF/VTAM V. 4, R. 2, M. 0
VSEESA272	BASESERVICE	<i>a list of all PTFs already applied to the base products</i>
VSEESA272	OPTPSERVICE	<i>a list of all PTFs already applied to the optional products</i>



Sample: PSP Subset for 'IBMLANG/75K'



DATE	APAR	PTF	VOLID	COMMENTS
6 04/08/16	PQ81913	UQ85741	1000	HIPER OVERLAY SYMPTOMS WITH CHAR
5 04/08/16	PQ84219	UQ85081	1000	HIPER UNEXPECTED INTERRUPTS
4 04/08/16	PQ84983	UQ85742	1000	HIPER INTRODUCE NEW CEE5PRML
3 04/08/16	PQ86577	UQ86884	1000	HIPER LOOP ON EIP WRITEQ-TD FOR
2 04/08/16	PQ87058	UQ87306	1000	HIPER ABENDASRA WITH
1 04/08/16	PQ88853	UQ89395	1000	HIPER SSCANF INCORRECT OUTPUT ON

Order your PSP bucket via the Internet, or call the IBM support center.

see: <https://techsupport.services.ibm.com/server/390.psp390> (requires an id to sign in)

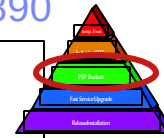
PSP Buckets for Hardware Support - Sample for z890

Select the subset you want to view.

UPGRADE	SUBSETS	ABSTRACT
2086DEVICE	chg/index	Upgrade 2086DEVICE
2086DEVICE	2086/ZOS	DEVICE 2086
2086DEVICE	2086VSE/ESA	DEVICE 2086
2086DEVICE	2086Z/VM	DEVICE 2086

Service Recommendation Summary

DATE	APAR	PTF	VALID	COMMENTS
7. 04/06/29	DY45940	UD52379	E271	NEW FUNCTION D/T2084 - Z990 (z890)
6. 04/06/28	PQ85963	UQ87857	1000	NEW FUNCTION D/T2084 - Z990 (z890)
5. 04/06/28	PQ86795	UQ88156	1000	HIPER OSA/SF New Functions
4. 04/06/28	DY46075	UD52493	E272	ADAPTER INTERRUPTION FACILITY
3. 04/06/28	DY45958	UD52320	1000	HIPER SYSTEM LOOP AT TERMINATION
2. 04/06/28	DY45944	UD52281	1000	HIPER HARDWAIT DURING IPL ON
1. 04/05/05	DY46105	UD52513	1000	NEW FUNCTION



RSL*) for VSE/ESA

What is it?

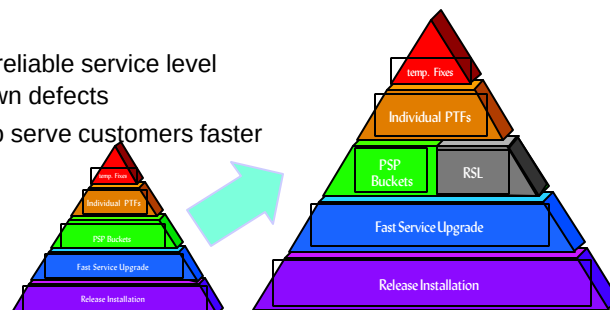
Recommended Service Level for VSE/ESA

- ◆ all available PTFs at specified cutoff date
- ◆ cutoff date describes a defined APAR/PTF level
- ◆ monitored 6-8 weeks for PE (PTF in Error)
- ◆ a list of PTFs kept in PSP and on VSE/ESA Home Page
- ◆ standard PTF installation process

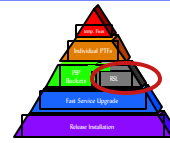
Why is it done?

- ◆ easy way to stay on current & reliable service level
- ◆ reduces re-discoveries of known defects
- ◆ helps IBM service personnel to serve customers faster

*) not to be confused with the RSU concept of z/OS



RSL for VSE/ESA



RSL - Rules

- Define cutoff date **every 2-3 month** (sync. with refresh)
- Create RSL **for all releases** in service on latest refresh level
- Next refresh level = last RSL of previous refresh
- Create 'final' RSL at EOS of a given release

RSL - Ordering

- Order via PSP, multiple lists of PTFs in RSL Subsets
- Order electronically via Internet,
==> get PTF list via VSE/ESA Home Page

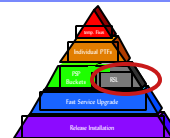
RSL for VSE/ESA

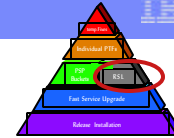
Currently available RSLs:

RSL-Name	Subsets
VSERSL272	RSLBASE2xx
VSERSL271	RSLAD2xx
VSERSL270*	RSLAFP2xx
VSERSL263	RSLDB2xx
VSERSL262	RSLLANG2xx
VSERSL261*	RSLNCP2xx
VSERSL260*	RSLOTHER2xx
VSERSL252	RSLOLD2xx (if applicable)

2xx stands for 2.7.1, 2.7.0, etc...

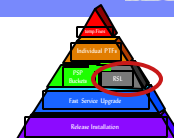
*) for information only:
to upgrade 2.6.0, 2.6.1, or
2.7.0 order Refresh 2.6.3, or
2.7.2 for FSU.





RSL Subsets

RSLBASE2xx <u>VSE Base Products</u>	RSLDB2xx <u>Database Products</u>
ACF/VTAM, CICS/TS, CICS/VSE, DITTO, EREP, HLASM, ICKDSF, LE/VSE, TCP/IP, VSE Central Functions	DB2 Server, Data Restore VSE, Control Center VSE, DLI/VSE, DB2 VSAM Transparency, QMF /VSE
RSLAD2xx <u>Application Development</u>	RSLLANG2xx <u>Language & Compiler</u>
MQSeries for VSE, SDF/CICS, SDF II VSE Base	VAGen Server VSE, IBM C for VSE, IBM PL/I VSE, IBM COBOL VSE, RPG II, CCCA VSE, High Level Language Assembler Toolkit VSE
RSLAFP2xx <u>Adv. Function Printing</u>	RSLNCP2xx <u>Network Control</u>
PSF/VSE V2 Compatibility Fonts Base, AFP Font Coll. for VSE, PPFA/370, OGL/370	ACF/NCP VSE, ACF/SSP VSE, x.25 NPSI, EP V1 for ACF/NCP
RSLOTHER2xx <u>Other opt. Products</u>	RSLOLD2xx
IXFP/Snapshot VSE, DFSORT/VSE, GDDM/VSE, CICSVR/VSE, DITTO/ESA for VSE Japanese, ACLR/VSE	Products or product releases no longer distributed in the next higher refresh level (2.x.x+1)



RSL for VSE/ESA on the Homepage

The VSE home page contains a table like the following with links to the individual listings.

Service recommended for		PTF Order List	Cutoff Date
VSE/ESA 2.7.2	Base Products	PTFs 272B	July 31, 2004
	Optional Products	PTFs 272O	
VSE/ESA 2.7.1	Base Products	PTFs 271B	Jan. 26, 2004
	Optional Products	PTFs 271O	
VSE/ESA 2.7.0	Base Products	Please order the latest refresh	Jun. 30, 2003
	Optional Products		
VSE/ESA 2.6.3	Base Products	PTFs 263B	July 31, 2004
	Optional Products	PTFs 263O	
VSE/ESA 2.6.2	Base Products	PTFs 262B	Jun. 30, 2003
	Optional Products	PTFs 262O	
VSE/ESA 2.6.1	Base Products	Please order the latest refresh	Oct. 21, 2002
	Optional Products		
VSE/ESA 2.6.0	Base Products		Apr. 16, 2002
	Optional Products		
VSE/ESA 2.5.2	Base Products	PTFs252B	Dec. 31, 2003
	Optional Products	PTFs252O	

APAR lists (pdf files)

see: http://www-1.ibm.com/servers/eserver/zseries/os/vse/support/vsersl/vse_rsl.html

2

emp. sup.

Individual PTEs

PPT Buckets

RSL

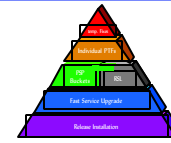
Fast Service Upgrade

Release Installations

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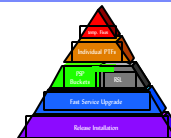
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Comparison of VSE Service Deliverables



	Refresh	RSL	PSP	PTF
What is it	complete product with integrated PTFs; level documented in the system	List of all PTFs available at cutoff date; monitored 6-8 weeks for PE, level identified by date of list	selected PTFs mainly for HIPER APARs; changes continuously	'official' fix for a code defect documented in an APAR
When is it available	every 6-12 month; usually for the newest release	every 2-3 month	continuously	continuously
When to order/install	for base install or level upgrade (FSU)	preventively to stay current between refreshes, avoid know problems	after refresh installation and preventively to avoid HIPER problems	to fix a certain problem

Preventive Service Recommendation



- It is essential to have a preventive maintenance strategy
- Develop it according to your own needs
- Consider these aspects:
 - ▶ overall system complexity
 - ▶ workload and size of your system
 - ▶ growth of transaction rates, batch workload, file sizes
 - ▶ change activities
 - ▶ new hardware coming in
 - ▶ new applications, or changes to current ones

Suggestions for a healthy system:

- regular maintenance reduces the risk for rediscoveries of defects
- plan the time for maintenance cycles well ahead

and the benefit is:

- ➔ makes sure that the number of PTFs to apply is kept small to solve a sudden and unexpected defect
- ➔ avoids that an extensive upgrade has to be done under pressure

Preventive Service Recommendations



Install the latest **REFRESH**

- every 12 month
- but not later than 24 month

if you are on the latest Refresh Level

Install the latest **RSL**

- every 6 month
- but not later than 12 month
- in addition order the newest PSP bucket shortly before upgrading to get the hottest fixes as well.

Install the **PSP bucket** ...

- every 3 month
- but not later than 6 month
- order the hardware bucket when installing new hardware
- as an alternative to solve an encountered software defect

Always check out the VSE web page before installation!

Before upgrading, also check with your third parties for their corresponding service levels, please!

Recommended Steps when going to a New Release

sequence of activities

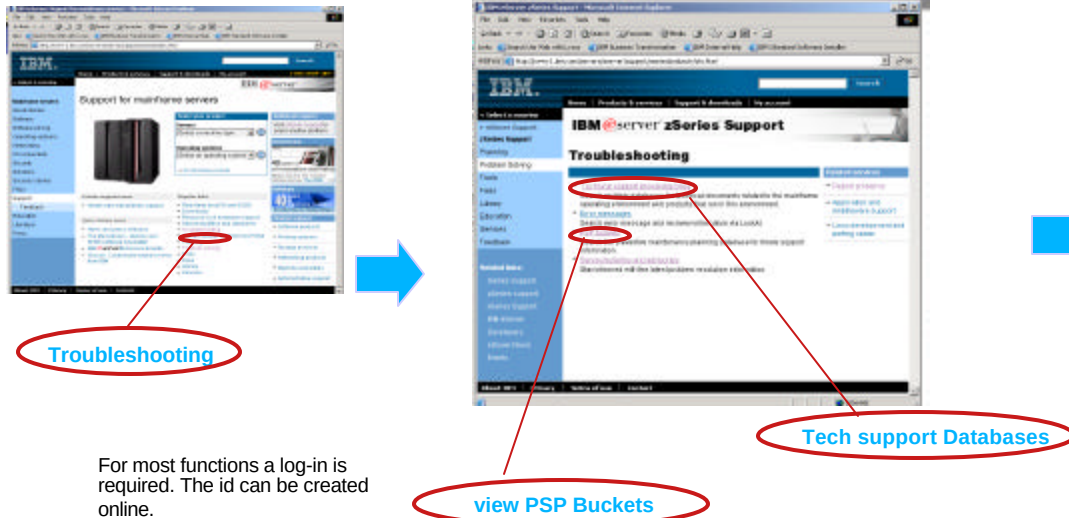
- Order the current refresh level and install it on your test system
- If there is already an RSL for that refresh then order and install it as well
- Also order and install the latest PSP bucket
- Have a testing period to make sure everything runs well as it did before
- Order and install the newest PSP bucket again 2-3 weeks before production cutover (check with your software vendors as well)
- Check out the VSE web pages *) for newest service information
- Regression testing
- Before production cutover have a fallback plan in place
- Production cutover

*) <http://www-1.ibm.com/servers/eserver/zseries/os/vse/support/support.htm>

Retrieving APARs/PTFs over the Internet

<http://www.ibm.com/servers/eserver/support/zseries/index.html>

or via: www.ibm.com >> Support & downloads >> Get product support for Servers >> Mainframe servers



The diagram illustrates the search process for APARs/PTFs. It shows three screenshots of the IBM Support website. The first screenshot shows the 'Technical help database' search page with a red circle around the search argument 'MSG01721'. The second screenshot shows the search results page with a red circle around the APAR 'DY45909: IPL WAITED IN SGERP DUE TO ERP TASK CANCELED WITH PROGCK. MSG01721 (01721) CONSOLE HANG'. The third screenshot shows the 'Obtain the fix for this APAR' page with a red circle around the 'Obtain the fix for this APAR' link. Arrows indicate the flow from the first screenshot to the second, and then to the third.

Technical help database

search argument: e.g. MSG01721

returns:

Abstract: **DY45909: IPL WAITED IN SGERP DUE TO ERP TASK CANCELED WITH PROGCK. MSG01721 (01721) CONSOLE HANG**

Date: 03/09/12 Database: Closed S/390 Operating Systems APARs

Obtain the fix for this APAR

Applicable component levels

R55C PSY UD52251	UP03/03/07 I 1000
R55J PSY UD52252	UP03/03/07 I 1000
R65C PSY UD52260	UP03/03/10 I 1000
R65J PSY UD52261	UP03/03/10 P E263
R75C PSY UD52262	UP03/03/13 P E271
R75J PSY UD52279	UP03/03/13 P E271

- Select the PTFs for your release
- >>click 'Electronic delivery'
- >> specify if you want prerequisites, superseded, PE shipped as well.
- >> continue
- >> submit
- You will be informed via e-mail about status and how to retrieve the package from an ftp server

COERVER=30-STATUS
 SOURCE = EMAIL
 COERNBR=390273308
 CNTYNBR=000
 FRMNODE=BLDISDMC
 FRMUSER=R370ACK
 TO_NODE=NONE
 TO_USER=NONE
 SHPDATE=20041004034748
 TEXT = Data sent via "INET". To retrieve your service:
 TEXT = FTP to: [ptf.boulder.ibm.com](ftp://ptf.boulder.ibm.com)
 TEXT = Log on using userid "opqrst" and password "xxxxxx"
 TEXT = Enter the following FTP commands:
 TEXT = cd /390435230/c568606606
 TEXT = ascii f 80
 TEXT = get ftp3308.txt
 TEXT = get elst3308.txt
 TEXT = binary f 80
 TEXT = get eptf3308.bin
 TEXT = or--
 TEXT = To retrieve your service using a web browser:
 TEXT = Enter the following URL:
 TEXT = <ftp://opqrst:xxxxxx@ptf.boulder.ibm.com/390435230/c568606606>
 TEXT = Click on: ftp3308.txt to view the FTP count file.
 TEXT = Click on: elst3308.txt to view the Packing List file.
 TEXT = Click on: eptf3308.bin to download the PTF file.
 TEXT = To save the FTP count file or Packing List file to your
 TEXT = workstation, view the file and use the commands supported
 TEXT = by your browser to save the file to disk.
 TEXT = You may copy the files to a floppy and/or upload the files
 TEXT = to your host. Upload files with a '.txt' extension in text
 TEXT = mode and files with a '.bin' extension in binary mode. The
 TEXT = same modes should be used when transferring files through
 TEXT = intermediate computer systems.
 TEXT = Note: The ftp3308.txt file contains byte counts to
 TEXT = match against the FTP byte count for each file.
 TEXT =
 TEXT = Package contained 2 fixes with 2,061 Kilo-bytes of data
 TEXT = Total amount of data shipped was 2,061 Kilo-bytes
 TEXT =

PTF#	Reason Listed	Status	CLC
-----	-----	-----	-----
TEXT = UD52279	ORDERED	<<< Shipped >>>	75J
TEXT = UD52262	ORDERED	<<< Shipped >>>	75C

 NBRDATA = 0045

You receive such an e-mail with detailed instructions how to download the PTF file.

File ftpxxxx.txt contains the exact byte count
 File elstxxx.txt contains the PF cover letter
 File eptfxxx.bin contains the PTFs

```

C:\>ftp ptf.boulder.ibm.com
Connected to ptf.boulder.ibm.com.
220 ptf.boulder.ibm.com FTP server (Version=2.6.2(1) Mon Aug 11 15:21:34
2004) ready.
User (ptf.boulder.ibm.com:(none)): opqrst
331 Password required for opqrst.
Password:
332 User opqrst logged in; Access restrictions apply.
ftp> cd /390435230/c568606606
250 Cwd command successful.
ftp> ascii f 80
200 Type set to A.
ftp> get ftp3308.txt
200 PORT command successful.
250 Opening ASCII mode data connection for ftp3308.txt (2268 bytes).
226 Transfer complete.
ftp> 2296 bytes received in 0.163seconds 6.380bytes/sec.
ftp> get elst3308.txt
200 PORT command successful.
250 Opening ASCII mode data connection for elst3308.txt (12508 bytes).
226 Transfer complete.
ftp> 12726 bytes received in 0.619seconds 19.948bytes/sec.
ftp> binary f 80
200 Type set to B.
ftp> get eptf3308.bin
200 PORT command successful.
250 Opening BINARY mode data connection for eptf3308.bin (2061024 bytes).
226 Transfer complete.
ftp> 2061024 bytes received in 6.565seconds 314.063bytes/sec.
ftp>
  
```

Check the Byte-Count of the downloaded PTF-File!

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Transferring and Installing the PTF into the VSE System

via TCP/IP (recommended)

- from the PC via TCP/IP ftp to VSE into a VSAM file
 - the VSAM file has to be defined in TCP/IP:
 - DEFINE FILE, TYPE=ESDS,IJSYSPF,PUBLIC='IJSYSPF'
 - transfer using parameters ['binary'](#), ['quote site recfm f'](#) and ['quote site lrecl 80'](#)
- install the PTFs via the UII dialogs
 - service medium is 'disk'

alternatively:

via a VTAPE
 or via Host Transfer File (HTF), or into a library member

Warning!

- loading PTF files directly into the POWER reader gives fatal results:
 - PRE and CO requirements are not necessarily fulfilled due to any sequence
 - PTF data containing POWER-JECL will be interpreted by POWER
 - indirect PTF installation is not possible

find detailed instructions in:
<http://www-1.ibm.com/servers/eserver/zseries/os/vse/support/ptfappl.htm>

Wellness and VSE | how you can improve the health of your system

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Viewing the Latest Service Related Information

Service and Support

Further down this page find links to specific service information for the individual components: e.g. list of APARs and PTFs with a short description in chronological order.

The blue boxes contain hot information related to defects and problems!

ShopzSeries Overview

- Easy and fast way for customers to order zSeries Software via the Web
- order tailored product and service packages for z/OS, z/OS.e and OS/390,
- order tailored product packages for z/VM, VM/ESA and VSE/ESA,
- review your software licenses in all of these environments, and
- plan for future upgrades.
- Note: Product ordering is currently limited to the US and Western Europe.

Visit the ShopzSeries Web site at: <http://www.ibm.com/software/shopzseries>
(Requires an ID to sign in)

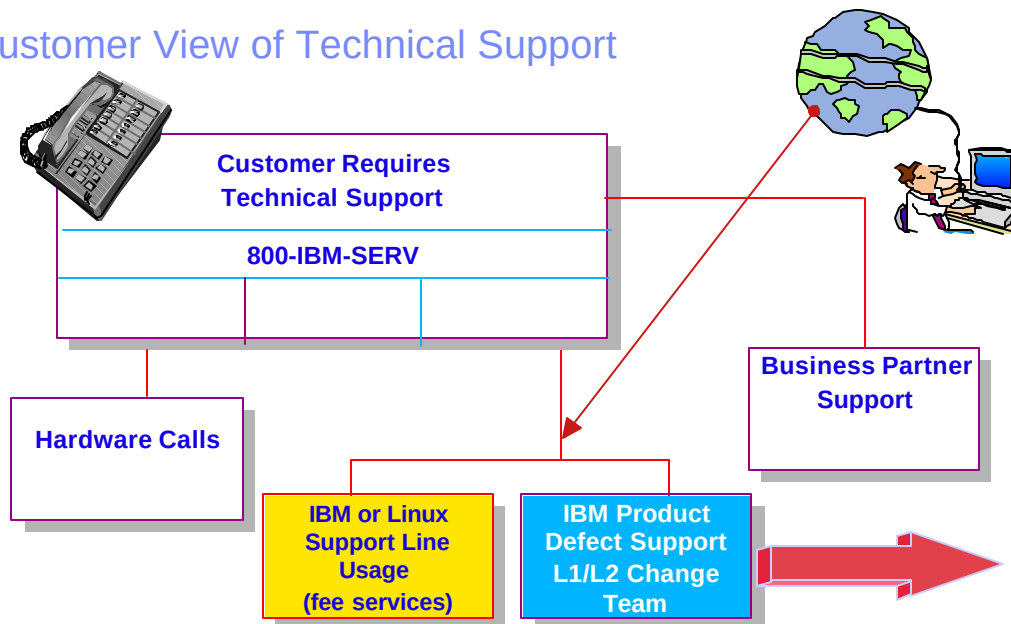
ShopzSeries - VM & VSE Support

- Customers can use ShopzSeries to create and submit software orders for VM and VSE!
- Specific capabilities available for VM and VSE customers:
 - ▶ View entitlement based on the catalog of products offered in the system package (base & optional).
 - ▶ Create and submit orders including performing technical requisite and incompatibility checking.
 - ▶ Order new releases or refreshes.
 - ▶ Both entitled and priced upgrades are supported:
 - For entitled orders, ShopzSeries offers fully automated order placement (i.e. no IBM intervention required).
 - All priced transactions (and legacy entitled orders) will be handled through existing ShopzSeries process with IBM Order Center.
 - ▶ Monitor order status thru link to the software order tracking page.
- Ordering of Service (e.g. PSP buckets) will be added to ShopzSeries later.!

Trends towards e-ordering and e-delivery

- Reduce/eliminate hardcopy shipments, go e-books
 - ▶ VSE shipments contain a CD with documentation
 - ▶ manuals on website are up to date with short lead time
- Move away from tape shipments to complete e-delivery
 - ▶ order zSeries software products and product updates online
 - ▶ get service (corrective/preventive) as e-service without delay
 - ▶ ShopzSeries is the strategic way of ordering zSeries Software

Customer View of Technical Support



Both the Defect Support and Supportline are provided by the VSE lab team!

Working with the VSE Level 2 Team

Before Calling IBM please have the following information ready:

- ▶ define the problem as specifically as you can
- ▶ identify the failing product/component as close as possible
- ▶ the version/release/APAR level you have installed
- ▶ steps which led to the failure if applicable
- ▶ any changes you have made before
- ▶ any messages or other symptoms
- ▶ a list of vendor products installed on the system
- ▶ the phone number (time) where you can be reached
- ▶ a feeling for the business impact or severity of the problem

VSE/ESA

Please use electronic means to send debugging documentation:

- ▶ E-mail for problem logs and small files
 - data could be clobbered due to EBCDIC/ASCII translation
- ▶ use the IBM ftp server for dumps and larger amount of data:
 - [ftp testcase.software.ibm.com](ftp://testcase.software.ibm.com)
 - the L2 rep will give you instructions how to do it

It will speed up the resolution time of your problem!



IBM Defect Support Statement and more



Program Services support for most zSeries (S/390) products includes problem support for suspected defects in IBM code and publications via telephone (voice), and electronic access. This support is available until such time as it is withdrawn with at least 12 months notice via an IBM announcement letter. IBM will provide remote technical specialists necessary to resolve defects in the majority of our mainframe products at no additional cost to you. Support for high severity problems is available 24 hours a day, 7 days a week.

Download from:

<http://techsupport.services.ibm.com/guides/handbook.html>

What about Usage Support / Q&A?

Do you have the right support in place?

VSE Level 1/2 is for defect support only!
What about non-defect?

You want to know 'how to' use a function, or you need advice on a more complex technical question?

Then an **IBM Supportline** offering could be the right answer to you!

Frequent Observations by the L2 Team

- Local modifications are often not documented and may cause problems at next release migration.
- No standalone dump tape ready! Create it, put it on the shelf and tell operations how to take s.a. dumps correctly (incl. store status).
- PTF application jobstreams are not generated on the current system
 - ▶ PTF could be installed incomplete or even erroneous
 - ▶ system could be inconsistent
- Indirect PTFs installed directly by circumventing the IUI
 - ▶ no fallback anymore in case of a PTF error
- FSU process used from a thirdparty source - IBM cannot support you.
- When running out of Getvis it is usually a fact and not a defect of the operating system. Use the SDAID Getvis trace to find the source.
- Backup tapes are seldomly tested
 - ▶ try to restore your backup tapes on regular base
 - ▶ make sure they are usable when you need them!

updated

... more useful Information ...

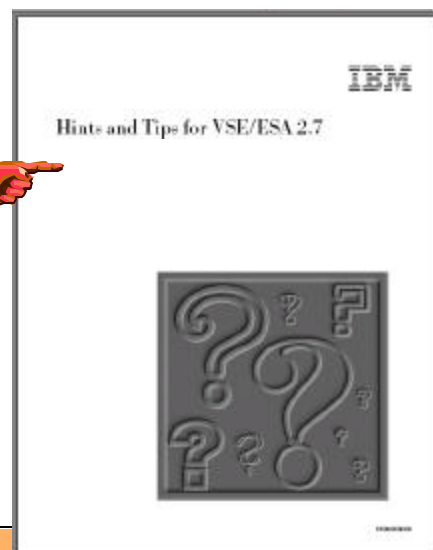
- ▶ see our newest issue of



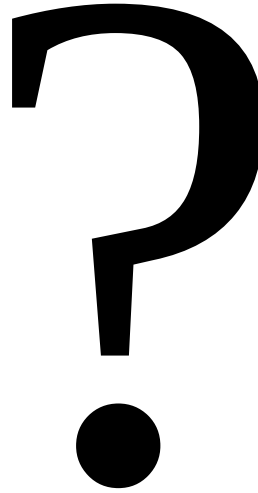
- ▶ **VSE Hints & Tips** (Edition September 2004)



download as PDF file from the VSE homepage:
<http://www.ibm.com/servers/eserver/zseries/os/vse/support/hintshp.htm>



Thanks for listening!



now ... or later to zierl@de.ibm.com

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