



# **Program Directory for VSE/ESA Version 2**

Version 2 Release 7.2

Program Number 5690-VSE

Document Date: May 2004

GI11-2681-04

**Note!**

Before using this information and the product it supports, be sure to read the general information under "Notices" on page vii.

This program directory, dated May 2004, applies to VSE/Enterprise Systems Architecture Version 2 (VSE/ESA 2.7.2) Release 7.2 , Program Number 5690-VSE for the following:

<b>Feature Numbers</b>	<b>Content</b>	<b>System Name</b>
2198/2199	VSE/ESA V2 English Base on 3480/3590 Cartridge	VSE/ESA V2
2197	VSE/ESA V2 English Base on CD-ROM	VSE/ESA V2
2400/2404	VSE/ESA V2 German Base on 3480/3590 Cartridge	VSE/ESA V2
2406	VSE/ESA V2 German Base on CD-ROM	VSE/ESA V2
2598/2599	VSE/ESA V2 Spanish Base on 3480/3590 Cartridge	VSE/ESA V2
2597	VSE/ESA V2 Spanish Base on CD-ROM	VSE/ESA V2
2090/2089	VSE/ESA V2 Japanese Base on 3480/3590 Cartridge	VSE/ESA V2

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Database 2	Language Environment	VM/ESA
DataPropagator	MQSeries	VSE/ESA
DB2	Multiprise	VTAM
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## The following summarizes the changes made in VSE/ESA 2.7.0 and since then

**Changes a f t e r VSE/ESA 2.7.2 General Availability::** Hints and Tips updated with APAR fix to Supervisor Generation

**VSE/ESA 2.7.2 Changes::** With this modification level, VSE/ESA is provided through ShopzSeries on CD-ROM and also downloadable from the Internet for customers from the following countries:

- Austria
- Denmark
- Belgium
- Finland
- France
- Germany
- Ireland
- Italy
- Luxemburg
- Netherlands
- Norway
- Portugal
- Spain
- Sweden
- Switzerland
- United Kingdom
- USA

Customers in these countries can now choose Internet delivery for their CBPDO, VM SDO Version 4 and VSE SIPO orders. Internet delivery may not be available for certain products in these package types.

For details how to download and install VSE/ESA 2.7.2 from these newly introduced media, please see the VSE Install Instructions on the VSE/ESA Home Page:

<http://www.ibm.com/servers/eserver/zseries/os/vse>

For functional enhancements of VSE/ESA 2.7.2, please see the

- VSE/ESA Release Guide, SC33-6718
- VSE/ESA e-business Connectors User's Guide, SC33-6719

and the VSE/ESA Home Page:

<http://www.ibm.com/servers/eserver/zseries/os/vse>

**added VSE/ESA OPTIONAL PROGRAMS**

- 300PEL Compatibility Fonts of 5648-040 PSF/VSE

**Removed from VSE/ESA 2.7.2**

- 5746-XXT SDF/CICS 1.5.0

**VSE/ESA 2.7.1 Changes**

**Updated VSE/ESA BASE PROGRAMS**

- 5697-F42 DB2 Server for VSE/ESA 7.3 including Data Propagator 7.3

**Updated OPTIONAL PROGRAMS**

- 5697-F42 DB2 Server 7.3 NLV 7.3 NLV - new release
- 5697-F42 DB2 Server 7.3 Data Restore - new release
- 5697-F42 DB2 Server 7.3 Control Center - new release

(Please note, that QMF for VSE remains on level 7.2)

**Removed from VSE/ESA 2.7.1:**

- 5735-XXB Emulator Program 1.9.0
- 5668-738 ACF/NCP 3745/3720 5.4.0
- 5668-854 ACF/NCP 3725 4.3.1
- 5688-035 X.25 NPSI 3720/3745 3.4.0
- 5668-719 X.25 NPSI 2.1.0
- 5697-F42 DB2 Server for VSE/ESA 7.2 including Data Propagator 7.2

**VSE/ESA 2.7.0 Changes:** With VSE/ESA 2.7.0 the **compressed** 3480 cartridge was introduced which replaced the previous 3480 **UN**compressed cartridge. With this change, the VSE/ESA Version 2 BASE fits on **ONE** volume.

**Updated VSE/ESA BASE PROGRAMS:**

- 5686-066 VSE Central Functions 6.7 - new release
- 5686-094 LE for VSE 1.4.3 - new mod level
- 5686-A04 TCP/IP for VSE/ESA 1.5 - new release

**Updated OPTIONAL PROGRAMS**

- 5686-066 VSE CF IXFP/Snapshot 6.7 - new release
- 5686-A06 MQSeries for VSE/ESA 2.1.2 - new mod level

**Removed from VSE/ESA 2.7.0**

- 5686-055 NetView V2 VSE/ESA

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## 1.0 Introduction

This program directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of VSE/ESA 2.7.2. You should read all of this program directory before installing the program and then keep it for future reference.

The program directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic and optional program materials and documentation for VSE/ESA 2.7.2.
- 3.0, “Program Support” on page 29 describes the IBM support available for VSE/ESA 2.7.2.
- 4.0, “Program and Service Level Information” on page 31 lists the APARs (program level) and PTFs (service level) incorporated into VSE/ESA 2.7.0
- 5.0, “Installation Requirements and Considerations” on page 35 identifies the resources and considerations for installing and using VSE/ESA 2.7.2.
- 7.0, “Installation Instructions” on page 55 provides detailed installation instructions for VSE/ESA 2.7.2.
- 8.0, “VSE/ESA 2.7.2 Install Logic” on page 57 provides the install logic for VSE/ESA 2.7.2.

Before installing VSE/ESA 2.7.2, read 3.1, “Preventive Service Planning” on page 29. This section tells you how to find any updates to the information and procedures in this program directory.



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## 2.0 Program Materials

An IBM program is identified by a program number and a feature code. The program number for VSE/ESA 2.7.2 is 5690-VSE.

The program announcement material describes the features supported by VSE/ESA 2.7.2. Ask your IBM marketing representative for this information if you have not already received a copy.

The following sections identify:

- The basic and optional program materials available with this program
- Program Source Materials

Microfiche program listings are not provided with VSE/ESA 2.7.2. Customers with access to View Program Listings (VPL), such as through SoftwareXcel Extended, can access program listings formerly provided through microfiche.

Those customers without access to VPL can contact their IBM representative.

The VPL facility provides online viewing of program listings that are available to customers.

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## 2.1 For Users who have NOT ordered a I I VSE/ESA Base Products

Customers, who have not ordered ALL VSE/ESA Products are requested to delete those products, for which they are not licensed.

### 2.1.1 General Description

In order to ensure successful installation, all base products are delivered with the VSE/ESA Version 2 system, but if you have specified only some of them to use and to get licensed for, you are requested to delete the others from the system.

### 2.1.2 Jobstreams included for deleting VSE/ESA Base components

VSE/ESA 2.7.2 provides ready-to-run jobs to delete base products which were not intentionally ordered.

Following is a list of these jobs, stored in ICCF library 59:

- DELCICS to delete CICS TS 1.1.1
- DELDB273 to delete DB2 Server V7.3
- DELDIT to delete DITTO/ESA
- DELLECOB to delete the LE/VSE COBOL parts \*)
- DELLEPLI to delete the LE/VSE PL/I parts \*)
- DELTCPIP to delete TCP/IP for VSE/ESA
- DELVTM to delete ACF/VTAM 4.2
- DELHLASM to delete HLASM 1.4.0
- DELREXX to delete REXX/VSE 6.7.0

**Note:** \*)The VSE C Run-Time support will remain in the VSE/ESA BASE.

To delete one of these Base Products, access ICCF library 59 and submit the job named in above list.

**Note:** Since the VSE/ESA System Package is tested and delivered as a full-function, pre-packaged system, any modifications to the system become the user's responsibility. If you are deleting a base component, you should be aware of the consequences of the loss of product function.

1. Since the deletion of a component is treated as altered code, solving problems may cause additional billing, if the alteration is determined to be the cause of a problem.
2. You should be aware that maintenance procedures, including the application of PTFs, may be affected in the event one or more components are deleted.
3. Deleting parts of LE requires updates of the CICS CSD file. Please refer to skeleton SKLE370 in ICCF library 59 for more details.
4. Do not delete the VSE C Run-Time support - without which CICS TS will not come up.

### **2.1.3 Special considerations when deleting CICS Transaction Server**

- ICCF cannot be used - also not with CICS/VSE
- The Interactive User Interface cannot be used - also not with CICS/VSE
- DL/I 1.10.0 does not run with the CICS Transaction Server, it requires CICS/VSE Version 2.3
- DL/I 1.11.0 requires CICS Transaction Server 1.1

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## 2.2 VSE/ESA BASE - BASIC Machine Readable Material (MRM)

The **VSE/ESA BASE** is delivered either

on **THREE volumes of either 3590 Cartridges or 3480 Cartridges** (compressed):

- VSE/ESA BASE
- VSE/ESA Extended Base
- DB2 Server for VM & VSE Help Text

or on **ONE CD-ROM** containing:

- ReadMe File
- VSE/ESA BASE
- VSE/ESA Extended Base
- DB2 Server for VM & VSE Help Text

or **through electronic delivery** (via ShopzSeries) to be downloaded

- ReadMe File
- VSE/ESA BASE
- VSE/ESA Extended Base
- DB2 Server for VM & VSE Help Text

Figure 1 on page 7 describes the **MEDIA and VOLUMES** of the VSE/ESA BASE. These volumes contain all the programs and data needed for installation. VSE/ESA 2.7.2 is installed using the Maintain System History Program (MSHP).

Figure 2 on page 8 describes the **BASE PRODUCTS and COMPONENTS** of the VSE/ESA BASE - on Cartridge

Figure 3 on page 10 describes the **FILES** of the VSE/ESA Base - on Cartridge.

Figure 4 on page 12 describes the VSE/ESA 2.7.2 EXTENDED BASE Products / Components - on cartridge

Figure 5 on page 13 describes **VSE/ESA 2.7.2 on CD-ROM** and the files provided through e-delivery.

For download and installing the files from CD-ROM or provided as e-delivery, please see the VSE Install Instructions on the VSE/ESA Home page:

<http://www.ibm.com/servers/eserver/zseries/os/vse>



## 2.2.1 VSE/ESA BASE - MEDIA and VOLUMES

Figure 1. Basic Material - VSE/ESA - MEDIA and VOLUMES

Medium	Feature Numbers	Physical Volume	External Label Identification
3480 Cartridge compressed	2198,2400,2598,2090	1	VSE/ESA2.7.2-xx
		2	VSE/ESA2.7.2XBASE
3590 Cartridge	2199,2404,2599,2089	1	VSE/ESA2.7.2-xx
		2	VSE/ESA2.7.2XBASE
CD-ROM	2197,2406,2597	1	VSE/ESA2.7.2-xx

### Notes:

1. **xx** defines the LANGUAGE of the VSE/ESA Base, in which the system was ordered:
  - xx = EN English
  - xx = GE German
  - xx = SP Spanish
  - xx = KA Kanji (Japanese)
2. The **XBASE** (Extended Base) contains further VSE/ESA Base Programs. **DO NOT IPL the Extended Base**
3. Please see Chapter **Summary of Changes** (page ix) for which customers CD-ROM is available and who can download VSE/ESA from the Internet.
4. Please note that VSE/ESA Japanese is not available on CD-ROM or through e-delivery.

## 2.2.2 VSE/ESA BASE - PRODUCTS / COMPONENTS - on cartridge

Figure 2 describes the contents of the VSE/ESA 2.7.2 Base

Figure 2 (Page 1 of 2). VSE/ESA 2.7.2 - BASE Products

Product Description	Program Number	Component-Identifier	CLC
VSE/ESA 2.7.2 (Package)	5690-VSE	n/a	n/a
VSE Central Functions 6.7.0	5686-066	n/a	n/a
VSE/SP UNIQUE CODE	5686-066	568606601	75C
VSE/UNIQUE CODE ENGLISH	5686-066	568606602	75D
KANJI	5686-066	568606602	75E
GERMAN	5686-066	568606602	75A
SPANISH	5686-066	568606602	75H
VSE/POWER	5686-066	568606603	75C
VSE/POWER Macros	5686-066	568606603	75G
VSE/VSAM	5686-066	568606605	75C
VSE/VSAM Macros	5686-066	568606605	75G
VSE/AF SVR & BAM & GDS	5686-066	568606606	75C
VSE/AF Macros	5686-066	568606606	75G
VSE/AF Generation Feature	5686-066	568606606	75J
VSE/AF MSHP	5686-066	568606607	75C
VSE/AF Info/Analysis	5686-066	568606608	75C
VSE/AF IOCP	5686-066	568606609	75C
VSE/ICCF	5686-066	568606610	75C
VSE/FastCopy	5686-066	568606611	75C
REXX/VSE Library	5686-066	568606612	75I
REXX/VSE Kernel & Interface	5686-066	568606616	75I
VSE/OLTEP	5686-066	568606613	75I
OSA SF	5686-066	568606630	7G7
VSE Connectors	5686-066	568606635	75N
LE Base ENU + JPN 1.4.3	5686-066	568606632	75K
LE C ENU + JPN 1.4.3	5686-066	568606633	75L
CICS Transaction Server 1.1.1	5648-054	564805400	B0P

Figure 2 (Page 2 of 2). VSE/ESA 2.7.2 - BASE Products

Product Description	Program Number	Component-Identifier	CLC
TCP/IP 1.5 for VSE/ESA 1) Application Pak NFS Feature GPS Feature	5686-A04	5686A0400	7IP
ACF/VTAM 4.2.0 2) Client/Server MultiDomain InterEnterprise	5686-065	568606501	FE6
High Level Assembler 1.4.0	5696-234	569623400	489
EREP 3.5.0	5656-260	565626001	E00
ICKDSF 1.17.0	5747-DS2	565899201	1NM
DITTO/ESA for VSE	5648-099	564809901	36O
LE COBOL + JPN + CICS (1.4.3)	5686-094	568609403	7EW
LE PL/I + JPN (1.4.3)	5686-094	568609406	7EX

**Notes:**

1. TCP/IP for VSE/ESA consists of several functional features, which are pre installed with the base product. Each feature is key-protected. They have to be activated by entering an activation key together with the customer number, which is provided when TCP/IP for VSE/ESA was ordered.
2. ACF/VTAM V4R2 for VSE/ESA consists of three functional levels which are shipped in the base product. They are activated by entering your customer number and valid password, which is added to your order according to the ordered feature.

## 2.2.3 VSE/ESA BASE - MRM FILE Contents - on Cartridge

The layout of the base tapes changed. Initial Installation will reflect the new layout. FSU will also handle the new layout, provided the prepare step is executed first. The downlevel check should not be done prior to the prepare step, but **after the prepare**.

Figure 3 describes the files of the VSE/ESA Base (labelled: VSE/ESA2.7.2-xx)

Figure 3 (Page 1 of 2). File Content: VSE/ESA 2.7 BASE

File	Name
1	Header and SA Supervisor
2	VSE Standalone Utilities
3	MSHP History File - SYSRES Products
4	SYSRES Library
5	Null File
6	End of Backup Record
7	DTSFILE Header
8	DTSFILE Non-NLS
9	EOF1 - DTSFILE Trailer
10	Header File
11	MSHP History File - PRD1.MACLIB Products
12	PRD1.MACLIB Sublibrary
13	Header File
14	MSHP History File - PRD2.SCEEBASE Products
15	PRD2.SCEEBASE Sublibrary
16	Header File
17	MSHP History File - NLS Products
18	NLS Library
19	Null File
20	End of Backup Record
21	DTSFILE Header
22	DTSFILE NLS
23	EOF1 - DTSFILE Trailer
24	Header File
25	MSHP History File - Generation Features
26	Generation Feature

Figure 3 (Page 2 of 2). File Content: VSE/ESA 2.7 BASE

<b>File</b>	<b>Name</b>
27	Null File
28	End of Tape Record (EOT)
29	Header File
30	MSHP History File - PRD1.BASE Products
31	PRD1.BASE Sublibrary
32	Null File
33	End of Backup Record
34	Online-Message-File
35	Null File
36	End of Tape Record

## 2.2.4 VSE/ESA Extended BASE - PRODUCTS / COMPONENTS

Figure 4 describes the VSE/ESA 2.7.2 EXTENDED BASE Products / Components.

Figure 4. VSE/ESA 2.7.2 - EXTENDED BASE Products

Product Description	Program Number	ComponentID	CLC
CICS/VSE 2.3 Production	5686-026	568602601	14X
CICS/VSE 2.3 Generation 1)	5686-026	568602601	14V
CICS/VSE 2.3 RCF	5686-026	568602601	14W
OS/390 APIs	5686-066	568606614	75V
LE DBCS Locales	5686-066	568606634	75M
DB2 V7.3 Server f.VSE/ESA 2)	5697-F42	5697F4201	3NN
DB2 V7.3 DPRPR	5697-F42	5697F4201	3NO

### Notes:

1. This feature is only needed if CICS/VSE 2.3 is to be re-generated
2. For an improved installability of DB2 Server for VSE Version 7.3 (5697-F42), this product is partially packaged and delivered as a key-enabled component of the VSE/ESA 2.7.2 Base. First time DB2 users can take advantage of a free-of-charge 90-day trial period to evaluate the product. An activation key, provided with the DB2 Server for VSE V7 license, is required to use the product beyond the 90-day trial period. Packaging info: The DB2 V7 components packaged onto and always distributed with the VSE/ESA Extended Base Tape are DB2 Server for VSE and Data Propagator Capture for VSE. The DB2 Server for VSE Help Tape is always distributed on a separate tape. The DB2 optional features are packaged as optional products and distributed on the VSE/ESA optional product 'stacked tape' if they were ordered.

## 2.2.5 VSE/ESA on CD-ROM

The following files are available on the CD-ROM in the sequence shown below:

Figure 5. VSE/ESA 2.7.2 - VSE/ESA 2.7.2 on CD-ROM

File #	File Description	File Name
1	Readme File	VSERDME.txt
2	VSE/ESA BASE	VSEBAS27.AWS
3	VSE/ESA Extended Base	VSEBAE27.AWS
4	DB2 Help Text	DB2VSEHE.AWS

For details on the contents of the VSE/ESA Base and the VSE/ESA Extended Base, please see Figures 2, 3 and 4.

Note that the optional products are delivered on a 2nd CD-ROM in a file named: VSEOPT27.AWS.

## 2.2.6 VSE/ESA downloadable from the Internet

The following files are available when downloading from Internet through ShopzSeries:

<b>Base Tape</b>	VSE27xYY.aws
<b>Extended Base Tape</b>	VSE27xXB.aws
<b>DB2 Help Tape</b>	DB2HELP.aws
<b>Opt.Product Tape</b>	VSEOPT27.aws

Note that after downloading the respective files from the Internet, you will have the VSE/ESA 2.7 operating system and/or optional products available on your PC in ZIPped format. After unzipping these files you will have the files available as shown above.

The VSE/ESA operating system consists of 3 files (VSE/ESA base, VSE/ESA extended base, DB2 Help Text), for the optional products you will have only one file available: named VSEOPT27.AWS. In case of multiple optional products ordered, you will find all these optional products in this one file in VSE stacked format.

The description of the next steps for processing these files can be found at the VSE Home Page at

<http://www.ibm.com/servers/eserver/zseries/os/vse>

or in the manuals VSE/ESA 2.7.2 Installation SC33-6704 or VSE/ESA 2.7.2 System Upgrade and Service, SC33-6702, both available from the VSE Home page or the IBM Publications Center at

<http://www.elink.ibm.com/public/applications/publications/cgibin/pbi.cgi>.

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## 2.3 VSE/ESA BASE - OPTIONAL Machine-Readable Material

There is Optional Source available for VSE Central Functions 6.7.0.

The distribution media for optional machine-readable material are 3480 cartridge compressed or 3590 cartridge.

Please note, that the optional machine-readable material is NOT available on CD-ROM or through e-delivery.

A separate memorandum is distributed with the Optional Material. It contains a description on how to install the Optional Source Code of VSE Central Functions.

Figure 6 describes the media.

*Figure 6. Optional Material: 5686-066 VSE Central Functions 6.7*

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<b>Feature Number</b>	<b>Medium</b>	<b>Product Name</b>	<b>Product No.</b>	<b>External Tape Label</b>
5812	3480 Cartridge	VSE Central Functions	5686-066	VSE CF 6.7.0 SOURCE
6099	3590 Cartridge	VSE Central Functions	5686-066	VSE CF 6.7.0 SOURCE

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## 2.4 VSE/ESA BASE - Program Publications

The following sections identify the basic and optional publications for VSE/ESA 2.7.2, that are available as hardcopy publications.

From VSE/ESA 2.7.2 onwards, all VSE/ESA manuals will be available as softcopy only. This includes LE/VSE manuals, VSE/POWER manuals, CICS Transaction Server for VSE/ESA manuals, and so on. You can now obtain softcopy VSE/ESA manuals from either the:

- VSE Collection CD-ROM, SK2T-0060 (delivered with each VSE/ESA order)
- IBM Publications Center, which has this internet URL:

<http://www.elink.ibm.com/public/applications/publications/cgibin/pbi.cgi>

From the IBM Publications Center, you can download most VSE/ESA online publications free-of-charge in PDF or BOOK format. You can also order hardcopies of VSE/ESA manuals (for an additional fee) that were published before VSE/ESA 2.7.2, providing they are still available.

Please note that the Licensed Program Specifications (LPS) for the following VSE/ESA products are now also available and shipped in softcopy version only. They can be found on the PDF-CD of the VSE/ESA Softcopy Collection Kit in bookshelf 'VSE/ESA Related LPS PDFs'.

VSE/ESA  
LE for VSE/ESA  
TCP/IP for VSE/ESA  
IXFP/SnapShot for VSE/ESA  
DL/I 1.11.0  
DOS/VS RPG II  
OS/VS RPG II  
VSE/ACLR  
VSE/VSAM for VM

Those publications, which have been added or updated with VSE/ESA 2.7.2 are either marked with **(N)** for NEW publications, or **(U)** for updated documentation. Your shipment contains ONE copy of all those publications, which were updated since your last order.

### 2.4.1 VSE/ESA Base - Basic Publications

*Figure 7 (Page 1 of 2). VSE/ESA Basic Publications*

Publication Title	Form Number
VSE/ESA Release Guide	SC33-6718 U
VSE/ESA Softcopy Collection Kit	SK2T-0060 U
DB2 Server CD Doc Kit	SK3T-5257
DB2 Server Overview	GC09-2995

Figure 7 (Page 2 of 2). VSE/ESA Basic Publications

<b>Publication Title</b>	<b>Form Number</b>
QMF Window Try/Buy Kit	LCD4-3781
Program Directory VSE/VSAM for VM	n/a
DB2 Program Directory	GI10-4999
DB2 Memo to Users DB2 Server	GI10-5008

Figure 8 identifies the basic program publications as hardcopies for further VSE/ESA 2.7.2 base products.

Figure 8. Publications of VSE/ESA 2.7.2 Base Programs

<b>Publication Title</b>	<b>Form Number</b>
CICS/TS Program Directory	GI10-2508
CICS/TS Licensed Programming Specs	GC34-5464
DITTO/ESA Licensed Programming Specs	GH19-8223
DITTO/ESA Program Directory	GI10-0426
ACF/VTAM Program Directory	GI10-8112
ACF/VTAM Licensed Programming Specs	GC31-6490

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## 2.5 VSE/ESA OPTIONAL PROGRAMS

Optional Programs are independent products, that can be ordered additionally and together with VSE/ESA and which run under the operating system VSE/ESA. They should not be mixed up with the optional material (source code), which is available for both the VSE/ESA BASE and some Optional Programs.

The distribution medium for these Optional Programs are the same as for the VSE/ESA Base. The medium contains all the programs and data needed for installation using the Maintain System History Program (MSHP). They are on the media in stacked format and can be installed by using the VSE/ESA dialogs.

If VSE/ESA 2.7.2 was ordered to be delivered through the Internet (e-delivery), Optional Programs have to be downloaded as described in the VSE Install Instructions on the VSE Home Page:

<http://www.ibm.com/servers/eserver/zseries/os/vse>

### 2.5.1 Optional Programs - Available with VSE/ESA V2

(sorted by Product Number)

Prod.No.	Product Name	V.R.M	remarks
-----	-----	-----	-----
5648-063	ACF/NCP	7.8.1	3746-900 incl. NCP
5648-099	DITTO/ESA for VM feature	1.3.0	VM format
5648-B02	VA Generator Server	1.2.0	NLS available
5648-B33	AFP Font Collection	2.1.1	VSE fonts / NLS
5668-723	GDDM-IVU	1.1.3	
5668-801	GDDM-IMD	2.1.3	
5668-812	GDDM-PGF	2.1.3	
5686-011	CICSVR/VSE	1.2.0	
5686-040	PSF/VSE	2.2.1	Base and Fonts
5686-057	GDDM/VSE	3.2.0	NLS available
5686-064	ACF/SSP for VSE	4.8.1	
5686-065	ACF/VTAM for VM feature	4.2.0	VM format
	ACF/VTAM APPC Feature		
5686-066	IXFP/Snapshot	6.7.0	Opt.Feat.of VSE CF
5686-068	COBOL for VSE/ESA	1.1.0	Full/Altern.Function
5686-069	PL/I for VSE/ESA	1.1.0	Full/Altern.Function
5686-081	VSE/VSAM for VM	6.1.0	VM format
5686-A01	C for VSE/ESA	1.1.0	Full/Altern.Function
5686-A06	MQSeries for VSE/ESA	2.1.2	
5686-A07	CCCA for VSE/ESA	2.1.0	
5688-035	X.25 NPSI	3.9.0	
5688-190	PPFA/370	1.1.0	
5688-191	UGL/370	1.1.0	incl. NLS
5696-234	HLASM Toolkit	1.4.0	WS feature
5697-B88	DB2 VSAM Transparency	5.1.0	
5697-F42	DB2 V7 Server for VSE	7.3.0	NLV JPN, DEU, FRA
	Control Center	7.3.0	

	Data Restore	7.3.0	
5697-F42	QMF for VSE/ESA	7.2.0	Base and NLV
5697-F42	QMF for Windows	7.2.0	Base and NLV
5735-XXB	EP	1.14.0	
5746-RG1	DOS/VS RPG II	1.3.0	
5746-SM3	DFSORT/VSE	3.4.0	
5746-XE7	VSE/ACLR	1.2.1	
5746-XXT	SDF II VSE	1.6.0	
5746-XX1	DL/I DOS/VS	1.10.0	
5746-XX1	DL/I VSE	1.11.0	

## 2.5.2 Optional Programs - List of Product Identifiers

The following Optional Programs are available with VSE/ESA 2.7.2. They show the product identifiers as you will find them on the Optional Program tape itself.

BACKUPID	COMPID	CLC	PRODID	
-----	-----	---	-----	
PSF/ACIF...2.2.1	564806201	FW0	062FW0	
PSF/API....2.2.1	564806202	FW1	062FW1	
NCP/V7.....7.8.1	564806300	78G	06378G	
DITTO.JPN..1.3.0	564809902	370	099370	
QMF/VSE....7.2.0	566872101	2NR	F422NR	Base / US English
QMF/VSE.U..7.2.0	564806102	2NS	F422NS	Upper Case English
QMF/VSE.C..7.2.0	564806103	20L	F4220L	Canadian French
QMF/VSE.R..7.2.0	564806104	2NT	F422NT	Simpl.Chinese
QMF/VSE.F..7.2.0	564806107	2NU	F422NU	French
QMF/VSE.D..7.2.0	564806108	2NV	F422NV	German
QMF/VSE.I..7.2.0	564806109	2NW	F422NW	Italian
QMF/VSE.K..7.2.0	564806110	2NX	F422NX	Japanese
QMF/VSE.H..7.2.0	564806111	2NY	F422NY	Korean
QMF/VSE.P..7.2.0	564806112	2NZ	F422NZ	Brazil.Port
QMF/VSE.S..7.2.0	564806113	200	F42200	Spanish
QMF/VSE.Y..7.2.0	564806115	201	F42201	Swiss French
QMF/VSE.Z..7.2.0	564806116	202	F42202	Swiss German
PSF/COMPAT.B300	564811310	1BM	1131BM	300PeI Fonts
VGEN.BASE..1.2.0	5648B020A	1JI	B021JI	Base
VGEN.ENU...1.2.0	5648B0207	1JF	B021JF	US English
VGEN.ENP...1.2.0	5648B020B	1JJ	B021JJ	UC English
VGEN.DES...1.2.0	5648B0202	1JA	B021JA	Swiss German
VGEN.ESP...1.2.0	5648B0203	1JB	B021JB	Spanish
VGEN.DEU...1.2.0	5648B0204	1JC	B021JC	German
VGEN.CHS...1.2.0	5648B0205	1JD	B021JD	Simpl.Chinese
VGEN.KOR...1.2.0	5648B0206	1JE	B021JE	Korean
VGEN.PTB...1.2.0	5648B0208	1JG	B021JG	Brazil.Portugese
VGEN.JPN...1.2.0	5648B0209	1JH	B021JH	Japanese
AFP_FONT...2.1.1	5648B3300	n/a	n/a	1)
GDDM-IVU...1.1.3	566872301	1FF	7231FF	
GDDM-IMD...2.1.3	566880101	1FG	8011FG	
GDDM-PGF...2.1.3	566881201	1F5	8121F5	
CICSVR/VSE.1.2.0	568601101	1NL	0111NL	
PSF/VSE....2.2.1	568604001	DC0	040DC0	
PSF/CODEPG.B240	568604015	FR9	040FR9	
AFP/CODEPG.B300	568604021	FS0	040FS0	

PSF/COMPAT.B240	568604055	DH1	040DH1	
PSF/COMPAT.U240	568604054	DH0	040DH0	
GDDM/VSE...3.2.0	568605701	1EA	0571EA	
GDDM/VSE.A.3.2.0	568605702	1EP	0571EP	
GDDM/VSE.B.3.2.0	568605702	1EO	0571EO	Brazilian
GDDM/VSE.C.3.2.0	568605702	1EN	0571EN	Simp.Chin.
GDDM/VSE.D.3.2.0	568605702	1EM	0571EM	Danish
GDDM/VSE.S.3.2.0	568605702	1EL	0571EL	Spanish
GDDM/VSE.T.3.2.0	568605702	1EK	0571EK	Trad.Chin
GDDM/VSE.V.3.2.0	568605702	1EJ	0571EJ	Swedish
GDDM/VSE.F.3.2.0	568605702	1EI	0571EI	French
GDDM/VSE.G.3.2.0	568605702	1EH	0571EH	German
GDDM/VSE.I.3.2.0	568605702	1EE	0571EE	Italian
GDDM/VSE.K.3.2.0	568605702	1ED	0571ED	Kanji
GDDM/VSE.N.3.2.0	568605702	1EC	0571EC	Norwegian
GDDM/VSE.Q.3.2.0	568605702	1EQ	0571EQ	Can.French
ACF/SSP...4.8.1	568606400	48G	06448G	
IXFP/SNAP...6.7.0	568606631	75P	06675P	4)
COB.BASE...1.1.0	568606800	18M	06818M	
COB.ENU...1.1.0	568606801	18N	06818N	
COB.JPN...1.1.0	568606802	18O	06818O	
DTVSE.BASE.1.1.1	5686A0200	6G8	A026G8	2)
DTVSE.JPN..1.1.1	5686A0201	6G9	A026G9	2)
PLI.VSE...1.1.0	568606900	18P	06918P	
DTVSE.BASE.1.1.1	5686A0200	6G8	A026G8	2)
DTVSE.JPN..1.1.1	5686A0201	6G9	A026G9	2)
C/VSE.BASE.1.1.0	5686A0100	1FY	A011FY	
C/VSE.JPN..1.1.0	5686A0101	1G4	A011G4	
DTVSE.BASE.1.1.1	5686A0200	6G8	A026G8	2)
DTVSE.JPN..1.1.1	5686A0201	6G9	A026G9	2)
MQSERIES...2.1.2	5686A0600	2ZZ	A062ZZ	
CCCA.VSE...2.1.0	5686A0700	1JS	A071JS	
X_25/NPSI...3.9.0	568803501	9E0	0359E0	
PPFA/370...1.1.0	568819001	A03	190A03	
OGL/370...1.1.0	568819101	A05	191A05	
OGL/370...1.1.0	568819102	AA0	191AA0	
OGL/370...1.1.0	568819103	AA1	191AA1	
OGL/370...1.1.0	568819104	AA2	191AA2	
HLASM.TLKT.1.4.0	569623401	4IM	2344IM	
DB2VSE.XTV.5.1.0	5697B8800	514	B88514	
DB2/NLV...7.3.0	5697F4201	3NN	F423NN	
ASN/VSE...7.3.0	5697F4201	3NO	F423NO	
DB2CC...7.3.0	5697F4206	3NQ	F423NQ	
DB2VSE.RCV.7.3.0	5697F4205	3NP	F423NP	
RPGII...1.3.0	5746RG100	042	RG1042	
DFSORT/VSE.3.4.0	5746SM310	34A	SM334A	
VSE/ACLR...1.2.1	5746XE700	H06	XE7H06	
SDF.II.VSE.1.6.0	5746XXT01	228	XXT228	
SDF.II.GER.1.6.0	5746XXT03	1J7	XXT1J7	
SDF.II.DES.1.6.0	5746XXT04	1J8	XXT1J8	
SDF.II.ESP.1.6.0	5746XXT05	1J9	XXT1J9	
SDF.II.JPN.1.6.0	5746XXT02	229	XXT229	
DL/I-BASE..1.A.0	5746XX100	DB5	XX1DB5	
DL/I-BASE..1.B.0	5746XX100	1I0	XX11I0	

EP\_R14....1.14.0 5748EP115 4E1 EP14E1 3)

**Notes:**

1. The AFP Fonts will NOT be stacked. You will get them on separate volumes.
2. These components define the debugging functions (DEBUG Tool), which are part of the Full Function orders of C for VSE, PL/I for VSE and COBOL for VSE.
3. The program number of EP (5735-XXB) differs from the COMPONENT-ID.
4. For installation and setup details of IXFP/Snapshot, please refer to the *VSE/ESA Release Guide* SC33-6718.

This version of IXFP/Snapshot is intended to run on VSE/ESA 2.7 only. If you need this product on the so called Service Option (VSE/ESA 2.6.3) please contact your IBM representative.

### **2.5.3 Optional Programs - Program Tapes/Program Cartridges**

All ordered Optional Programs will be delivered stacked on cartridge or in a file available on the CD-ROM or downloaded from the Internet. There will be multiple volumes, if the ordered products will physically not fit onto one volume.

You will get Program Directories of the individual Optional programs ordered with VSE/ESA 2.7.2 for additional information on the particular programs. Please ignore the **ordering information** in these directories, as this part does not apply to these products when ordered within the VSE/ESA package.

The external label of the volume(s) is: **VSE/ESA 2.7.2 OPT x OF y**

## 2.5.4 Optional Programs - File Content

Figure 9 describes the file content of the Optional Program Tape

Figure 9. Program Tape - 'VSE/ESA 2.7.2 OPT x OF y' File Content

File	Name
1	Null File
2	Start of Stacked Tape Indicator
3	Null File
4	1st Optional Program ordered
5	2nd Optional Program ordered
6	3rd Optional Program ordered
7	nth Optional Program ordered
8	Null File
9	End of Stacked Tape Indicator
10	Null File
11	Null File

Refer to the individual program directories on specific information to the ordered product.

## 2.5.5 Optional Programs - Basic Publications

The following tables identify the basic publications of the VSE/ESA 2.7.2 Optional Programs, that are available as hardcopies. The VSE/ESA Softcopy Collection Kit CD, which is delivered with every VSE/ESA order, provides further documentation to all VSE Optional Programs.

Figure 10. BASIC Documentation of ACF/NCP 5648-063 7.8.1

Publication Title	Order/Form Number
NCP Licensed Programming Specs	GC31-6226
Program Directory	GI10-6623
Memo to Licensees	GI10-6628

Figure 11. BASIC Documentation of DITTO/ESA f.VM 5648-099 1.3.0

Publication Title	Order/Form Number
Program Directory	GI10-0438

Figure 12. BASIC Documentation of VisualAge Generator Server 5648-B02 1.2.0

<b>Publication Title</b>	<b>Order/Form Number</b>
VA Generator Server LPS	GH23-0255
VA Server Guide	SH23-0256
Program Directory	GI10-0813
Memo to Current Licensees	GI10-6776

Figure 13. BASIC Documentation of AFP Font Collection 5648-B33 2.1.1

<b>Publication Title</b>	<b>Order/Form Number</b>
AFP Font Collection LPS	G544-5634
Program Directory VSE Fonts	GI10-0223
PGDIR Japanese Fonts VSE	GI10-0241
PGDIR Korean Fonts VSE	GI10-0242
PGDIR S-Chinese Fonts VSE	GI10-0243
PGDIR T-Chinese Fonts VSE	GI10-0244

Figure 14. BASIC Documentation of GDDM-IVU 5668-723 1.1.3

<b>Publication Title</b>	<b>Order/Form Number</b>
Program Directory	GI11-1586

Figure 15. BASIC Documentation of GDDM-IMD 5668-801 2.1.3

<b>Publication Title</b>	<b>Order/Form Number</b>
Program Directory	GI11-1630

Figure 16. BASIC Documentation of GDDM-PGF 5668-812 2.1.3

<b>Publication Title</b>	<b>Order/Form Number</b>
Program Directory	GI10-9657



Figure 17. BASIC Documentation of CICSVR/VSE 5686-011 1.2.0

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<b>Publication Title</b>	<b>Order/Form Number</b>
Licensed Program Specifications	GC26-7323
Program Directory	GI10-4528
Memo to Licensees	GI10-4534

Figure 18. BASIC Documentation of PSF/VSE 5686-040 2.2.1

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<b>Publication Title</b>	<b>Order/Form Number</b>
Licensed Programming Specifications	G544-3667
Program Directory for 2.2.1	GI10-0203

Figure 19. BASIC Documentation of GDDM/VSE 5686-057 3.2.0

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<b>Publication Title</b>	<b>Order/Form Number</b>
Series Licensed Progr Specifications	GC33-0876
Program Directory	GI11-1528

Figure 20. BASIC Documentation of ACF/SSP f. VSE 5686-064 4.8.1

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<b>Publication Title</b>	<b>Order/Form Number</b>
Licensed Program Specs SSP	GC31-6230
Program Directory	GI10-6620
Memo to Licensees	GI10-6627

Figure 21. BASIC Documentation of IXFP Snapshot 5686-066 6.7.0

---

<b>Publication Title</b>	<b>Order/Form Number</b>
Licensed Programming Specs	GC33-6603

Figure 22. BASIC Documentation of IBM COBOL for VSE/ESA 5686-068  
1.1.0

---

<b>Publication Title</b>	<b>Order/Form Number</b>
COBOL/VSE Licensed Programming Specs	GC26-8069
Memo to Licensees Full Function	GI10-9890
Memo to Licensees Alternate Function	GI11-1706
Memo to current Lics of the Debugger	GI10-8484
Memo to new Lics of the Debugger	GI10-8476

Figure 23. BASIC Documentation of IBM PL/I for VSE/ESA 5686-069  
1.1.0

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<b>Publication Title</b>	<b>Order/Form Number</b>
PL/I VSE Licensed Programming Specs	GC26-8055
Memo to Licensees Full Function	GI11-1707
Memo to Licensees Alternate Function	GI11-1708

Figure 24. BASIC Documentation of IBM C for VSE/ESA 5686-A01 1.1.0

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<b>Publication Title</b>	<b>Order/Form Number</b>
C/VSE LPS	GC09-2421

Figure 25. BASIC Documentation of MQSeries for VSE/ESA 5686-A06  
2.1.2

---

<b>Publication Title</b>	<b>Order/Form Number</b>
MQSeries VSE/ESA LPS	GC34-5365
Memo to new Licensees	GI10-2512

Figure 26. BASIC Documentation of CCCA for VSE/ESA 5686-A07 2.1.0

---

<b>Publication Title</b>	<b>Order/Form Number</b>
Licensed Programming Specifications	GC26-9408
Program Directory	GI10-5079

Figure 27. BASIC Documentation of X.25 NPSI 5688-035 3.9.0

<b>Publication Title</b>	<b>Order/Form Number</b>
X.25 NCP PSI V3 Licensed Progr Specs	GC30-9605
X.25 NCP PSI V3 Host Programming	SC30-3502
Program Directory	GI10-6558

Figure 28. BASIC Documentation of PPFA/370 5688-190 1.1.0.

<b>Publication Title</b>	<b>Order/Form Number</b>
Licensed Program Specifications	G544-3696
Quick Reference	G544-3701
Diagnosis Guide + Reference	LH40-0207
Program Directory	GI10-9679

Figure 29. BASIC Documentation of OGL/370 5688-191 1.1.0

<b>Publication Title</b>	<b>Order/Form Number</b>
OGL/370 Licensed Progr. Specifications	G544-3697
OGL/370 Quick Reference	SX35-5032
Program Directory	n/a

Figure 30. BASIC Documentation of HLASM Toolkit 5696-234 1.4.0

<b>Publication Title</b>	<b>Order/Form Number</b>
Memo to new Licensees	GI10-5051

Figure 31. BASIC Documentation of DB2 VSE/VSAM Transparency 5697-B88 5.1.0

<b>Publication Title</b>	<b>Order/Form Number</b>
VSAM Transparency for VSE Users Guide	SC26-8956
Program Directory	GI11-1723

Figure 32. BASIC Documentation of DB2 Server for VSE/ESA 5697-F42  
7.3.0

<b>Publication Title</b>	<b>Order/Form Number</b>
DB2 Server F.VM & VSE Licensed Specs	GC09-2982
DB2 Server Diagnosis GD + Reference	LC09-2907
DB2 Server Universal Developers Edition	LK3T-5242
DProP VSE Memo to Users	GI10-5010
DProP VSE Program Directory	GI10-5001
Control Center Program Directory	GI10-5003
Control Center Memo to Users	GI10-5012
Data Restore Program Directory	GI10-5005
Data Restore Memo to Users	GI10-5014
QMF for VSE Program Directory	GI10-8330
QMF for VSE NLV Program Directory	GI10-8332

Figure 33. BASIC Documentation of EP 5735-XXB 1.14.0

<b>Publication Title</b>	<b>Order/Form Number</b>
Licensed Progr.Specifications	GC31-6201
Program Directory	GI10-0996

Figure 34. BASIC Documentation of RPG II 5746-RG1 1.3.0

<b>Publication Title</b>	<b>Order/Form Number</b>
Language Reference	SC33-6031
Installation Reference	SC33-6032
Messages	SC33-6033
Auto Report	SC33-6034
User's Guide	SC33-6074
Program Directory	GI10-9770

Figure 35. BASIC Documentation of DFSORT/VSE 5746-SM3 3.4.0

<b>Publication Title</b>	<b>Order/Form Number</b>
Licensed Progr.Specifications	GC26-7038
Reference Summary	SX26-6008
Program Directory	GI10-4513

Figure 36. BASIC Documentation of VSE/ACLR 5746-XE7 1.2.1

<b>Publication Title</b>	<b>Order/Form Number</b>
Program Directory	GI11-0645

Figure 37. BASIC Documentation of SDF II VSE 5746-XXT 1.6.0

<b>Publication Title</b>	<b>Order/Form Number</b>
SDF II Introducing Release 6	GH12-6314
SDF II Licensed Specification	GH12-6318
Program Directory	GI10-0424

Figure 38. BASIC Documentation of DL/I VSE 5746-XX1 1.10.0 and 1.11.0

<b>Publication Title</b>	<b>Order/Form Number</b>
General Information Manual	GH20-1246
Guide for New Users	SH24-5001
Library Guide + Master Index	GH24-5008
Diagnostic Guide	SH24-5002
Low Lev Code Cont. Check	SH20-9046
Ref Summary: CALL Prog. Interface	SX24-5103
Ref Summary: HLPI Interface	SX24-5120
Program Directory	GI10-0484

## 2.5.6 Optional Programs - Licensed Publications

Optionally available publications are orderable under the individual Optional program product numbers. Please see the Program Directories of these products for available publications.



---

## 3.0 Program Support

This section describes the IBM support available for VSE/ESA 2.7.2.

---

### 3.1 Preventive Service Planning

Before installing VSE/ESA 2.7.2, check with your IBM Support Center or use either Information/Access or SoftwareXcel Extended to see whether there is additional Preventive Service Planning (PSP) information that you should know. To obtain this information, specify the following UPGRADE and SUBSET value:

**VSEESA2rm**

where rm is the current Release/Modification level.

With this upgrade value you will see lists of subset values, one sorted by VSE/ESA BASE programs, and one sorted per VSE/ESA OPTIONAL programs. The subset identifies are derived from the product names, to where the subset identifiers belong.

In addition, there are the following subset values:

**BASESERVICE** and **OPTPSERVICE**

Using these values, you find the list of APARs and related PTFs per BASE program (BASESERVICE) and OPTIONAL program (OPTPSERVICE). These lists are identified by the products component identifier, which you may find in Chapter 'Optional Programs - List of Product Identifiers.

If you have received VSE/ESA 2.7.2 only from IBM Software Distribution, then before installing VSE/ESA 2.7.2, you should also check with your IBM Support Center or use either Information/Access or SoftwareXcel Extended to see if there is additional PSP information that you should know.

---

### 3.2 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent. Please refer to Figure 2 on page 8 for component IDs (COMPID) for VSE/ESA 2.7.2





---

## 4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of VSE/ESA 2.7.0. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated. Information about the cumulative service tape is also provided.

---

### 4.1 Program Level Information

The following is a list of APARs fixed and integrated since VSE/ESA 2.6, which are NOT visible in the MSHP history file.

#### COMPONENT 568606601, ..02 (UNIQUE CODE)

PQ41225	PQ41480	PQ42737	PQ43137	PQ43503	PQ44269
PQ45663	PQ46864	PQ48871	PQ49063	PQ49301	PQ49437
PQ49527	PQ50082	PQ50122	PQ50346	PQ51324	PQ51515
PQ51586	PQ52261	PQ52476			
PQ54326	PQ54701	PQ54702	PQ55137	PQ55920	PQ55927
PQ55969	PQ56186	PQ56424	PQ56556	PQ56618	PQ56819
PQ56864	PQ56865	PQ57091	PQ57099	PQ57217	PQ57220
PQ57472	PQ57473	PQ57607	PQ57743	PQ57744	PQ57985
PQ58998	PQ60136	PQ60250	PQ60447	PQ60449	PQ61009
PQ61103	PQ61749	PQ61787	PQ62813	PQ65460	PQ65715
PQ65790	PQ66568	PQ68047			

#### COMPONENT 568606603 (POWER)

DY45464	DY45489	DY45498	DY45511	DY45514	DY45521
DY45543	DY45546	DY45554	DY45555	DY45562	DY45570
DY45584	DY45591	DY45607	DY45613	DY45622	DY45634
DY45647	DY45675	DY45679	DY45701	DY45714	DY45763
DY45769	DY45780				
DY45745	DY45747	DY45748	DY45749	DY45750	
DY45783	DY45786	DY45804	DY45806	DY45821	DY45825
DY45835	DY45838	DY45870	DY45874	DY45884	DY45895
DY45933	DY45942	DY45999			

#### COMPONENTS 568606604, ..06, ..07, ..08, ..09 (AF)

DY45502	DY45516	DY45525	DY45526	DY45528	DY45530
DY45537	DY45540	DY45545	DY45547	DY45551	DY45556
DY45557	DY45564	DY45568	DY45573	DY45580	DY45586
DY45593	DY45619	DY45623	DY45626	DY45629	DY45636
DY45639	DY45644	DY45655	DY45658	DY45676	DY45677
DY45683	DY45684	DY45685	DY45686	DY45698	DY45712
DY45726	DY45739	DY45758	DY45767	DY45773	DY45779

DY45785					
DY45736	DY45752	DY45774	DY45789	DY45796	DY45798
DY45799	DY45817	DY45826	DY45827	DY45829	DY45830
DY45839	DY45845	DY45848	DY45849	DY45851	DY45869
DY45878	DY45879	DY45881	DY45886	DY45887	DY45888
DY45889	DY45890	DY45892	DY45896	DY45897	DY45911
DY45917	DY45921	DY45934	DY45938	DY45939	DY45947
DY45950	DY45971	DY45975	DY45976	DY45980	DY45988
DY45995	DY46002				

**COMPONENT 568606605 (VSAM)**

DY44814	DY44996				
DY45529	DY45536	DY45538	DY45539	DY45571	DY45589
DY45596	DY45612	DY45617	DY45618	DY45630	DY45631
DY45645	DY45654	DY45661	DY45667	DY45687	DY45693
DY45696	DY45751	DY45764	DY45778		
DY45744	DY45754	DY45755	DY45808	DY45809	DY45819
DY45822	DY45844	DY45850	DY45865	DY45908	DY45918
DY45922	DY45969	DY45970	DY45977	DY45978	

**COMPONENT 568606630 (OSA/SF)**

PQ06993	PQ06292	PQ03091	PQ11504	PQ16071	
PQ54717	PQ59028	PQ66278			

**COMPONENT 568606610 (ICCF)**

PN73312	PN73314	PN79224	PN80038	PN85665	PN88902
PQ11175					
PQ58394	PQ57333	PQ70277			

**COMPONENT 568606611 (FASTCOPY)**

DY44060	DY44121	DY44214	DY45867		
---------	---------	---------	---------	--	--

**COMPONENTs 568606612, 568606616 (REXX)**

PQ41345	PQ42277	PQ44022	PQ47519	PQ51117	
PQ55252	PQ56301	PQ56557	PQ59388	PQ66948	PQ69262

**COMPONENT 568606613 (OLTEP)**

DY44219

**TCP/IP 1.5 5686-A0400**

PQ11216	PQ11589	PQ11981	PQ12876	PQ14716	PQ14718
PQ14724	PQ16251	PQ18295	PQ18354	PQ19496	PQ19507
PQ19603	PQ19780	PQ20942	PQ21691	PQ24008	PQ26600
PQ27233	PQ27252	PQ28760	PQ29052	PQ29053	PQ39048
PQ39540	PQ39277				
PQ40278	PQ43707	PQ43576	PQ43577	PQ43581	PQ45314
PQ45531	PQ46046	PQ46047	PQ46048	PQ46049	PQ46050
PQ46051	PQ46052	PQ46053	PQ46054	PQ46055	PQ46056
PQ46057	PQ46058	PQ46059	PQ46060	PQ46061	PQ46062
PQ46063	PQ46064	PQ46065	PQ52348	PQ54068	PQ55591
PQ60559	PQ60559	PQ60560	PQ63021	PQ66906	PQ69574

**LE/VSE 1.4.3 5686-06632 (LE Base)**

PQ06598	PQ09262	PQ21622	PQ23918	PQ24407	PQ24997
PQ26738	PQ27448	PQ28586	PQ28747	PQ29165	PQ31256
PQ31989	PQ35020	PQ36828	PQ38321	PQ39636	PQ42344
PQ47866	PQ48405				
PQ01591*	PQ13106*	PQ29151*	PQ33406*	PQ34353*	PQ36632*
PQ47713*	PQ62014	PQ65818	PQ67005		

\*) indicates the APAR has been routed from LE OS/390 or LE z/OS.

**LE/VSE 1.4.3 5686-06633 (LE C)**

PQ24999	PQ27349	PQ30589	PQ31101	PQ32076	PQ33140
PQ34038	PQ34263	PQ45676	PQ45681	PQ47358	

**VSE Connectors 5686-06635**

PQ41480	PQ49063	PQ50122	PQ51324	PQ52261
PQ56023	PQ56024	PQ56316	PQ60611	PQ60612
PQ54703	PQ56517	PQ59275	PQ56316	PQ67458
PQ67459				

**LE/VSE 1.4.3 5686-09403 (LE COBOL)**

PQ11742	PQ24687	PQ28536	PQ29574	PQ30638	PQ30663
PQ30711	PQ30714	PQ38025	PQ49487	PQ50085	
PQ61668	PQ66612				

**LE/VSE 1.4.3 5686-09406 (LE PL/I)**

PQ28824	PQ30907	PQ32442	PQ36650	PQ37297	PQ48684
PQ65549	PQ66264				

**CICS/TS 1.1.1 5648-054**

PQ26158	PQ26159	PQ26160	PQ26161	PQ26165	PQ26166
PQ26170	PQ26632	PQ26634	PQ26635	PQ26636	PQ26639
PQ26640	PQ26642	PQ26644	PQ26789	PQ26792	PQ27517
PQ27956	PQ27959	PQ28334	PQ28617	PQ28642	PQ29185
PQ29289	PQ29570	PQ29694	PQ30170	PQ30707	PQ31254
PQ33640	PQ33689	PQ34164	PQ34772	PQ35402	PQ35598
PQ36567					

**Note:** For APARs integrated into 5648-054 CICS Transaction Server 1.1.0, please see the 5648-054 Program Directory.

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**4.2 Service Level Information**

There is no information for VSE/ESA 2.7.2 at this time.

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**4.3 Cumulative Service Tape**

There is no cumulative service tape for VSE/ESA 2.7.2.

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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating VSE/ESA 2.7.2.

---

### 5.1 System Requirements

#### 5.1.1 Operating System Requirements

VSE/ESA 2.7.2 is an operating system itself and does not require another operating system to run under. Anyway, VSE/ESA 2.7.2 can run as a guest system under the following VM/ESA systems:

z/VM Version 3 (or later), where VSE/ESA runs in 31-bit mode.

If VSE/ESA 2.7 is running under z/VM Version 3.1 please see the processor prerequisites as listed below in chapter 5.1.2.

Note that VSE/ESA 2.7.2 runs with supervisor mode ESA only. If you are migrating from a pre VSE/ESA V2 system and running a supervisor with MODE-VM or MODE=VMESA, please see *VSE/ESA Planning*, SC33-6703, Chapter: Planning for Migration.

Additional information is available in

- *z/VM Version 3 Release 1, Running Guest Operating Systems*, SC24-5950,
- *z/VM Version 4 Release 1, Running Guest Operating Systems*, SC24-5997
- *VSE/ESA Installation*, SC33-6704.

#### 5.1.2 VSE/ESA Processor Support

VSE/ESA 2.7.2 supports ESA/390 **uniprocessors** and **multiprocessors** of the following IBM System/390 processor series:

IBM eServer zSeries 800  
IBM eServer zSeries 890  
IBM eServer zSeries 900  
IBM eServer zSeries 990  
IBM S/390 Multiprise 3000  
IBM S/390 Parallel Enterprise Server - Generation 5  
IBM S/390 Parallel Enterprise Server - Generation 6

VSE/ESA 2.7.2 provides "n-way" support for the multiprocessor models of these processor series through the VSE/ESA Turbo Dispatcher.

Note that VSE/ESA can run as a guest system under z/VM on all processors supported by z/VM.

Please also note that VSE/ESA 2.7.2 will not run under z/VM V3 on servers not listed above in this section.

### **5.1.3 Processor Details**

Please refer to *VSE/ESA Planning SC33-6703* for an actual list of the processors supported by VSE/ESA.

### **5.1.4 Minimum System Configuration**

VSE/ESA 2.7.2 requires the following minimum system configuration:

- 16MB of processor (real) storage.  
Since the processor storage available is usually much higher, this value is mainly of interest if VSE/ESA is running in LPAR mode or under z/VM.
- About 916MB (environment A) or about 1030MB (environment B) of disk device space on two volumes, DOSRES and SYSWK1, as outlined in *VSE/ESA Planning, SC33-6703*.
- A tape or cartridge unit supporting the distribution medium.
- A system printer. This may be a channel-attached or adapter-attached printer controlled by VSE/POWER or a local terminal printer controlled by CICS. A terminal printer should have a minimum speed of 300 lines per minute.
- A display station. This can be a terminal or programmable workstation of any supported type.
- The system console. This can be an integrated console or any display station supported as system console.

### **5.1.5 DASD Storage Requirements**

Please see: *VSE/ESA Planning, SC33-6703* for storage requirements.

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## 6.0 Special Considerations

Information on VSE/ESA base and optional programs

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### 6.1 Tips and Hints for VSE/ESA Base Programs

#### 6.1.1 Supervisor Generation fails with VSE/ESA 2.7.2 and later

If it is required to generate an own supervisor with the base VSE/ESA 2.7.2, the supervisor generation could fail with the following message:

```
** ASMA044E Undefined symbol - THININT  
** ASMA435I Record 2951 in PRD2.GEN1(SGSVCX)
```

This error is caused by a wrong level part OSADCL.A in PRD2.GEN1.

The correct level of this part is delivered with PTF UD52494 (APAR DY46075) catalogued into PRD1.MACLIB. Since in the standard LIBDEF chain PRD1.MACLIB is behind PRD2.GEN1, the wrong part in the generation library should be deleted or renamed.

If the generation feature is installed **after** the above PTF is installed, please be aware, that the generation feature is installed in the time sequence after the MACLIB (in case of an FSU as well as for initial installation), and that above PTF is removed from the history file. This is due to incorrect comprise information for part OSADCL.A. Therefore you have to reinstall this PTF. After deleting part OSADCL.A from PRD2.GEN1, the supervisor generation will work.

#### 6.1.2 VSE/ESA Fast Service Upgrade (FSU)

There will be no Fast Service Upgrade provided from releases prior to VSE/ESA 2.5.0. In any case, first run the prepare step, afterwards you may run the FSU installation. **Do not run a downlevel check** in any case of a release upgrade. For preparation tasks and additional space requirements, refer to the *System Upgrade and Service* and the *Planning* manual.

For electronic delivery (download from ShopzSeries), FSU as a service refresh on VSE/ESA 2.7 is possible using virtual tape support. In this case, the electronic medium can be used directly. For more information, see the VSE Install Instructions on the VSE/ESA Home Page:

<http://www.ibm.com/servers/eserver/zseries/os/vse>

and also the *System Upgrade and Service* manual.

After FSU is finished, you should update the CICS TS transaction security settings using the merge key (PF6) on the 'Dialog Definition Transaction Security' (fastpath 28). For additional post-FSU tasks refer to the *System Upgrade and Service* manual.

With VSE/ESA 2.7.2 the system default FCT settings are migrated into the CICS CSD file. After the FSU from VSE/ESA 2.5 message 'DFHAM4803F applid Install failed because an existing definition for file 'FILE' could not be deleted' is displayed. This is due to the fact that the SIT refers to FCT=SP and therefore the FCT definition is used instead of the CICS RDO definition. You should change the SIT to FCT=NO to avoid the message. CICS will use the CSD base file definition.

There are new applications and selection panels. After the FSU, upgrade the application profiles and selection panels as described in the manual.

### **6.1.3 SSL Client Authentication**

With VSE/ESA 2.7 it is possible to assign a VSE user ID to a client certificate and use the access rights of this user ID for the client. Therefore the service BSSDCERT was introduced. Details about BSSDCERT can be found at 'VSE/ESA e-business Connectors User's Guide' via the VSE Home Page.

For CWS/SSL see also 'CICS TS for VSE/ESA: Enhancements Guide' .

### **6.1.4 OS/390 Library - API**

This library contains members for the OS/390 emulation environment. The members contained in this library are not intended for general use by VSE/ESA customers but may be required by vendor products. Vendors who have a need for these interfaces should contact VSE/ESA development by sending a note to VSE@de.ibm.com

### **6.1.5 Restriction of the MSHP TAILOR Function**

The MSHP TAILOR function together with one of the following control statements

```
EXECute ASSEMBLY
EXECute ASSEMBLY,LNKEDT
EXECute ASSEMBLY,LIBR
```

for generating library members is no longer supported with VSE/ESA Version 2.

Message

```
0S05I PHASE ASSEMBLY NOT FOUND
```

will be issued if it is attempted to use this function. Starting with VSE/ESA 2.1, the DOS/VSE Assembler (ASSEMBLY) has been replaced by the High Level Assembler for VSE (ASMA90). The MSHP TAILOR function does not work with the High Level Assembler for VSE.



## 6.1.6 Implementation of LCDD for the 3494 Tape Library Dataserver

The Library Device Control Driver for VSE/ESA (LCDD) is included in VSE/ESA 2.7.

For LCDD commands please review GC33-6740, but be aware that LCDD is installed into IJSYSRS.SYSLIB and the sample startup JCL to tailor is in ICCF LIB 59.

## 6.1.7 Device Support Facilities (DSF 1.17)

For details on this release, please see the Program Directory of Device Support Facilities Release 17, GI11-1238, and the DSF User's Guide and Reference Release 17, GC35-0033, available on the VSE Softcopy Collection Kit CD: SK2T-0060.

Both publications are also available from the VSE Home Page at

<http://www.ibm.com/servers/eserver/zseries/os/vse/>

## 6.1.8 HLASM Support with ACF/SSP Version 4, Release 8

With ACF/SSP 4.7 and later, ACF uses the High Level Assembler for NCP and EP compiles. There are a couple of macros with the same name as for VSE Central Functions causing assembly errors. It is recommended to change the search chain for source members and put PRD1.MACLIB ahead of PRD2.COMM, the target library for ACF/SSP.

## 6.1.9 CICS/TS

**IMPORTANT:** Do not specify SEC=NO in the SIT, SEC=NO means no security checking in CICS/TS at all, that is no signon security and also no transaction security. SEC=YES by default will use the basic security manager (BSM) as external security manager.

CICS/TS SIT setting SVA=NO changed to SVA=YES. To allow CICS coexistence, exclude list DFH\$SVEX is used.

To activate this change in case of an FSU Release upgrade, the SIT has to be compiled and the CICS startup job has to be changed to reflect the exclude list.

## 6.1.10 SVA Setup

With VSE/ESA 2.7.2 LE Base and C-Runtime routines are loaded into the SVA. For details see *VSE/ESA Planning* SC33-6703. In order to make sure the related programs can also be used in CICS/TS, default setting of SVA in the SIT was changed from NO to YES.

### 6.1.11 Telnet Terminal Definition and Autoinstall

The default terminal logmodes used by TCP/IP Telnet do not have the extended data stream flag set. Without this flag set, file transfer using IND\$file transaction will not work. It is recommended to use the logmodes with the query facility instead of the default modes. An example would be:

```
DEFINE TEL, ID=MYTEL, TAR=DBDCCICS, TERM=D1000, CO=20, LOGMODE=SP3272QN, -  
        LOGMODE3=SP3272QN, LOGMODE4=SP3272QN, LOGMODE5=SP3272QN
```

If only extended data stream is wished, without the query facility, following definition for the Telnet daemon is appropriate:

```
DEFINE TEL, ID=MYTEL, TAR=DBDCCICS, TERM=D1000, CO=20, LOGMODE=SP3272EN, -  
        LOGMODE3=SP3273EN, LOGMODE4=NSX32704, LOGMODE5=NSX32705
```

In any case, non SNA logmodes have to be specified. With the logmodes above, the logtab IESINCLM has to be specified in the VTAM application definition:

```
D100001 APPL AUTH=(ACQ), MODETAB=IESINCLM
```

In the above samples, logmodes for terminal models 3, 4 and 5 are also added. In case of the query facility modes, the logmode can also be specified with the MENU definition, in this case only one LOGMODE parameter is required: LOGMODE=SP3272QN.

### 6.1.12 DITTO

DITTO APAR PQ70313 increased the size of DITMOD PHASE by about 80K. With the changed phase, the online version of DITTO will not work, since interactive partition/class 'Y' is too small. Either increase the size of class 'Y' by 1 MB or change the profile to run DITTO in a lower partition by default. You may also load DITMOD into the SVA to avoid the problem.

Class Y is increased to 3MB in case of an initial installation. The FSU classtable needs to be updated as described.

---

## 6.2 Language Environment for VSE/ESA (LE/VSE 1.4.3)

### 6.2.1 LE/VSE 1.4.3

Except for the DBCS local component, all LE/VSE components are shipped as part of the VSE/ESA 2.7.2 base system.

The optional LE/VSE 1.4.3 DBCS locale component is shipped on the VSE/ESA 2.7.2 Extended Base tape.

For more information, please see the *VSE/ESA Release Guide* SC33-6718

The following table lists the new component identifiers (COMP IDs) and component level codes (CLCs).

Component-ID	CLC	Description
5686-066-32	75K	LE Common base, containing information written in: - Uppercase and mixed-case US English - Japanese NLF
5686-066-33	75L	LE C-specific base, containing information written in: - Uppercase and mixed-case US English - Japanese NLF
5686-066-34	75M	Optional LE DBCS Locale Component (see note below)
5686-094-03	7EW	LE COBOL-specific base and CICS, containing information written in: - Uppercase and mixed-case US English - Japanese NLF
5686-094-06	7EX	LE PL/I-specific base, containing information written in: - Uppercase and mixed-case US English - Japanese NLF

#### Notes:

1. For a summary of all the changes introduced with LE/VSE 1.4.3 (including changes contained in all re-published LE/VSE manuals), refer to the *VSE/ESA Release Guide*, SC33-6718. The manual is also available on the *VSE/ESA Softcopy Collection Kit*, SK2T-0060.
2. The LE Base (\$SVACEE) and C Runtime (\$SVAEDCM) are pre loaded in the SVA. Please also see the *VSE/ESA Planning Guide*, SC33-6703.

Please notice that option modules (e.g.) CEECOPT.PHASE and CEEDOPT.PHASE are included in \$SVACEE. Changing run-time options for batch and CICS environment therefore requires a SVA re-load via SET SDL command from BG partition. Supplied skeletons CEEWCOPT and CEEWDOPT in ICCF library 62 will take this into consideration.

### 6.2.1.1 Modifying the Behavior of the COBOL Reusable Environment (optional):

The COBOL reusable environment behavior can be modified to control how program checks are handled that occur in a non-Language Environment conforming driver. The COBOL reusable environment is established with the RTEREUS run-time option or a call to IGZERRE INIT.

Use the IGZWARRE sample job to change the behavior of COBOL's reusable environment. You must modify the IGZRREOP macro invocation, depending on the function that you want.

To run with VS COBOL II and DOS/VS COBOL run-time compatibility mode (i.e., the user has control of program checks that occur when the COBOL reusable environment is dormant, resulting in an additional performance cost), use:

- IGZRREOP REUSENV=COMPAT

To run with optimum performance (i.e., Language Environment intercepts all program checks that occur when the COBOL reusable environment is dormant and converts them to CEE3321C/CEE3320C, resulting in improved performance), use:

- IGZRREOP REUSENV=OPT

See *LE/VSE Customization Guide* for related information.

## 6.2.2 Mixed Language Applications under LE/VSE (involving Assembler)

When creating or maintaining mixed language applications in an LE/VSE environment various supported techniques are available. In general the following macros and services can assist to ensure operating LE/VSE-conform.

- LE/VSE assembler macros (CEEENTRY/CEETERM)
- LE/VSE preinitialization service (CEEPIPI)
- LE/VSE C-specific macros (EDCPRLG/EDCEPIL)

Examples and further details not covered here are available on LE/VSE Home Page via <http://www-1.ibm.com/servers/eserver/zseries/os/vse/le/samples.htm>

## 6.2.3 Summary of LE/VSE Customization and IVP-Jobs in IUI

This is a list of LE/VSE related jobs, pre-installed in ICCF library 62. These members can assist you in various verification and customization tasks.

ICCF Member	Purpose and Function
CEECCSD	LE/VSE base program definitions (CICS)
CEEWCCSD	Skeleton for enabling LE/VSE program definitions (CICS)

<b>ICCF Member</b>	<b>Purpose and Function</b>
CEEWCEXT	Identify abnormal termination exit to LE/VSE (CICS)
CEEWCOPT	Installation-wide default LE/CICS run-time options
CEEWCXIT	Installation-wide assembler user exit
CEEWDCCD0	Card-device run-time LIOCS phase
CEEWDDU0	Diskette-device run-time LIOCS phase
CEEWDEXT	Identify abnormal termination exit to LE/VSE (batch)
CEEWDOPT	Installation-wide default LE/batch run-time options
CEEWDPRO	Printer device run-time LIOCS phase
CEEWDXIT	Installation-wide assembler user exit (batch)
CEEWHLLX	High level language user exit
CEEWINFG	Collect system status information related to LE/VSE
CEEWINFR	Summarize/condense information generated via CEEWINFG
CEEWIVP1	Verification of Assembler program interface
CEEWIVP2	Verification of LE/VSE COBOL Component
CEEWIVP3	Verification of LE/VSE PL/I Component
CEEWIVP4	Verification of LE/VSE C Component
CEEWIVP5	Verify the LE/VSE C Prelink Utility
CEEWMSVA	LE/VSE base routines eligible for putting into the SVA
CEEWUOPT	Application specific run-time options
CEEWUXIT	Application specific assembler user exit
EDCCCS	LE/VSE C-specific program definitions (CICS)
EDCLLOCL	Changing the C locale time information
EDCUCSD	Optional codeset converters (CICS)
EDCWMSV1	LE/VSE C-specific routines eligible for SVA
IBMCCSD	LE/VSE PL/I-specific program definitions (CICS)
IBMSVA1	LE/VSE PL/I-specific routines eligible for SVA
IGZCCSD	LE/VSE COBOL-specific program definitions (CICS)
IGZWARRE	Customize behavior of COBOL reusable environment
IGZWEPC	COBOL COBPACK tailoring
IGZWEPC	COBOL COBPACK tailoring
IGZWEPCO	COBOL COBPACK tailoring
IGZWESV1	LE/VSE COBOL-specific routines eligible for SVA
SKLE370	LE/VSE CICS CSD entries in GROUP(CEE)

<b>ICCF Member</b>	<b>Purpose and Function</b>
CEETSCSD (*)	Sample code for USESVACOPY(YES) alteration, LE Base under CICS TS (pre-customized since VSE/ESA 2.6.0)
EDCTSCSD (*)	Sample code for USESVACOPY(YES) alteration, LE C under CICS TS (pre-customized since VSE/ESA 2.6.0)
IGZTSCSD (*)	Sample code for USESVACOPY(YES) alteration, LE COBOL under CICS TS (optional !)
IBMTSCSD (*)	Sample code for USESVACOPY(YES) alteration, LE PL/I under CICS TS (optional !)
EDCXDLY (#)	Sample C/VSE code exploiting new LE/VSE Callable Service CEE5DLY (introduced with LE 1.4.2)
IGZTDLY (#)	Sample COBOL/VSE code exploiting new LE/VSE Callable Service CEE5DLY (introduced with LE 1.4.2)

**Notes:**

1. Skeleton SKLE370 is located in ICCF lib 59. It reflects a pre-customized status of the shipped CICS region (for VSE/ESA 2.4 (and later) this is a CICS TS based DBDCCICS). Hence there is no need to run SKLE370 unless LE/VSE definitions are modified or reestablished. For example this may apply when a second CICS region is built. Be aware that you need LE/VSE C-specific support in order to start CICS TS, respectively make use of Debug Tool for VSE/ESA (orderable feature of LE/VSE enabled compilers).
2. All members marked (\*) are sample code and have been introduced with LE/VSE 1.4.2. They contain component specific DFHCSDUP ALTER commands for USESVACOPY(YES) enablement under CICS Transaction Server. Please be aware that this change has to go along with a CICS SIT parameter setting of SIT SVA=YES as well as load of corresponding \$SVAxxx loadlists. For details and possible impacts in a CICS coexistence environment please refer to CICS TS documentation and VSE/ESA Planning Guide, SC33-6703.

**For VSE/ESA 2.7.2 the delivered system is pre-customized with SIT SVA=YES:**

- a. Making use of SVA loadlists \$SVACEE (LE/VSE 1.4.3 Base) and \$SVAEDCM (LE/VSE 1.4.3 C).
- b. Shipping USESVACOPY(YES) enabled CICS CSD definitions - via GROUP(CEE) - for LE/VSE 1.4.3 modules contained in these loadlists. There is no need to run CEETSCSD and EDCTSCSD on this level. All is present !

**Additional information:**

- a. A set of Z-books (allowing direct DFHCSDUP input) was provided to support the preload issue. Actually members CEETICSD.Z and EDCTICSD.Z which are integrated in common base install and service upgrade procedures. The LE COBOL and LE PL/I specific Z-books (IGZTICSD and IBMTICSD) complement this set (but aren't preloaded).

## 6.2.4 Languages and CICS Transaction Server

CICS Transaction Server for VSE/ESA supports:

- All LE/VSE conforming compilers (C/VSE, COBOL/VSE, PLI/VSE)
- High Level Assembler with LE/VSE
- DOS/VS COBOL and VS COBOL-II (if relinked / using LE run-time)

CICS Transaction Server does not support:

- DOS PL/1 and C/370 applications (recompilation with LE-conforming compiler is required)
- RPG-II (not supported by LE, either)

## 6.2.5 Generating Applications Capable of Running Under LE/VSE

Be aware of the Interactive Interface support (Primary Library, OPTION 8, translate and compile ...) in order to build your applications.

This will ensure usage of language independent stubs such as CICS DFHELII, related options etc.

**Note:** Be aware that every CICS TS related transaction needs to be "security-enabled" prior to its first execution. The Interactive Interface provides associated support via dialog 'Define Transaction Security' fastpath 28.

## 6.2.6 AMODE 24 Applications in a LE/VSE-initialized CICS Environment

Under CICS, the supplied default LE/VSE run-time options ALL31(ON) and STACK(4K,4K,ANYWHERE,KEEP) are present.

These settings improve performance and storage utilization for a CICS region running AMODE31 programs or applications that use CICS services to invoke AMODE24 programs from AMODE31 applications. This is applicable unless AMODE31 programs dynamically call AMODE24 programs (which are not automatically enabled for AMODE switching). In such cases a setting off ALL31(OFF) and STACK(4K,4K,BELOW,KEEP) is recommended/required. You may wish to implement it by use of an appropriate CEEUOPT.OBJ linked with an application.

**Note:** LE/VSE Customization Guide, SC33-6682 Chapter 2 shows an example on how to build a CEEUOPT (application specific run-tune option module).

Detailed information about run-time option changes are also available in *IBM LE/VSE R4 Customization Guide*, SC33-6682.

## 6.2.7 Run-Time Options to Use with Caution

You may find these tips valuable in your environment:

- Use LE/VSE run-time option **TERMTHDACT(UADUMP)** for diagnosis in a batch environment. It generates a VSE partition dump and a corresponding LE/VSE dump. For problem determination under both CICS/VSE and CICS TS it is recommended to specify TERMTHDACT(DUMP).

Please also be aware that use of TERMTHDACT (UADUMP) with database managers will bypass backout processing that may be required after application failure. Any files still open at point of failure will not be closed. Additional reference will be available via Info APAR II 11817.

- The default run-time option **HEAP(...,ANYWHERE,...)** is important because of the correlation to COBOL compile options DATA(24/31), RMODE and RENT. Be aware that there is a 64k limit for CICS/VSE GETMAIN storage requests below the 16MB line. Avoid HEAP(BELOW) it ignores the COBOL DATA(xx) compile setting for location of dynamic data areas (such as working storage) !
- Setting **TRAP(ON,MAX)** ensures LE/VSE's integrity when handling abnormal conditions. TRAP(OFF) should only be activated on request of IBM service personal.
- The **3rd parameter** of the **STORAGE** run-time option can be of importance in PL/I migration environments. It deals with PL/I automatic variable storage and provides an initialization service in case the programming style did not consider start values for variables. However the associated performance impact can be significant (dependent on how the application is coded). Since it deals with the LE/VSE stack it can degrade overall run-time performance for all languages ! Therefore a setting of STORAGE(00,NONE,00,xk) should be used very strictly, respectively application specific (e.g. via tailored CEEUOPT.OBJ or JCL PARM override).

## 6.2.8 CICS/VSE Table Parameter Settings (optional environment)

Please ensure that you update the following CICS table(s) if you intend to run COBOL/VSE, VS COBOL II, DOS/COBOL or PLI/VSE programs under control of LE/VSE:

### CICS/VSE System Definition Table (SIT):

- **COBOL2=NO**

LE/VSE will automatically provide you with the necessary run-time support for VS COBOL II.

- **PL1=NO**

This is the recommended setting in order to indicate to CICS/VSE that LE/VSE is going to provide related run-time support. In case of LE/VSE this must be a PLI/VSE compiled program unit. On the contrary PL1=YES assumes involving the obsolete DOS PL/I 1.6.0 run-time library which went out-of-service 06/30/1997.

### CICS/VSE Processing Program Table (PPT): (VS COBOL II only)

If there are VS COBOL II run-time PPT entries

- Do **not** include copy-book **IGZ9PPT.A** in your PPT



- Recompile your CICS PPT in order to update control information
- Recycle CICS via **cold-start**. This should be done once in conjunction with topic "Member SKLE370 provides LE/VSE support for CICS/VSE".
- If there are CICS CSD entries for VS COBOL II modules IGZCPAC & IGZCPCC (instead of macro definitions) - ensure they are removed

If you plan to use VS COBOL II with the LE/VSE run-time under CICS/VSE, you should observe the following when modifying your CICS/VSE PPT:

- Do **not** include the VS COBOL II copy-book, **IGZ9PPT.A** in your PPT. Instead include the copy-book, **IGZCPPT.A**, supplied in PRD2.SCEECICS.
- Recompile your CICS PPT
- Recycle CICS via **cold-start**

## 6.2.9 CICS Translator Options Required for COBOL Applications

For COBOL/VSE or VS COBOL II online programs (VS COBOL II must at least be relinked to involve LE/VSE run-time) one of the following CICS/VSE or CICS TS translator options must be used. This will apply to mainline programs as well as to COPY-books that may be translated separately.

- XOPTS(**COBOL2**) was a minimum setting for VS COBOL II type programs, preferable matching the ANSI74 standard. It may also be used in a COBOL/VSE context.
- XOPTS(**ANSI85**) implies COBOL2 and can also be applicable for COBOL/VSE or VS COBOL II compiled program units. However these settings are appropriate in case the application exploits ANSI85 functionality such as nested programs.
- XOPTS(**COBOL3**) is a CICS TS only translator option which you may wish to use as an indicator for a COBOL/VSE or SAA AD/Cycle COBOL/370 cross compile program unit. It implies ANSI85 and COBOL2. By the way CICS TS doesn't support the SIT COBOL2 parameter since the run-time must be LE/VSE. Please refer to CICS Transaction Server documentation for more details.

**Note:** Sometimes VS COBOL II programs, translated without either of these CICS translator options, executed without error with the former VS COBOL II run-time. However such programs will not execute successfully under LE/VSE and are likely to use the old and obsolete COBOL specific CICS stub DFHECI.

## 6.2.10 LE/VSE Related Service via Ordering PSP Bucket

Please use VSE/ESA specific PSP buckets for upgrading LE/VSE. This package is named "VSEESA27x" (where x is the modification level). It can be ordered via IBM service teams. The related subset for LE/VSE 1.4.3 is named "IBMLANG/75K". Of further interest can be CICS subsets ensuring synchronization with LE/VSE.

## 6.2.11 LE/VSE Return Codes to CICS

The following msg and return code might be experienced in VSE/ESA 2.7 environments in case the CEECOPT.A (LE/CICS option source) is assembled without the CEELOPT macro appendix.

DFHAP1200 DBDCCICS A CICS request to the Language Environment for VSE/ESA has failed. Reason code '0011060'.

The event indicates that an invalid CEECOPT.PHASE module was used for LE/CICS initialization. Simply take the system provided CEEWCOPT skeleton and regenerate CEECOPT.PHASE for related relief.

**Note:** This setup problem is outlined via MSG DFH1568 in CICS/VSE coexistence environments.

## 6.2.12 CLER Usage in multiple CICS environments:

This newly provided LE/CICS run-time option tailoring transaction (VSE/ESA 2.7) is intended for dynamic, temporary overrides in a single, active CICS subsystem. As such CLER customization will not take effect in other CICS subsystems nor retain after CICS recycling.

LE/CICS run-time options that are commonly shared between multiple CICS subsystems (referring to the same CEECOPT module) are better tailored via customizing CEEWCOPT skeleton and CEECOPT.A option source.

## 6.2.13 LE/VSE Documentation Links

- 

<http://www.ibm.com/servers/eserver/zseries/os/vse/1e/books.htm>

The link also provides a 'doc sorted by LE/VSE release' view.

- *LE/VSE V1R4 Programming Reference*,SC33-6685
- *LE/VSE V1R4 Customization Guide*,SC33-6682
- *LE/VSE V1R4 Programming Guide*,SC33-6684
- *LE/VSE V1R4 Debugging & Run-Time Message Guide*,SC33-6681
- *LE/VSE V1R4 C Run-Time Programming Guide*,SC33-6688

have been updated for the March 2003 Softcopy Collection Kit SK2T-0060 and placed into the VSE/ESA 2.7 bookshelf.

the LE/VSE Customization Guide, SC33-6682 has been updated for the September 2003 Softcopy Collection Kit and placed into the VSE/ESA 2.7 bookshelf.

## **6.2.14 LE/VSE Support for COBOL/VSE**

APAR PQ74201 has been introduced to support COBOL/VSE documentation and message updates. This also comprises updates to LE/VSE 1.4.1 and LE/VSE 1.4.2. For details please see the APAR description available in RETAIN or via the VSE/ESA service links on the web.

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## 6.3 TCP/IP for VSE/ESA

With VSE/ESA 2.7.2 APAR PQ77237 (aka TCPIP15C) was installed as the current service level for TCP/IP for VSE/ESA.

The functional update of the TCP/IP for VSE/ESA 1.4 or 1.3 program (IBM program number 5686-A04) to release level 1.5 was introduced with APAR PQ66906. This APAR is included in VSE/ESA 2.7.2

The documentation for TCP/IP 1.5 for VSE/ESA is available on the VSE/ESA 2.7.2 Softcopy Collection CD-ROM SK2T-0060.

On the CD-ROM you will find 6 books with the original program description from Connectivity Systems Incorporated, the provider of the TCP/IP for VSE 1.5 program, plus one manual describing the setup of the TCP/IP for VSE/ESA program IBM is providing. The books are as follows:

- TCP/IP for VSE/ESA - IBM Program Setup and Supplementary Information
- TCP/IP for VSE 1.5 Installation Guide
- TCP/IP for VSE 1.5 User's Guide
- TCP/IP for VSE 1.5 Operator Commands
- TCP/IP for VSE 1.5 Programmer's Reference
- TCP/IP for VSE 1.5 Messages
- TCP/IP for VSE 1.5 Optional Products

The manual 'TCP/IP for VSE/ESA - IBM Program Setup and Supplementary Information' (SC33-6601) replaces the former 'TCP/IP for VSE/ESA User's Guide'. All the available documentation for the TCP/IP for VSE/ESA 1.5 program is described in that manual in Chapter 1.

All the documentation on the CD-ROM is available in PDF format only. You can use the Adobe Acrobat Reader to view and print the documentation. If you do not already have an Acrobat Reader installed, or if you need information on installing and using an Acrobat Reader, see the Adobe Web site at

<http://www.adobe.com>

You will find the documentation for this new release of TCP/IP for VSE/ESA also on the VSE Home Page at

<http://www.ibm.com/servers/eserver/zseries/os/vse/>

For a detailed description of

- How to install TCP/IP Keys
- The TCP/IP demo mode
- Dependencies when you are using a license from Connectivity Systems.

please see the manual *TCP/IP for VSE/ESA IBM Program Setup and Supplementary Information* SC33-6601.

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## 6.4 Installation Hints and Tips

### 6.4.1 Installation of VSE Connector Client

For installation details, please refer to the following Internet page:

<http://www.ibm.com/servers/eserver/zseries/os/vse/support/vseconn/conmain.htm>

### 6.4.2 Installation of the Java-Based TCP/IP for VSE/ESA Configuration Dialog

For installation details, please refer to the following internet page:

<http://www.ibm.com/servers/eserver/zseries/os/vse/support/vseconn/conmain.htm>

### 6.4.3 CWS Client Authentication

With VSE/ESA 2.7.2 the CICS Web Support (CWS) supports SSL Client Authentication. The Interactive Interface now includes a new dialog and various service functions that can be used with CWS to implement client authentication and manage client certificates.

For more information, check the following books:

- *CICS Transaction Server for VSE/ESA V1R1 Enhancements Guide*, GC34-5763.
- *VSE/ESA e-business Connectors User's Guide*, SC33-6719

and the VSE/ESA Internet page at

<http://www.ibm.com/servers/eserver/zseries/os/vse/>

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## 6.5 Publication Updates

### 6.5.1 Accessing VSE/ESA Performance Documentation

You can receive up-to-date performance information for VSE/ESA from the Internet or from the VSE CD-ROM Collection SK2T-0060.

From the internet, access and get these documents via the VSE/ESA Home Page

<http://www.ibm.com/servers/eserver/zseries/os/vse/library/vseperf.htm>

On the CD-ROM Collection, all the performance documents are on disc 3.

The following files or documents are available, all of them are in PDF format (ADOBE Acrobat Reader):

FILE	DOCUMENT TITLE
VE13PERF.PDF	IBM VSE/ESA 1.3/1.4 Performance Considerations
VEVMPERF.PDF	IBM VSE/ESA VM Guest Performance Considerations
VE21PERF.PDF	IBM VSE/ESA V2 Performance Considerations
VE21TDP.PDF	IBM VSE/ESA Turbo Dispatcher Performance
VEIOPERF.PDF	IBM VSE/ESA I/O Subsystem Performance Considerations
VEPERACT.PDF	IBM VSE/ESA Hints for Performance Activities
VETCPPER.PDF	VSE/ESA TCP/IP Performance Considerations
VESORTP.PDF	IBM DFSORT/VSE Performance Considerations
VECICSTS.PDF	IBM VSE/ESA CICS Transaction Server Performance Considerations
VE25PERF.PDF	IBM VSE/ESA 2.5 Performance Considerations
VE26PE00.PDF	IBM VSE/ESA 2.6 and 2.7 Performance Considerations
VETP1400.PDF	IBM VSE/ESA TCP/IP 1.4 and 1.5 Performance Considerations

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## 6.6 Tips and Hints for VSE/ESA Optional Programs

### 6.6.1 VisualAge Generator Server runtime

The documentation delivered with Visual Age Generator Server 1.1.0 for VSE/ESA describes the setup for a VSE/ESA 2.4 system. So here are the changes that are necessary to run the Generator Server for VSE/ESA on a VSE/ESA 2.6 system (and later) with CICS TS 1.1.1:

The following is a sample to setup VAGEN for DBDCCICS

**EZEPRIN needs to be a standard system label, because CICS TS 1.1.1 doesn't work with temporary labels (DLBL statements) in the JCL**

**Description:** The label EZEPRIN is defined in member ELAVCICS.A and usually you have to add the label to the CICS startup job, but the temporary 'DLBL EZEPRIN' statement doesn't work and the CICS startup fails. If you insert the label into the standard system label area (see job ADDLAB below), then the CICS startup will run successfully. The ASSGN statement is the only one which needs to be placed in CICS startup job.

**FCT entries are now online**

**Description:** The FCT entries are migrated to CSD and now online, they should now be defined via RDO. To migrate the old FCT entry in ELAFCT, assemble DFHFCTSP (with inserted ELAFCT) and change the job SKCSDFIL (library 59), simply add the line 'MIGRATE TABLE(DFHFCTSP)' at the end of the DFHCSDUP part after the ADD GROUP statement (see the following sample for 3380 or CKD devices below).

Run the job and the table will be updated and migrated to the new format.

Job ADDLAB:

```
* $$ JOB JNM=ADDLAB,CLASS=0,DISP=L,PRI=3
// JOB ADDLAB
// OPTION STDLABEL=ADD
// DLBL ELACFIL,'ELA110.ELACFIL',,VSAM,CAT=IJSYSCT
// DLBL EZEPRIN,'USER.EZEPRINT.FILE',0,SD
// EXTENT SYS025,SYSWK3,1,0,5910,75
/*
/&
* $$ EOJ
```

Part of job SKCSDFIL

```
// EXEC DFHCSDUP,SIZE=600K      UPDATE CICS CSD VSAM FILE
  DELETE GROUP(ELAGRP)
* $$ SLI MEM=ELAGRP.A,S=(PRD2.DBASE)
* $$ SLI MEM=ELAGENU.A,S=(PRD2.DBASE)
  ADD GROUP(ELAGRP) LIST(VSELIST)
  DELETE GROUP(DFHFCTSP)
  MIGRATE TABLE(DFHFCTSP)
```

## 6.6.2 DOS/VS COBOL withdrawal

DOS/VS COBOL is no longer available as individual product. DOS/VS COBOL customers who wish to run it under VSE/ESA 2.3 (with CICS/VSE 2.3) and later may refer to APARs PQ00970 and PQ00971. These APARs provide assistance in migrating the DOS/VS COBOL product (members+ MSHP service information) from an existing operating environment to VSE/ESA 2.3 and later.



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## 7.0 Installation Instructions

### 7.1.1 Installing from CD-ROM and through e-delivery

Please see the VSE Install Instruction on the VSE/ESA Home Page:

<http://www.ibm.com/servers/eserver/zseries/os/vse>

### 7.1.2 ICKDSF Considerations when placing the VTOC on Large DASDs

For ECKD devices containing more than 64K tracks, there are special considerations for VTOC placement. The highest address that can be referenced as a VTOC track must be 64K-1. Because of this, the entire VTOC must reside within the first 64K tracks, that is, the VTOC must end before cylinder 4369 (X'1111') head 1. This is especially important when using the DOSVTOC(END) parameter. Its usage can result in error message **ICK21002I INVALID VTOC ORIGIN SPECIFICATION**

For further details please see the ICKDSF R17 User's Guide and Reference, GC35-0033.

### 7.1.3 VSE/VSAM on Large DASDs

VSE/VSAM supports Large DASDs up to a capacity of 10017 cylinders (150255 tracks). This limit corresponds to the capacity of an IBM 3390 Model 9. Therefore due to this restriction (for details see *VSE/ESA 2.7.2, Release Guide*, SC33-6718), Large DASDs are not supported as VSE/ESA system residence devices.

Please see *VSE/ESA Planning*, SC33-6703 for storage requirements.



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## **8.0 VSE/ESA 2.7.2 Install Logic**

There is no further information for VSE/ESA 2.7.2



## 9.0 Reader's Comments

### Program Directory for VSE/Enterprise Systems Architecture Version 2 Release 7.2

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1	2	3	4	5	N	

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Contents of program directory	1	2	3	4	5	N
Installation Verification Programs	1	2	3	4	5	N
Time to install the product	1	2	3	4	5	N
Readability and organization of program directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
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