E52

**ShopzSeries: Ordering service and Products
for z/VSE and z/VM on-line**

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Agenda

- **Service deliverables**
  - **Refresh, PSP, RSL, RSU …**

- **How to help yourself in case of a problem**
  - **Search for APARs and PTFs**

- **ShopzSeries**
  - **Ordering service and products**
  - **Installing downloaded PTFs and products**

VSE service pyramid
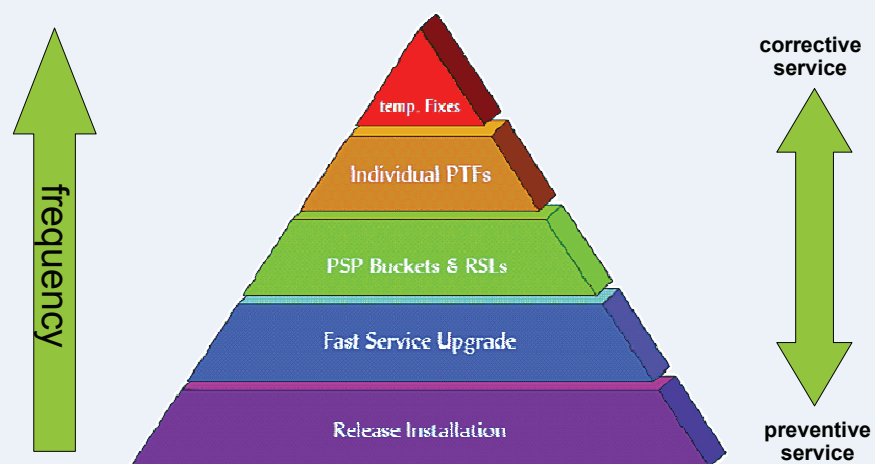
The service pyramid for VM is similar, e.g. instead of FSU -> RSU

Priority 1: Stay on a supported level

- **Make sure that your system is always on a supported level**
  - **to get help and support from IBM when you need it**

- **Plan ahead sufficient time**
  - **for release or version upgrade**
  - **for PTF installation**

- **IBM announces End-of-Service dates at least 12 Month ahead**
  - **VSE: http://www.ibm.com/servers/eserver/zseries/zvse/**
  - **VM: http://www.vm.ibm.com/techinfo/lpmigr/vmleos.html**

- **Consult your software vendors for upgrades and specific information**

End-of-Service dates

Product	End of Marketing	End of Service
z/VSE 4.1	-	-
z/VSE 3.1	May 31, 2008	-
VSE/ESA 2.7	September 30, 2005	February 28, 2007
VSE/ESA 2.6	March 14, 2003	March 31, 2006
VSE/ESA 2.5	December 14, 2001	December 31, 2003

http://www.ibm.com/servers/eserver/zseries/zvse/about/status.html

Product	End of Marketing	End of Service
z/VM 5.3	-	September 2010
z/VM 5.2	-	April 2009
z/VM 5.1	September 2006	September 2007
z/VM 4.4	March 2006	September 2006
z/VM 4.3	August 2003	May 2005

http://www.vm.ibm.com/techinfo/lpmigr/vmleos.html

VSE: Refreshes

- **VSE Base Tapes + Optional Product Tapes**
  - **For Fast Service Upgrade (FSU)**
    - **Upgrade from older releases Releases (e.g. VSE/ESA 2.7 -> z/VSE 3.1)**
    - **Refresh to a higher Level (e.g. z/VSE 3.1.0 -> z/VSE 3.1.1)**
  - **For base installation**

- **Contains all PTFs available until a cut off day**
- **have undergone a basic regression test by IBM**
- **are orderable until a new refresh level or new release becomes available**

Product	End of Marketing	End of Service
z/VSE 4.1.0	-	-
z/VSE 3.1.2	May 31, 2008	-
VSE/ESA 2.7.3	September 30, 2005	February 28, 2007
VSE/ESA 2.6.3	March 14, 2003	March 31, 2006

VM: Recommended Service Upgrade (RSU)

- **List of recommended PTFs at specified cut off day**
  - **Contains not only HIPER PTFs**
  - **Only available for VM**

- **Updated 2-3 times a year**

- **Can be ordered from IBM Service or Internet**
  - **use RSU Number (e.g.. UM97520)**
  - **ShopzSeries: http://www.ibm.com/software/shopzseries**
  - **RSU Lists: http://www.vm.ibm.com/service/rsu/**
  - **Additional info: http://www.vm.ibm.com/service/oi.html**
  - **Will be shipped like PTF Service Envelope(s)**

VSE: Recommended Service Levels (RSLs)

- **List of ALL available PTFs at specified cut off day**
  - **contains not only HIPER PTFs**
  - **only available for VSE**

- **Kept up to date on a 2-3 Month period**

- **Can be ordered from IBM Service or Internet**
  - **copy & paste PTF List into the service order (ShopzSeries)**

- **Will be shipped as PTF Tape(s)**

- **http://www.ibm.com/servers/eserver/zseries/zvse/**
  support/preventive.html#rsl

VSE: Recommended Service Levels (RSLs)

Service recommended for	PTF Order List	Cutoff Date
z/VSE 3.1.1	Base Products	November 30,
	Option	
z/VSE 3.1.0	Base P	
	Option	
VSE/ESA 2.7.3	Base P	
	Option	
VSE/ESA 2.7.2	Base P	
	Option	
VSE/ESA 2.7.1	Base P	
	Option	

Recommended service levels

PTF numbers November 30, 2005:

z/VSE 3.1.1 base products

(total size of RSL: 16.9MB)
CICS Transaction Server for VSE/ESA 1.1.1
UK07647 UK07656 UK07779 UK08223 UK08369 UK08567

DITTO/ESA VERSION 1.3.0
UK07731 UK08473

EREP 3.5.0
UD52922 UD52943 UD52946

ICKDSF 1.17.0
UK07981

The PTF list can be copy & pasted into a service order in ShopzSeries

Preventive Service Planning (PSP Buckets)

- **List of PTFs that solve „High Impact or Pervasive" (HIPER) problems**

- **Available for every refresh level**
  - **e.g. VSEESA273, ZVSE310, …**

- **Are permanently maintained and kept up to date by the product change teams**

- **are divided into subsets for the individual components and hardware devices**
  - **e.g.. IBMLANG/75K, 2086DEVICE**

- **Can be ordered from IBM Service or Internet**
  - **use PSP name plus subset (e.g. VSEESA273 - BASESERVICE)**
  - **ShopzSeries: http://www.ibm.com/software/shopzseries**
  - **List: https://techsupport.services.ibm.com/server/390.psp390**

- **Will be shipped as PTF Tape(s) or Service Envelop(s)**

Comparison of the service deliverables

	Refresh	RSU	RSL	PSP	PTF
What is it	Complete Product (includes all PTFs)	List of recommended PTFs at a cut off day	List of ALL PTFs at a cut off day	List of selected PTFs (HIPER)	Official Fix for a code problem (APAR)
When is it available	Every 6-12 Month, usually for the newest release	Updated 2-3 times a year	Every 2-3 Month	Is constantly kept up to date	Will be created when a fix is available
When should it be installed	For base install or Fast Service Upgrade (FSU)	Preventive to stay on an current level	Preventive to stay on an current level	After a refresh installation and preventive to avoid HIPER problems	To fix a certain problem

Service recommendations

- **It is essential to have a preventive maintenance strategy**

- **Install the latest Refresh**
  - **every 12 Month**

- **If you are on a current refresh level:**
  - **Install the newest RSL**
    - **every 6 Month**
  - **Install the newest PSP Bucket**
    - **every 3 Month**
    - **also order the hardware bucket when you install new hardware**

Service recommendations

- **When migrating onto a new release or version:**
  - **Order and install the latest refresh level**
  - **Order and install the newest RSLs and PSP buckets for this refresh**
  - **Also consult your Software Vendors for their corresponding service levels**
  - **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**
  - **Before production cutover have a fallback plan in place**

- **When you migrate to a new hardware**
  - **Order and install the corresponding hardware buckets before you migrate to the new hardware**
  - **Before production cutover have a fallback plan in place**

Agenda

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How to help yourself in case of a problem

- **What to do if you encounter a problem ???**
  - **What did change since it worked the last time? Make sure you carefully document every change!**

  - **Change back all changes step by step. Do you still encounter the problem?**

  - **Is the problem reproducible? If yes, what do you do to force the problem to occur? Try different variations.**

  - **Collect information about the problem**
    - **When exactly does it occur? What is the trigger?**
    - **What is the result of the problem? Error message, Dump, Hardwait, Loop, Performance loss, …**
    - **Which products or components are affected?**

How to help yourself in case of a problem

- **Is this already a known and fixed problem?**
  - **Search the APAR database**
    - **https://techsupport.services.ibm.com/server/zseries.srchBroker**
    - **Keywords: Message number, symptom, …**
  - **VSE: APAR Lists available for each release and component on the VSE support page**
    - **http://www.ibm.com/servers/eserver/zseries/zvse/support/corrective.html**
  - **VSE Hot Service News:**
    - **http://www.ibm.com/servers/eserver/zseries/zvse/support/index.html#news**

- **Call IBM Support**
  - **IBM L1 searches internal problem database and/or passes the problem to the L2 team**

Example – Search with Message number

- **The following message occurs:**

```
L151I UNEXPECTED RETURN CODE FROM MACRO/MODULE GETVIS
      IN MODULE INLPOPEN PHASE $IJBLBR - RC = X'10'
```

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Example – Search results

DY46209: LIBRM GETS L151I UNEXPECTED RETURN CODE FROM MACRO/MODULE GETVISIN MODULE INLPOPEN PHASE $IJBLBR - RC = X'10'

A fix may be available

Obtain the fix for this APAR

APAR status
Closed as program error.

Error description

LIBRM gets MSGL151I UNEXPECTED RETURN CODE FROM MACRO/MODULE GETVIS IN MODULE INLPOPEN PHASE $IJBLBR - RC = X'10'. GETVIS RC X'10' means "maximum number of subpools exceeded".

Local fix

Problem summary

```
****************************************************************
* USERS AFFECTED: LIBRM in 7x24 partition.                    *
****************************************************************
* PROBLEM DESCRIPTION: MSGL151I UNEXPECTED RETURN CODE        *
****************************************************************
* RECOMMENDATION:                                             *
****************************************************************
```
LIBRM gets MSGL151I UNEXPECTED RETURN CODE FROM MACRO/MODULE GETVIS IN MODULE INLPOPEN PHASE $IJBLBR - RC = X'10'. GETVIS RC X'10' means "maximum number of subpools exceeded". This occurs in a never ending partition using LIBRM macros in different subtasks. The Librarian uses subpool IDs built of the string 'INLC' or 'INLG' concatenated with the task identifier (TID). The subpool ID is not freed at end of task. Therfore the maximum of 128 subpools is exceeded after some time.

Problem conclusion

For partition GETVIS requests the TID is no longer part of the subpool ID.

Temporary fix

Comments

APAR information
APAR number	DY46209
Reported component name	VSE/AF SVR BAM
Reported component ID	568606606
Reported release	65C
Status	CLOSED PER
PE	NoPE
HIPER	NoHIPER
Submitted date	2005-02-03
Closed date	2005-03-22
Last modified date	2005-08-25

APAR is sysrouted FROM one or more of the following:

APAR is sysrouted TO one or more of the following:
UD52738 UD52739 DY46349

Modules/Macros
INLPGVFV

Fix information
Fixed component name	VSE/AF SVR BAM
Fixed component ID	568606606

Applicable component levels
R65C PSY UD52738   UP05/05/03 I 1000
R75C PSY UD52739   UP05/05/03 I 1000

➢ PTF can be ordered using this link
➢ Or copy & paste it into a ShopzSeries order


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What is ShopzSeries ?

- **IBM's productivity tool for planning and ordering zSeries software**

- **With ShopzSeries you can:**
  – **order tailored product and service packages for z/OS, z/OS.e, z/VM and VSE/ESA, z/VSE**
  – **review your software licenses in all of these environments**
  – **plan for future upgrades.**

- **URL:**
  – **http://www.ibm.com/software/shopzseries**

IBM ShopzSeries - Sign in
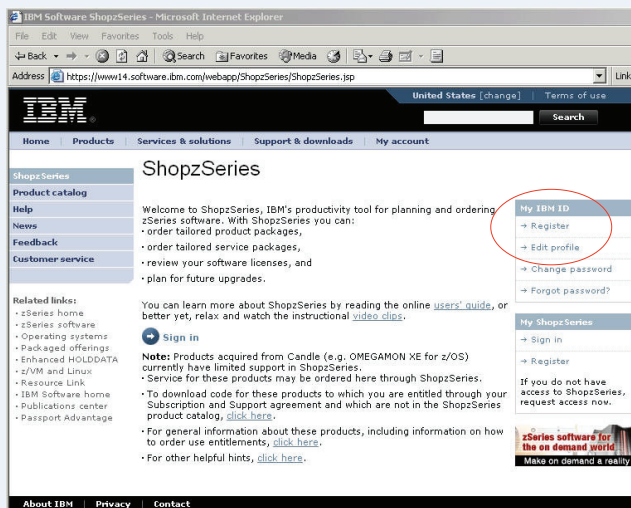
– You need an IBM-ID

– The IBM-ID is free of charge and can be registered within minutes

– With ShopzSeries you create a profile that contains your hardware systems

IBM ShopzSeries - Profile

IBM ShopzSeries – Create an order

– You can order products or service for VSE, VM and z/OS

– You will get a notification e-Mail when your order is ready

– You can download the product or service packages or you get it on CD-ROM or tape

IBM ShopzSeries – Order service

Upload your Installed Software Report

VSE: Installed Software Report Tool

Download:

http://www.ibm.com/servers/eserver/zseries/zvse/
downloads/tools.html#isrtool

VSE: Installed Software Report Tool

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VM: Create an Installed Software Report

- **Logon with MAINT User-ID**

- **Command VMFBTMAP ALL**
  - **z/VM 5.1.0 or later**

- **Creates a file named VMPFXALL BITMAP on the System Inventory Disk (Default: 51D - File Mode D)**

- **Download this file to your workstation in binary**

IBM ShopzSeries – Order VM RSUs/ESOs

ESO

ShopzSeries > My current order >
Step 3 of 5 Specify order contents
Service - March 21, 2006, 12:25

Select the RSUs you would like to order.

Available RSUs

Select	Description	RSU level
☐	**z/VM Version 5.2.0 Stacked 5201RSU (PTF UM97520)**	
	DirMaint	0502
	RACF Feature z/VM	0501
	TCP/IP	0501
	z/VM Version 5.2.0	0501
☐	**z/VM Version 5.1.0 Stacked 5104RSU (PTF UM97510)**	
	HCD and HCM for VM	0501
	Language Environment	0503
	Performance Toolkit for z/VM	0402
	TCP/IP	0502
	z/VM Version 5.1.0	0502

RSU

ShopzSeries > My current order >
Step 3 of 5 Specify order contents
Service - March 21, 2006, 12:28

Select the products for which you would like to order service.

Products available for ESO service

Select	Description	ID	Version	ESO level
☐	ACF / NCP BASE V7R6M0	5648063G	V7R6M0	0508
☐	ACF / NCP BASE V7R7M0	5648063H	V7R7M0	0508
☐	ACF / NCP BASE V7R8M0	5648063J	V7R8M0	0508
☐	ACF / NCP BASE V7R8M1	5648063L	V7R8M1	0602
☐	ACF / SSP V4R5M0	5654009C	V4R5M0	0106
☐	ACF / SSP V4R6M0	5654009D	V4R6M0	0106
☐	VSE/VSAM FOR VM V6R1M0	5686081A	V6R1M0	0102
☐	VTAM FOR VM/ESA V4R2M0	5654010A	V4R2M0	0602

Include service starting from 9201 ▼ [Help]

Previous   Save   Discard   Continue

IBM ShopzSeries – Order PSP service

VM

Step 3 of 5 Specify order contents
Service - March 21, 2006, 12:33

Your order will include service for the products in your installed software report.

Previous   Save   Discard   Continue

Step 3 of 5 Specify order contents
Service - March 21, 2006, 12:32

...the PSP recommended service "buckets" you would like to order.

Available PSP recommended service by product

Description	ID	Version
z/VM Version 5.2.0 Stacked 5201RSU (PTF UM97520)	5VMCPR20	V5R2M0
DIRM510 0502RSU		
RACFVM1100 0501RSU		
TCPIP520 0501RSU		
ZVM520 0501RSU		
VMESO0501 VMVSAM		
VTAM FOR VM/ESA V4R2M0	5654010A	V4R2M0
VMESO0602 ACFVTAM/420		

☑ Include requisite service from 9201 ▾ [Help]

Previous   Save   Discard   Continue

VSE

– VSE PSP orders base on your Installed Software Report

– VM PSP orders allow to select the PSP bucket to order

IBM ShopzSeries – Order PTFs and RSLs

Step 3 of 5 Specify order contents
Service - March 21, 2006, 11:08

Enter the PTFs you would like to order separated by blanks or commas.
[Help]

```
CICS Transaction Server for VSE/ESA
1.1.1
UK07647 UK07656 UK07779 UK08223
UK08369 UK10000 UK10276 UK10932
UK10938 UK11037

DITTO/ESA VERSION 1.3.0
UK07731 UK08473 UK11283

EREP 3.5.0
```

☑ Include requisite service from past 90 days [Help]

Previous   Save   Discard   Continue

Step 3 of 5 Specify order contents
Service - March 21, 2006, 11:08

ERROR:
The following items were not added because they are invalid: CICS Transaction Server for VSE ESA 1 1 1 DITTO ESA VERSION 1 3 0 EREP 3 5 0 ICKDSF 1 17 0 CICS VSE 2 3 0 None ACF VTAM VERSION 4 2 0 VSE Central Functions 7 1 0 VSE SP UNIQUE CODE VSE SP MRI English 81D (total size of PTFs 2 3MB) VSE SP MRI German 81A (total size of PTFs 2 3MB) VSE SP MRI Japanese 81E (total size of PTFs 2 3MB) VSE SP MRI Spanish 81H (total size of PTFs 2 5MB) VSE POWER VSE VSAM None VSE AF VSE AF MSHP None VSE AF IOCP None VSE AF Fastcopy None REXX VSE None OSA SF VSE Connector None IBM LE for VSE ESA 1 4 4 LE VSE C 1 4 4 None LE VSE COBOL 1 4 4 None LE VSE PLI 1 4 4 None VSE TCP IP 1 5 0 FOR VSE ESA None IBM High Level Assembler 1 5 0.

Enter the PTFs you would like to order separated by blanks or commas.
[Help]

```
UD52833 UD52862 UD52864 UD52865
UD52873 UD52874 UD52878 UD52880
UD52881 UD52886 UD52888 UD52905
UD52906 UD52907 UD52908 UD52909
UD52912 UD52914 UD52920 UD52921
UD52922 UD52927 UD52928 UD52943
UD52945 UD52946 UD52947 UD52970
UD52983 UD52994 UD53001 UD53010
UD53011 UK07560 UK07647 UK07656
UK07731 UK07779 UK07897 UK08102
```

☑ Include requisite service from past 90 days [Help]

Previous   Save   Discard   Continue

– Copy & paste the PTF-List (including all other text)

– ShopzSeries automatically detects what's a valid PTF number

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IBM ShopzSeries – Download the packages

- **You will be notified by e-Mail, when your order is ready**
- **Download Director**
  - small Java Applet
  - resume downloads when connections are lost
  - increases download speed using multiple connections

Download U00245379 - Service - March 22, 2006, 13:42

Download expires on 21 Apr 2006

Installation instructions
View now

Readme file for Order# B6516899
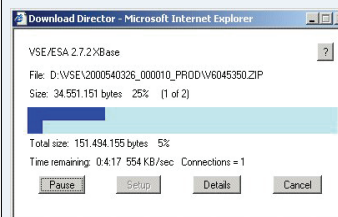View Now (0.002 MB)

Service Overview for Order# B6516899
View Now (0.059 MB)

VSE PTF Envelope for Order# B6516899
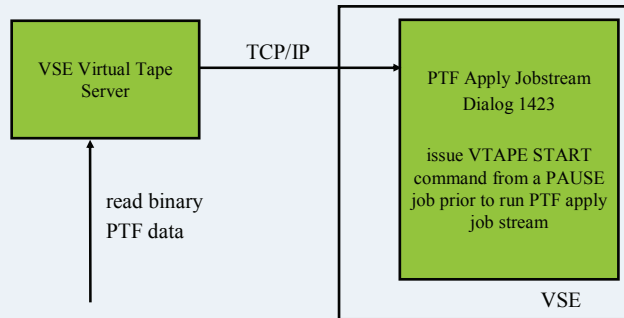↓ Download to your workstation using IBM Download Director (1.6 MB)
↓ Download to your workstation using HTTPS (1.6 MB)

Download Director - Microsoft Internet Explorer

VSE/ESA 2.7.2 XBase

File: D:\VSE\2000540326_000010_PROD\V6045350.ZIP

Size: 34.551.151 bytes 25% [1 of 2]

Total size: 151.494.155 bytes 5%

Time remaining: 0:4:17 554 KB/sec Connections = 1

Pause Setup Details Cancel

VSE: Installing downloaded PTFs

- **You get ONE binary job stream (fixed 80)**
  - **Zipped with PKZIP (ShopzSeries)**
  - **includes all ordered PTFs**

- **Recommended installation procedure:**
  - **Unzip the package into a temporary directory on your PC**
  - **upload it into PTF.FILE (IJSYSPF)**
    - **http://www.ibm.com/servers/eserver/zseries/zvse/documentation/edelivery.html#eptf**
  - **or use Virtual Tape (PTF tape simulation)**

- **Not recommended: submit into VSE reader**
  - **no indirect PTF apply possible**
  - **PRE- and CO-requirements may not be fulfilled due to wrong order of PTFs**
  - **POWER JECL included in the data part of the PTFs will be processed while running the job.**
  - **Missing POWER JECL in the PTF file causes POWER to extract VSE JOB cards**
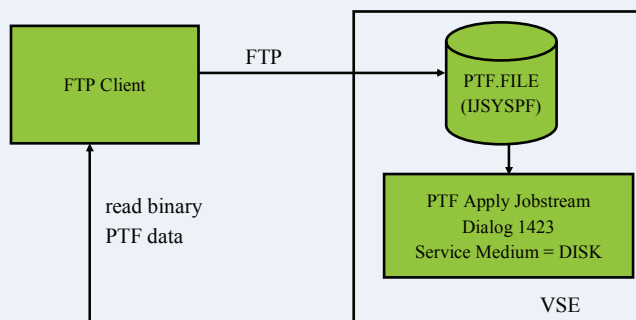
VSE: Apply PTFs via Virtual Tape

```
VSE Virtual Tape
Server
```
              TCP/IP
```
PTF Apply Jobstream
Dialog 1423

issue VTAPE START
command from a PAUSE
job prior to run PTF apply
job stream
```
                                    VSE

read binary
PTF data

1.) Rename file eptf6234.bin to eptf6234.ptf
2.) issue VTAPE START command from a PAUSE job
   // VTAPE START,UNIT=<cuu1>,LOC=<ip-address>,
                    FILE='C:\eptf6234.ptf',READ
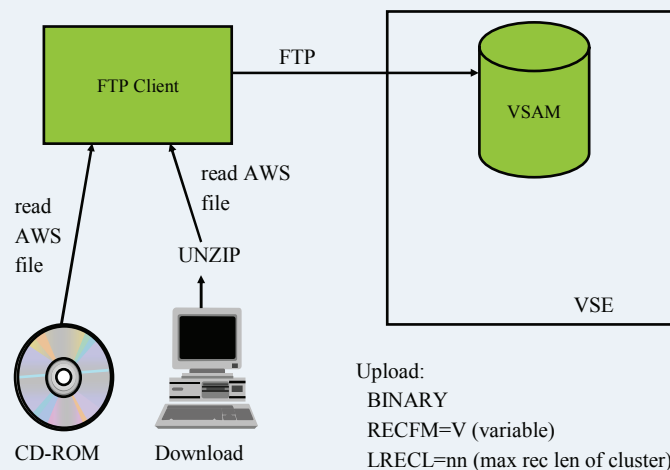

VSE: Apply PTFs via PTF.FILE (IJSYSPF)

```
FTP Client
```
        FTP
```
PTF.FILE
(IJSYSPF)
```

```
PTF Apply Jobstream
Dialog 1423
Service Medium = DISK
```
                          VSE

read binary
PTF data

DEFINE FILE,TYPE=ESDS,DLBL=IJSYSPF,PUBLIC='IJSYSPF'

Upload:
  BINARY
  RECFM=F (fixed)   – quote site recfm f
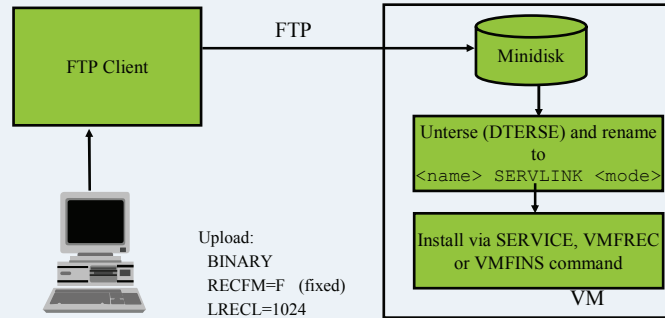 LRECL=80   – quote size lrecl 80

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VSE: Performing an Fast Service Upgrade

- **FSU from VSE/ESA 2.5.x/2.6.x to VSE/ESA 2.7.x can only be done using a real tape**
  - except on MP3000, Flex-ES
  - You need to create a real tape from the tape image
    - Use DITTO Tape to Tape Copy

- **FSU from >= VSE/ESA 2.7.0 to 2.7.x or z/VSE 3.1 or z/VSE 4.1 can be done with VTAPE (VSAM tape image)**
  - upload of tape image into VSAM file needed

- **FSU is done as usual (either from real tape or VTAPE)**
  - FSU Preparation   - Dialog 1432
  - FSU Installation   - Dialog 1433

VSE: Upload a tape image to VSAM

FTP Client

FTP

VSAM

VSE

read AWS file

read AWS file

UNZIP

CD-ROM

Download

Upload:
 BINARY
 RECFM=V (variable)
 LRECL=nn (max rec len of cluster)

VM: Install service and products

FTP Client

FTP

Minidisk

Unterse (DTERSE) and rename to
<name> SERVLINK <mode>

Install via SERVICE, VMFREC or VMFINS command

VM

Upload:
  BINARY
  RECFM=F (fixed)
  LRECL=1024

- See "z/VM Guide for Automated Installation and Service"
- "z/VM Summary for Automated Installation and Service (Tape/CD-ROM Installation)"
  - http://www.vm.ibm.com/pubs/v51isum.pdf
- "z/VM Electronic Delivered Service (CORrective or RSU) Installation Instructions"
  - http://www.vm.ibm.com/install/servinst.html

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2007 System z Technical Conference

IBM ShopzSeries – Product catalog

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VSE: Installing optional products

- **Optional product tapes come in a stacked format**
  - **all products ordered are contained in one tape image file (e.g. VSEOPT27.aws)**
- **Optional products can be installed via VTAPE using the dialogs 111 and 112**
  - **using a remote tape image**
    - **AWS file (CD-ROM)**
    - **AWS file within a ZIP file (download)**
  - **using a VSAM tape image**
    - **upload of tape image into VSAM file needed**
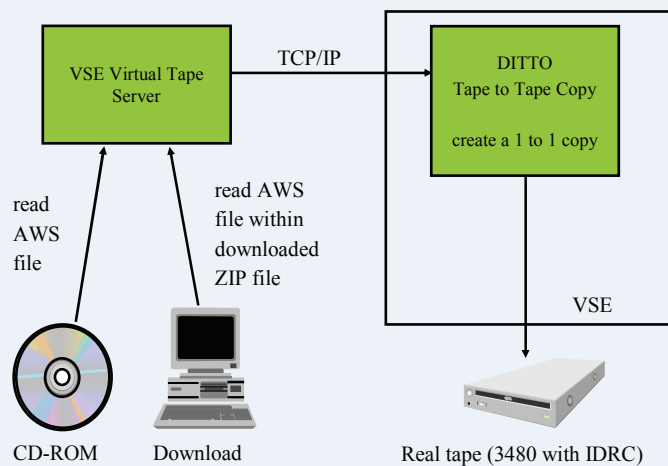

VSE: Installing optional products
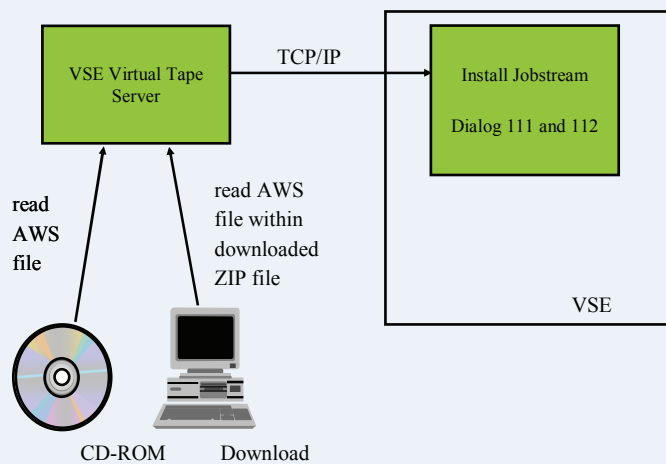
VSE: Installing the VSE base system

- **Base installation can NOT be done from VTAPE**
  - **except on MP3000, Flex-ES**

- **You need to create a real tape from the tape image**

  - **Use DITTO Tape to Tape Copy**
    - **source: VTAPE (remote tape image)**
    - **destination: real tape**

  - **Remote Tape image (source) can be**
    - **AWS file (CD-ROM)**
    - **AWS file within a ZIP file (download)**

- **Base installation from real tape works as usual**
  - **refer to VSE Installation manual**

VSE: Create a real tape from a tape image

VSE Virtual Tape Server

TCP/IP

DITTO
Tape to Tape Copy

create a 1 to 1 copy

read
AWS
file

read AWS
file within
downloaded
ZIP file

CD-ROM   Download

VSE

Real tape (3480 with IDRC)

VSE: Create a real tape from a tape image

```
* $$ JOB JNM=COPYTAPE,CLASS=0,DISP=D
// JOB COPYTAPE
// PAUSE PLEASE MOUNT A TAPE ON <cuu2>
// UPSI 1
DVCDN <cuu1>
// PAUSE - DEVICE DOWN OK
// VTAPE START,UNIT=<cuu1>,LOC=<ip-address>,FILE='<tape image file>',READ
DVCUP <cuu1>
// ASSGN SYS010,<cuu2>,08
* OUTPUT MEDIA, 3480 COMPRESSED
// ASSGN SYS011,<cuu1>
* INPUT MEDIA
// EXEC DITTO
$$DITTO REW OUTPUT=SYS010
$$DITTO REW OUTPUT=SYS011
$$DITTO TT INPUT=SYS011,OUTPUT=SYS010,NFILES=<36>
/*
DVCDN <cuu1>
// VTAPE STOP,UNIT=<cuu1>
DVCUP <cuu1>
/&
* $$ EOJ
```

    <tape image file>:
    CD-ROM: D:\VSEOPT27.aws   (D: ist Ihr CD-ROM drive)
    Download: C:\VSE\V6045349.ZIP!VSEOPT27.aws
                  (! separates ZIP name and name of tape image in the ZIP file)

Priority 1: Stay on a supported level

- **Make sure that your system is always on a supported level**
  - **to get help and support from IBM when you need it**

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Questions ?

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