

IBM z/VSE



Release Guide

Version 3 Release 1 Modification Level 1

IBM z/VSE



Release Guide

Version 3 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.

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This edition applies to Version 3 Release 1 Modification Level 1 of IBM z/Virtual Storage Extended (z/VSE), Program Number 5609-ZVS, and to all subsequent releases and modifications until otherwise indicated in new editions.

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About This Book

z/VSE is the successor to IBM's VSE/ESA product. Many products and functions supported on z/VSE may continue to use VSE/ESA in their names.

z/VSE can execute in 31-bit mode only. It does not implement z/Architecture, and specifically does not implement 64-bit mode capabilities.

z/VSE is designed to exploit select features of IBM eServer zSeries hardware.

This manual provides details of the enhancements and changes implemented with IBM z/VSE Version 3, Release 1, Modification Level 1 (z/VSE 3.1.1).

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 3 Release 1 Modification Level 1.

How to Use This Book

The book contains one chapter:

- "What Is New With z/VSE 3.1.1?," on page 1

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/>

What Is New With z/VSE 3.1.1?

This chapter provides a brief description of the items and changes introduced with z/VSE 3.1.1, in these sections:

- “Support for the IBM System z9 109 Mainframe”
- “Support for NPIV”
- “Security Enhancements” on page 2
- “Support for the IBM TotalStorage 3584 UltraScalable Tape Library” on page 2
- “Support for the IBM TotalStorage 3592 Model E05 Tape Drive” on page 3
- “Support for Preferred Paths to SCSI Disks” on page 3
- “VSE/POWER Enhancements” on page 4

Support for the IBM System z9 109 Mainframe

The **IBM System z9 109** (abbreviated to **z9-109**) delivers excellence in large-scale enterprise computing, and is designed and optimized for On Demand Business.

IBM mainframes provide an advanced combination of reliability, availability, security, scalability, and virtualization, together with the ability to reallocate processing power designed to match changing business priorities on demand. The z9-109 additionally focuses on providing higher availability and reducing planned and unplanned outages. The z9-109 achieves this by:

- Providing improved non-disruptive replace, repair, and upgrade functions for memory, books, and I/O.
- Extending the non-disruptive capability to cover the downloading of Licensed Internal Code upgrades.

The z9-109 is designed to provide:

- Improved system performance over the z990.
- Improved availability.
- Support for up to 60 LPARs, which is fully supported by z/VSE 3.1.1.
- N_Port ID Virtualization, which is fully supported by z/VSE 3.1.1.
- OSA-Express2 1000BASE-T Ethernet, which is fully supported by z/VSE 3.1.1.
- OSA-Express2 OSN (OSA for NCP), which is fully supported by z/VSE 3.1.1.

Support for NPIV

The z9-109 allows access to shared SCSI disks using one FCP adapter. This is achieved by assigning a virtual WWPN to each FCP subchannel of an FCP CHPID. z/VSE V3R1.1 exploits this new functionality.

For details of where NPIV can be used, refer to the chapter “Configuring Your System to Use SCSI Disks” in the *z/VSE Administration*, SC33-8224.

Security Enhancements

The Basic Security Manager (BSM) now provides additional security by using the *BSM control file*. Using the BSM control file (VSE.BSTCNTL.FILE) and its administrative support, the BSM provides:

- CICS resource security for:
 - Application programs, using the MCICSPPT resource class.
 - Files, using the FCICSFCT resource class.
 - Journals, using the JCICSJCT resource class.
 - Temporary storage queues, using the SCICSTST resource class.
 - Transient data queues, using the DCICSDCT resource class.
 - Transactions that were initiated by the CICS START command, using the ACICSPCT resource class.
- Application security, using the APPL resource class.
- Facility security, using the FACILITY resource class.

The BSM control file can be used instead of file DTSECTXN for controlling access to CICS transactions. Migration programs are provided for you to migrate your security-related transaction data.

Note: The installation of z/VSE V3R1.1 will *not* provide any initial setup for the above CICS resource, application, and facility security. You can either migrate your security data from earlier releases of VSE, or you can manually create the security data for the above resources and entities.

In addition, the use of the IESIRCVT program to set a limit for invalid sign-on attempts has been replaced by the use of the BSTADMIN PERFORM PASSWORD command.

For details of all the above enhancements, refer to the manual *z/VSE Administration*, SC33-8224.

Support for the IBM TotalStorage 3584 UltraScalable Tape Library

The IBM TotalStorage 3584 UltraScalable Tape Library is designed to offer high performance, availability, reliability, mixed media, and on-demand storage capacity.

The *zSeries Attach for the 3584 (ELC)* program makes use of the 3584 Tape Library's support of the 3592 Tape Drive Model J1A. The ELC program provides attachment to the zSeries enterprise environment for the 3584 Tape Library. This zSeries-attachment is achieved by using the existing 3494 Library Manager to generate *SCSI Medium Changer* commands to drive the 3584.

The ELC program uses an IBM TotalStorage VTS (Virtual Tape Server) to provide an interface between the 3584 Tape Library and:

- zSeries hosts.
- Open Systems hosts.

In Open system environments, you can use in the same 3584 Tape Library:

- IBM TotalStorage LTO (Linear Tape-Open) Tape sub-systems.
- IBM TotalStorage 3592 Tape Drive Model J1A.

For details of the support for the 3584 Tape Library, refer to the chapter "Implementing 3494 or 3584 Tape Library Support" in the manual *z/VSE Administration*, SC33-8224.

Support for the IBM TotalStorage 3592 Model E05 Tape Drive

The IBM TotalStorage 3592 Enterprise Tape Drive E05 is designed to address the needs of applications for high capacity, fast access to data, and/or long term data retention.

The 3592 E05 offers these cartridges:

- 60 GB
- 300 GB (up to 900 GB with 3:1 compression)
- GB storage that exceeds the above. For details of these latest cartridges, refer to the relevant hardware specifications.

The above cartridge types are available in rewritable or WORM (Write Once Read Many) formats. WORM cartridges are designed to provide non-alterable, non-rewritable tape media for long-term records retention.

In addition to being used in standalone mode, a 3592 E05 tape drive can also be attached to an *IBM TotalStorage Enterprise Automated Tape Library 3494*. The 3592 E05 tape drive requires cartridges which are written in 512-track or 896-track formats.

For details of the support for the 3592 Enterprise Tape Drive E05, refer to the chapter “Hardware Support” in the manual *z/VSE Planning*, SC33-8221.

Support for Preferred Paths to SCSI Disks

Multipathing means that one or more alternate connection paths exist to a SCSI disk. It is used to increase the availability of a SCSI disk.

To implement multipathing, the FCP devices used to access a SCSI disk (LUN) must be on *different* physical FCP adapters (CHPIDs). If one connection path is no longer available due to an outage of an FCP adapter, the alternate connection path is used.

An FCP card can contain more than one physical FCP adapters (CHPIDs). Because maintenance activities might affect all physical FCP adapters (CHPIDs) contained on one FCP card, you might wish to use CHPIDs belonging to *different* FCP cards in your multipathing configuration. If you also wish to protect against the possible outage of a port, you can define an alternate connection path via a different port.

The configuration program of a disk controller might also allow you to define *preferred* and *non-preferred* paths. A QUERY SCSI command might then display this type of information:

AR 0015	FBA-CUU	FCP-CUU	WORLDWIDE	PORTNAME	LOGICAL UNIT NUMBER	PORT-STATUS
AR 0015	DA1	FA0	5005076300CA9A76		5600000000000000	PREFERRED
AR 0015	DA1MP	FB0	5005076300C29A76		5600000000000000	NON-PREF

For details of the support for preferred paths, refer to the chapter “Configuring Your System to Use SCSI Disks” in the manual *z/VSE Administration*, SC33-8224.

VSE/POWER Enhancements

The enhancements described below are included in z/VSE 3.1.1. They were also made available via z/VSE APARs.

Display of PAGES (Instead of LINES) in the XMT Queue Display

This enhancement was first made available with **APAR DY46322**. Previously, for LST entries in the display of the XMT queue, VSE/POWER displayed the “number of lines” in the “LINES” column. The “number of pages” were only displayed using the field “P=nn.nn” if this was requested by the user (using the `PDISPLAY... ,FULL=YES` command).

With the implementation of this APAR and the resulting enhanced `PDISPLAY` operand, `XMTL=PG` now causes the “number of pages” for XMT list entries to appear in the original LINES column. The original LINES column now has the header “PG/CD” (which is an abbreviation for PAGES/CARDS). For details, refer to the chapter “VSE/POWER Operator Commands” in the manual *VSE/POWER Administration and Operation*, SC33-8247.

Manipulation of the Job Disposition of Executing Jobs

This enhancement was first made available with **APAR DY46323**. Previously, when long-running jobs in the RDR queue were replaced by a newer version, the currently-executing (`DISP=*`) job could not be altered to `DISP=D`. By changing the disposition to `DISP=D`, the job would have been removed from the system at the end-of-job.

With implementation of this APAR, the `PDISPLAY... ,FULL=YES` command presents the original disposition with `ORGDP=D` or `ORGDP=K`. For a running job the original disposition must be either “D” or “K”. The operator can then use the `PALTER RDR,jobname...` command (further qualified by the jobnumber or `CQNUM`) to change the original disposition to the other dispatchable disposition (either “K” or “D”). For details, refer to the chapter “VSE/POWER Operator Commands” in the manual *VSE/POWER Administration and Operation*, SC33-8247.

Specification of Dynamic Partition Default-Output Class

This enhancement was first made available with **APAR DY46324**. Previously, if the `*$$LST/PUN` statement did not specify the `CLASS=` operand, the default output-class for jobs executing in dynamic partitions became the job execution class itself. This was providing the `SET DYNOUTCL=DYNCL` autostart statement has been activated.

With implementation of this APAR, an additional `SET DYNOUTc=outclass` statement allows you to specify a dynamic execution class. In this statement, the variable `c` is any default job output class (`outclass`) with the values A-Z, and 0-9. For details, refer to the chapter “VSE/POWER Autostart Statements” in the manual *VSE/POWER Administration and Operation*, SC33-8247.

Display of Queue-Entry Creation Time

This enhancement was first made available with **APAR DY46246**. Previously,

Before this enhancement, the `PDISPLAY... ,FULL=YES` option allowed you to display the creation date (`D=mm/dd/yyyy`) of a queue entry in the various queues. However, the creation time was only shown by the `PXIMSTRT` field of a fixed-format “spool access CTL-display” request.

With implementation of this APAR, the `FULL=YES` display also shows the creation time, with `T=hh:mm:ss` following `QNUM=nnnnn`. in the 3rd line. For details, refer to the chapter “VSE/POWER Operator Commands” in the manual *VSE/POWER Administration and Operation, SC33-8247*.

Scheduling of Reader Jobs Relative to Read-In Time

This enhancement was first made available with **APAR DY46246**. Previously, the scheduling of VSE/POWER jobs specifying `DUETIME=hhmm` occurred at a specified absolute time. This was either today, or on a following day (if you used the `DUEDATE` and `DUEMONTH` operands).

With implementation of this APAR, a new operand value `DUETIME=+hhmm` (or `+hmm`) allows the scheduling to occur at a time relative to the read-in time (that is, relative to today). Note that the `DUEDATE` and `DUEMONTH` operands can therefore not be used. For details, refer to the chapter “JECL Statements” in the manual *VSE/POWER Administration and Operation, SC33-8247*.

Optional Specification of Punch Output `DISP=I`

This enhancement was first made available with **APAR DY46367**. Previously, you had the possibility of specifying job-execution options for the reader (such as class and priority) for those jobs that were created via the `*$$PUN DISP=I` facility. However, you could not specify the `DISP` option, which was assumed to be `DISP=D`. This was sometimes a problem, for example when the new RDR job disappeared following its execution, or when the parent job has cancelled due to an error but the newly-created job continued executing.

With implementation of this APAR, the new operand `EDISP` for the `*$$PUN` statement allows you to specify any of the dispositions `D|H|K|L` for a `DISP=I` punch output. For details, refer to the chapter “JECL Statements” in the manual *VSE/POWER Administration and Operation, SC33-8247*.

Sequencing on Tape of `POFFLOAD` Tape Entries

This enhancement was first made available with **APAR DY46361**. Previously, the `POFFLOAD` journal `$OFJnnnn` logically itemized tape entries by `qnnnnnn`, where “q” was the Queue-ID (`R|L|P|X`) and `nnnnnn` was the sequence number. However, there was no physical link to the actual entries on the tape.

With implementation of this APAR, the itemization is also recorded on the tape. You can display it using the command `PDISPLAY... ,TAPE=uu,OUT=`. The keywords you use are `OFNUM=` and `$OFJ=`. For details, refer to the chapter “VSE/POWER Operator Commands” in the manual *VSE/POWER Administration and Operation, SC33-8247*.

Trailing-Blank Truncation Suppressed for Received `PNET` Entries

This enhancement was first made available with **APAR DY46375**. Previously, spooling job/output entries that were received from another NJE system node might contain records with “important” trailing blanks. Using the `BTRNC=NO` operand of the `JECL` statement, you were able to suppress the blank-truncation of

spool entries in VSE/POWER at entry-creation time. However, if the spool entry was received by VSE/POWER PNET from a non-VSE/POWER NJE system, blank truncation still took place.

With implementation of this APAR, two new features are provided:

- VSE/POWER entries that have the BTRNC=NO option will *not* be truncated, even if they are transmitted to another VSE/POWER system with the proper APAR correction.
- Spool entries will *not* be blank-truncated that are either:
 - Received by PNET started with the command PSTART PNET;node-id,...,BTRNC=NO.
 - Received on a VSE/POWER system that was started with the SET NETBTRCN=NO startup statement.

For details, refer to the chapter “Operating with VSE/POWER” in the manual *VSE/POWER Administration and Operation*, SC33-8247.

Spool-Entry Display Sorted by Creation-Date and Time

This enhancement was first made available with APAR DY46375. Previously, the standard PDISPLAY of spool output was sorted by class, disposition and priority.

With implementation of this APAR, the PDISPLAY RDR/LST/PUN/XMT command now accepts the keyword operands SORT=NEW|OLD,LIMIT=nnn|[16]. This results in a queue display that is sorted by the creation data and time in descending sequence, with the most recent on top, or in ascending order with the oldest on top. The optional LIMIT= operand specifies the maximum number of queue entry lines to be displayed. This permits the easy identification of outdated entries, or the time-sorted output of repeated job executions. For details, refer to the chapter “VSE/POWER Operator Commands” in the manual *VSE/POWER Administration and Operation*, SC33-8247.

Internal Access to Active VSE/POWER Job Class

This enhancement was first made available with APAR DY46423. Previously, the GETFLD FIELD=POWJOB macro could only be used to access the attributes of jobs that are currently running via the DSECT MAPPOWJB. For example: label PJBPNNAME provides the job name, and label PJBPNUM provides the job number.

With implementation of this APAR, support has been added for the job class at offset X'1E' (that is, PJBPNUM+2). For details, refer to the chapter “Dynamic Access to VSE/POWER Job Attributes” in the manual *VSE/POWER Application Programming*, SC33-8248.

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