

IBM z/VSE



# Release Guide

*Version 4 Release 1 Modification Level 1*



IBM z/VSE



# Release Guide

*Version 4 Release 1 Modification Level 1*

**Note!**

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

This edition applies to Version 4 Release 1 Modification Level 1 of IBM z/Virtual Storage Extended (z/VSE), Program Number 5609-ZV4, and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition replaces SC33-8300-00.

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## Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. The major accessibility features in z/VSE enable users to:

- Use assistive technologies such as screen readers and screen magnifier software
- Operate specific or equivalent features using only the keyboard
- Customize display attributes such as color, contrast, and font size

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## Using Assistive Technologies

Assistive technology products, such as screen readers, function with the user interfaces found in z/VSE. Consult the assistive technology documentation for specific information when using such products to access z/VSE interfaces.

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## z/VSE Information

z/VSE information is accessible using screen readers with the BookServer/Library Server versions of z/VSE books in the Internet library at:

<http://www.ibm.com/servers/eserver/zseries/zos/bkserv/vse.html>

One exception is command syntax that is published in railroad track format. If required, screen-readable copies of z/VSE books with that syntax information are separately available in HTML zipped file form upon request to [s390id@de.ibm.com](mailto:s390id@de.ibm.com).



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## About This Book

This manual provides details of the enhancements and changes implemented with IBM z/VSE Version 4 Release 1 Modification Level 1 (z/VSE 4.1.1).

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## Who Should Use This Book

This manual is intended for those z/VSE users who need to be aware of important information provided with z/VSE Version 4 Release 1 Modification Level 1.

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## How to Use This Book

The book contains one chapter:

- “What Is New With z/VSE 4.1.1?” on page 1

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## Where to Find More Information

Whenever appropriate, the book refers to other z/VSE manuals that provide further details on a specific topic.

The z/VSE home page provides additional z/VSE information:

### **z/VSE Home Page**

z/VSE has a home page on the World Wide Web, which offers up-to-date information about VSE-related products and services, new z/VSE functions, and other items of interest to VSE users.

You can find the z/VSE home page at:

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

You can also find VSE User Examples (in zipped format) at:

<http://www.ibm.com/servers/eserver/zseries/zvse/downloads/samples.html>



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## What Is New With z/VSE 4.1.1?

This chapter provides a brief description of the items and changes introduced with z/VSE 4.1.1.

It contains these sections:

- “Encryption Using the Encryption Facility for z/VSE”
- “Support for DB2 Version 7 Release 5” on page 3
- “Tape Encryption Using VSE/POWER Commands” on page 3
- “Language Environment Enhancements” on page 4
- “Restructuring of the z/VSE Administration Manual” on page 4
- “Restructuring of the z/VSE e-business Connectors User’s Guide Manual” on page 4

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## Encryption Using the Encryption Facility for z/VSE

### IBM Support!

The Encryption Facility for z/OS Client (whose short-form is *z/OS Java Client*) is separately licensed *IBM Java Client* and *IBM Decryption Client for z/OS* code that is provided “AS IS” (without warranty, without product support) and is available as a no-charge, web download. While IBM has no obligation under this license to provide support, IBM does intend to review and analyze problems reported. At IBM’s discretion, an updated z/OS Java Client web download (which includes the IBM Java Client and the IBM Decryption Client for z/OS) may be provided.

To report problems with the Java Client or Decryption Client when used to exchange data with the Encryption Facility for z/VSE (5686-CF8), please contact: [zvse@de.ibm.com](mailto:zvse@de.ibm.com).

The need to be able to create *secure* archived copies of business data is a critical security concern. Encrypting data that can be recovered at any time offers a high degree of privacy protection from unwanted access. The *Encryption Facility for z/VSE* makes use of:

- System z crypto and compression hardware,
- key management based on the *Keyman/VSE utility* (which can be downloaded from the VSE Homepage).

The Encryption Facility for z/VSE is a *software-based* encryption facility. Depending on the kind of processor and the type of cryptographic hardware that you have installed, the Encryption Facility for z/VSE also uses hardware-accelerated crypto support for encryption and decryption. It provides encryption for:

- single SAM files,
- VSAM files,
- VSE Library members,
- complete backups that were made using any z/VSE backup utility (such as IDCAMS, LIBR, POFFLOAD) or a vendor product.

Encrypted data can be exchanged between *different* operating systems:

- The Encryption Facility for z/VSE can read encrypted files that were created by the:
  - Encryption Facility for z/OS V1.1 (Version 1 Release 1),
  - z/OS Java Client V1.1/1.2 (Version 1 Release 1 or Version 1 Release 2).
- Both the Encryption Facility for z/OS V1.1 and z/OS Java Client V1.1/1.2 can read encrypted files that were created by the Encryption Facility for z/VSE.

You can also perform an encryption/decryption of data on *platforms other than z/VSE or z/OS*.

You can choose between *two* methods for encrypting data:

- *Passphrase-based encryption*, which is the simplest method since it does not require key-generation or key-handling. On systems without TCP/IP for VSE/ESA or with other TCP/IP stacks, you can *only* use passphrase-based encryption.
- *Public-key encryption*, which requires the use of Keyman/VSE to:
  - generate private and public keys,
  - import public keys.

Public-key encryption guarantees that although multiple sites can *encrypt* data, only *one single site* is able to *decrypt* the data. This is because private keys, which are used for decryption, are never (intentionally) distributed between systems. Therefore, public-key encryption *is more secure* (but also more restrictive) than passphrase-based encryption.

However, if you wish to create local backups which *do not leave* the encryption site, public-key encryption is relatively easy to implement.

For further details, refer to the chapter “Implementing the Encryption Facility for z/VSE” in the *z/VSE Administration*, SC33-8304.

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## Support for DB2 Version 7 Release 5

The DB2 Server for VSE Version 7 Release 5 is shipped on the z/VSE Extended Base Tape.

The installation and Fast Service Upgrade (FSU) *Program Development dialogs* establish Version 7 Release 5 of the DB2 Server for VSE. This includes support for the *DB2 Client Edition for VSE* (which is also shipped on the z/VSE Extended Base Tape).

For details, refer to the relevant DB2 documentation.

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## Encryption-Related Updates to the z/VSE Administration Manual

The *z/VSE Administration* contains important new information concerning hardware-based tape encryption. This information covers:

- The overview of hardware-based tape encryption,
- Using a job to backup data with encryption,
- Using a POFFLOAD command to backup data with encryption,
- Specifying KEKL statements,
- Understanding the message 0P68I KEYXCHG ER.

For details, refer to the chapter “Implementing Hardware-Based Tape Encryption” in the *z/VSE Administration*, SC33-8304.

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## Tape Encryption Using VSE/POWER Commands

- Using the VSE/POWER 8.1 support for *hardware-based tape encryption*, you can:
  - store/encrypt spool entries to tape using the POFFLOAD BACKUP|SAVE|PICKUP command
  - retrieve the stored entries using the POFFLOAD LOAD|SELECT command
  - display the queue entries residing on the encrypted tapes using the PDISPLAY command
  - read data from encrypted tapes using the PSTART command.
- To ensure that the POFFLOAD encryption parameters are consistent with those used with LIBR, FCOPY, and VSAM Backup jobs, the parameter *density* has been renamed to *mode*.
- The PGO command has been extended to include the encryption-related keywords KEKL1, KEM1, KEKL2 and KEM2.

For details of these enhanced commands, refer to the chapter “VSE/POWER Operator Commands” of the *VSE/POWER Administration and Operation*, SC33-8314.

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## Language Environment Enhancements

The enhancements and changes available with LE/VSE Version 1 Release 4 Modification Level 5 that is *shipped with z/VSE 4.1.1* are described in the *LE/VSE Programming Guide, SC33-6684*:

- The syntax diagram for run-time option USRHDLR has changed. For details, refer to the chapter “Coding a User-Written Condition Handler”.
- The descriptions of the VER, REL, and MOD parameters of the CEEPPA macro have changed. For details, refer to the chapter “Assembler Considerations”.

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## Restructuring of the z/VSE Administration Manual

To improve usability, the *z/VSE Administration* has been restructured into these five Parts, each with its own table-of-contents:

- System Customization
- Files and Tapes
- BSM Security
- Encryption
- Miscellaneous

In addition:

- The “BSM Security” part contains more chapters than in the previous edition of this manual, since some chapters have been split into smaller, more “task-oriented” chapters. Furthermore, restructuring has taken place between existing chapters.
- A roadmap has been provided which should help you to set up and configure your BSM-based security.
- The “Encryption” part contains these chapters that have been moved from the *z/VSE e-business Connectors User’s Guide*:
  - Setting up for SSL
  - Configuring for Server Authentication
  - Configuring for Client Authentication
  - Implementing Client Authentication with VSE User-ID Mapping

For details, refer to the *z/VSE Administration, SC33-8304*.

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## Restructuring of the z/VSE e-business Connectors User’s Guide Manual

With z/VSE 4.1.1, the *z/VSE e-business Connectors User’s Guide* has been restructured as follows:

- These chapters have been moved to a new “Encryption” part of the *z/VSE Administration, SC33-8304*:
  - Preparing Your System to Use SSL
  - Configuring for Server Authentication
  - Configuring for Client Authentication
  - Implementing Client Authentication with VSE User-ID Mapping
- In addition, the description of the 3-tier environment has been updated to reflect “logical” 3-tier environments.

For details of these enhancements, refer to the *z/VSE e-business Connectors User’s Guide, SC33-8310*.

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IBM z/VSE  
Release Guide  
Version 4 Release 1 Modification Level 1

Publication No. SC33-8300-01

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