

User's Guide and Reference for IBM z/VSE® Remote Access Programs

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IBM Z Dallas ISV Center, Dallas

Dallas, TX

USA

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Preface

This document is intended to assist the user in accessing and using the z/VSE Remote Development Program system. It covers all supported versions of z/VSE.

Comments on this document may be sent via email to: etpadmin@us.ibm.com

For Technical Support on a system running at the IBM Z Dallas ISV Center complex, please send an email to ztech@us.ibm.com with the name of your z/VSE system you are encountering the problem on along with a complete description of the problem.

Overview of the Remote Access Environment

The remote access environment is provided by the IBM Z Dallas ISV Center organization in conjunction with various IBM development laboratories. z/VSE is an operating system from IBM which runs on z Systems® server hardware.

Hardware and Software Platform

The remote access program is implemented on an IBM z Systems server which is accessible to Solution Developers participating in the Remote Development Program (RDP) via the INTERNET. The z Systems server runs the IBM z/VM® (Virtual Machine) operating system which supports multiple guest systems, each capable of supporting multiple users in a unique environment. Each remote access participant is provided with a dedicated z/VSE guest system, which appears to the user as a z Systems LPAR running a native z/VSE operating system.

Introduction to the Virtual Machine Concept

Virtual Machine (VM or z/VM) is a software facility that allows a physical processor in a complex to be configured with secured multiple "virtual" operating system processors or machines, the physical processor itself is also known as a 'HIPERVISOR'. Each virtual machine, also known as a guest, runs independently and secured from every other virtual machine. z/VM can run any z Systems operating system software (z/OS, z/VSE, z/VM, Linux on z Systems, CMS, etc.) and their supported software. Please refer to the IBM Redbook

Introduction to the New Mainframe: z/VM Basics SG247316

<http://www.redbooks.ibm.com/redbooks/pdfs/sg247316.pdf>

System Availability

The remote access program, also known as the Remote Development Program (RDP), host systems are generally available 24 hours per day, 7 days per week except for scheduled maintenance windows. Technical and administrative support is available from 07:00 to 19:00 US Central time Monday through Friday only.

Maintenance Window

The IBM Z Dallas ISV Center, Dallas has implemented the following policy regarding maintenance windows:

- Every Sunday between the hours of 09:30 and 15:30 US Central time the IBM Z Dallas ISV Center may choose to make any of the processors unavailable. This time will be used to perform system Initial Program Loads (IPL's) and to implement new or updated releases of software. All Solution Developers requiring an orderly guest z/VSE system shutdown should perform the shutdown prior to that time and should not plan to resume operation until after 15:30 US Central time on Sunday.
- A maintenance window will not be required every Sunday therefore, Solution Developers may choose to work during this time but only at their own risk. Notices will be posted whenever possible (via host system broadcast messages) but all activity during this window is subject to immediate interruption.
- Solution Developers with special requirements for this time period, should contact the IBM Z Dallas ISV Center as early as possible.

Remote Access System Backup

The z/VM host disks that contain the remote access system are backed up to tape every week and are available for 3 months. The intent of these backups is to enable us to recover from a DASD failure. The backup and restore process operates only at the z/VM host disk level, therefore the restoration of individual files from these backups is difficult and time-consuming and not generally available.

To obtain details of the backups for the remote access system, or to change the frequency of the backups, please contact the IBM Z Dallas ISV Center.

Technical Support

Technical Support is provided via e-mail. Hours of attended operation are 07:00 to 19:00 US Central time Monday through Friday except IBM USA holidays. Emails received after hours, on weekends, or on holidays will be processed the next business day. If you require technical support, please follow the instructions shown at URL <http://dtsc.dfw.ibm.com/contact.html>

Accessing the IBM Z Dallas ISV Center Secure Portal Server

Before utilizing the guest z/VSE system, Solution Developers must first follow the steps below to access the IBM Z Dallas ISV Center Secure Portal server (e.g., SVSCDR2) and initialize (IPL) the guest z/VSE system. Access to the IBM z Systems server requires access to the Internet. The method, line speed, and choice of Internet Service Provider are determined by the Solution Developer.

First, a word about user z/VM IDs...

Although ALL systems which run on a z/VM environment are known as z/VM Guests, we will use these two definitions of two different IDs to describe their use in this document:

- **Guest system ID** - z/VM ID which runs the z/VSE operating system and is also known as the **Guest z/VSE System ID**.
- **z/VM Personal user ID** - z/VM user ID used by an individual as a unique z/VM ID for security verification when accessing the z/VSE virtual machine, via the DIAL command and is also used for the Initial Program Load (IPL) of your Guest z/VSE System ID.

All Solution Developers have been provided with a Guest z/VSE System ID and one or more z/VM Personal user ID. In this guide, we refer to the **Guest z/VSE System ID** as **ETPGSy** and the **z/VM Personal user ID** as **ETPDxxx**.

If not previously supplied with passwords for the z/VM Personal user IDs, contact the IBM Z Dallas ISV Center and request to have the z/VM Personal user IDs RESUMED and an initial password set.

Figure 1 User IDs

Second, a word about TN3270 emulators...

- Consult the TN3270 emulator documentation to determine the appropriate key sequences required for the ENTER, PA2, F12 and CLEAR keys.
- The TN3270 emulator must be SSL capable.

Figure 2 TN3270 emulators

NOTE: IBM Corporation has taken steps to enhance the security of the internet connections to the IBM Z Dallas ISV Center remote access systems, by blocking various ports from "INBOUND" traffic. Information about the blocked ports can be found on the IBM Z Dallas ISV Center website at URL:

['http://dtsc.dfw.ibm.com/MVSDS/HTTPD2.DSN01.PUBLIC.HTML\(BLKPORTS\)'](http://dtsc.dfw.ibm.com/MVSDS/HTTPD2.DSN01.PUBLIC.HTML(BLKPORTS))

To access the IBM Z Dallas ISV Center Portal server, an Internet connection must first be established. Once that is established, perform the following steps:

Step 1. Direct an SSL enabled TN3270 connection to the IBM Z Dallas ISV Center Secure Portal at IP address **198.81.193.6 using port 23**.

For more site information, direct your browser to: <http://dtsc.dfw.ibm.com/>

Step 2. Once the connection is set up, the IBM Z Dallas ISV Center Portal server screen (Figure 3) will be displayed. Choose the system identified in the delivery email by entering in the system name and depressing ENTER.

Figure 3 Remote Access System SSL Portal example

```
=====
=====
===
===  ==WELCOME==TO  THE=====
===  IBM INNOVATION CENTER ==DALLAS==  ==
===
=====
=====
                                z/OS TCPIP Telnet
                                for Help follow directions on web page:
                                http://dtsc.dfw.ibm.com/contact.html

IBM's internal systems must only be used for conducting
IBM's business or for purposes authorized by IBM
management.
Use is subject to audit at any time by IBM management.

Choose from the following commands:
DR2   - Logon SVSCDR2
SY3   - Logon SVSCSY3
SY7   - Logon SVSCSY7

dr2
MA  A  24/005
```

Step 3. The next screen (Figure 4) displayed will be the IBM Z Dallas ISV Center, Dallas system LOGO screen, indicating that the IBM Z Dallas ISV Center Dallas z Systems server, that your z/VSE Guest System ID is running, has been reached.

Figure 4 Dallas System LOGO screen

```
z/VM ONLINE

=====
=====
===
===  ==WELCOME==TO  THE=====
===  IBM INNOVATION CENTER ==DALLAS==  ==
===
=====
=====
                                for HELP follow directions on web page:
                                http://dtsc.dfw.ibm.com/contact.html

IBM'S internal systems must only be used for conducting IBM'S
business or for purposes authorized by IBM management.
Use is subject to audit at any time by IBM management.

Fill in your USERID and PASSWORD and press ENTER
(Your password will not appear when you type it)
USERID  ==>
PASSWORD ==>

COMMAND  ==> LOGON ETPGSyy by ETPDxxx

Running  SVSCDR2
MA  A  42/040
```

IPL the z/VSE Guest System

There are two ways to IPL your z/VSE Guest system.

- a) You can logon to your z/VSE guest by using the “LOGON BY” process which allows you to use your personal user id to logon to the z/VSE guest (See “**IPL Using the Logon by Process**”)
- b) You can logon to your z/VM personal user id (See “IPL Using the SVXLOG Process”) and type:

SVXLOG YourGuestzVSESystem.

IPL Using the Logon by Process

At the command line of the LOGO screen you will type a similar command:

LOGON YourGuestzVSESystem BY YourPersonalUserId

The z/VM personal user id password will be expired on first use or any time after it has been reset by an IBM Z Dallas ISV Center support personnel. The system will prompt you to change your z/VM personal user id password. Using the previously stated z/VSE Guest System ID of ETPGSy and the z/VM personal id of ETPDxxx, at the command line we entered: **logon etpgsy by etpdxxx** then **depressed enter** to receive the following prompt:

**LOGON ETPGSy by ETPDxxx RPIMGR042I PASSWORD EXPIRED
To change your password - enter: nnn/nnn where nnn = new password
or, enter LOGOFF to cancel**

Enter a new password in the format of *new password/new password* and depress ENTER.

The text you type will not be visible to help assure the privacy of the z/VM Personal user ID password.

PASSWORD RULES. The PASSWORD MUST:

- Be eight characters in length
- Only contain alphabetic, numeric and national characters i.e., \$ # and @
- Contain at least one alphabetic and one non-alphabetic character
- Have the first and last characters be non-numeric
- Contain no more than three identical consecutive characters in any position from the previous password
- Contain no more than two identical consecutive characters
- Not contain the user id as part of the password
- Not be reused until after at least eight iterations

System “log messages” with information of general interest, are broadcast to all users on the system.

Be sure to review the broadcast messages for important notices regarding scheduled outages.

If you see “**VM READ**”, at the bottom right corner of your screen, **DEPRESS ENTER**

If you see “**MORE**” or “**Holding**” at the bottom right corner of your screen, clear your screen by depressing the appropriate **CLEAR** or **PA2** key or key sequence to continue.

**Note: The ENTER, CLEAR, and PA2 keys are part of the IBM 3270 terminal architecture.
Refer to your TN3270 emulator's documentation for information on these keys.**

Some systems will automatically IPL and the newer system require you to either depress PF12 when logging on to your Guest z/VSE system to IPL your system.

IPL of the z/VSE system will be successful when the screen shows the z/VSE console.

Figure 5 z/VSE Console messages

```
SYSTEM: z/VSE z/VSE 6.1 TURBO (01) USER: SYS
VM USER ID:ZVS61GA TIME: 12:58:58
F2 0163 DFHAI0101I DBDCCICS AITM initialization has started.
F2 0163 DFHTD0100I DBDCCICS Transient Data initialization has started.
F2 0163 DFHFC0100I DBDCCICS File Control initialization has started.
F2 0163 DFHFC0101I DBDCCICS File Control initialization has ended.
F2 0163 DFHTD0101I DBDCCICS Transient Data initialization has ended.
F2 0163 DFHTS0101I DBDCCICS Temporary Storage initialization has ended.
F2 0163 DFHCP0102I DBDCCICS CPI initialization has ended.
F2 0163 DFHPR0105I DBDCCICS Partner resource manager initialization has ended.
F2 0163 DFHAI0102I DBDCCICS AITM initialization has ended.
F2 0163 DFHSI1511I DBDCCICS Installing group list VSELIST.
F2 0163 DFHAP1203I DBDCCICS Language Environment for VSE/ESA is being
initialized.
F2 0163 CEE3550I LE/VSE C/VSE Run-Time Initialized
F2 0163 CEE3551I LE/VSE COBOL Run-Time Initialized
F2 0163 CEE3552I LE/VSE PL/I Run-Time Initialized
F2 0163 DFHWP1007 DBDCCICS Initializing CICS Web environment.
F2 0163 DFHWP1008 DBDCCICS CICS Web environment initialization is complete.
F2 0163 DFHSI8430I DBDCCICS About to link to PLT programs during the third
stage of initialization.
F2 0165 K002I BEGIN ICCF INITIALIZATION
F2 0165 K042I VSE ACCESS CONTROL NOT ACTIVE, VSE/ICCF ACCESS CONTROL ACTIVE
F2 0165 K481I DYNAMIC FILE SPACE INITIALIZATION BYPASSED
F2 0165 K001I DEVICE TYPE IS ECKD
F2 0165 K088I HI FILE RECORDS= 665,852 (76%)
F2 0163 K029I ICCF INITIALIZATION COMPLETED
F2 0163 IESC1055I ABOUT TO START SERVER TASK
F2 0163 DFHSI8434I DBDCCICS Control returned from PLT programs during the
third stage of initialization.
F2 0163 DFHSI1517 DBDCCICS Control is being given to CICS.
F2 0163 IESC1057I SERVER TASK HAS BEEN STARTED
F2 0163 DFHFC0208I DBDCCICS
LSR pool 1 is being built dynamically by CICS because the following
are not defined: 'CI SIZE' 'STRINGS' 'MAXKEYLENGTH'. A delay
is possible.

==>
1=HLP 2=CPY 3=END 4=RTN 5=DEL 6=DELS 7=RED 8=CONT 9=EXPL 10=HLD 11=PCUU 12=RTRV
ACT_MSG: HOLDRUN PAUSE: 01 SCROLL: 1 MODE: CONSOLE
M A 39/006
```

If you receive a similar message which follows:

```
BG 0000 DPD VOLID=DOSRES,CYL=398,NCYL=36,TYPE=N,DSF=N BG 0000 0I37D
PDS EXT 01 ON 123: OVERLAP ON UNEXPIRED FILE BG-0000
DOS.PAGING.FILE.FF0178E02097
```

Enter "**0 delete**" to continue the IPL.

Once you have IPLd the Guest z/VSE system the CICS Transaction Server, VTAM, and VSE/POWER will start automatically.

If you wish to use TCP/IP, use '**R RDR,TCPIP00**' from the z/VSE system console.

Figure 7: Logon Using SVXLOG Process screen 2

```
svxlog etpgsyy                                     Running  SVSCDR2
MA A                                                                 42/015
```

Figure 8: Logon Using SVXLOG Process screen 3

```
ICH70001I ZVS61GA  LAST ACCESS AT 07:56:12 ON MONDAY, AUGUST 8, 2016
Command accepted
Ready;
AUTO LOGON ***          ZVS61GA  USERS = 183
HPCPLS6056I XAUTOLOG information for ZVS61GA: The IPL command is verified by the
IPL command processor.
HPCPCFX6768I SECUSER of ZVS61GA initiated for you by ZVS61GA.
ZVS61GA : *****
ZVS61GA :
ZVS61GA :          Secondary Userid set to:  VSEMAINT
ZVS61GA :
ZVS61GA : *****
ZVS61GA :          ** ***** **
ZVS61GA :          ** The z/VSE IPL address is          : 123 **
ZVS61GA :          **
ZVS61GA :          ** The z/VSE Default LOADPARM value is: NONE **
ZVS61GA :          **
ZVS61GA :          ** ***** **
ZVS61GA :          *****
ZVS61GA :          **      .... IPL proceeding .... **
ZVS61GA :          ** Clear the screen when MORE or HOLDING **
ZVS61GA :          ** appears in the lower right-hand corner **
ZVS61GA :          ** of your screen. **
ZVS61GA :          *****
ZVS61GA : *****
ZVS61GA :          Using Load Command:  CP IPL 123
ZVS61GA :
ZVS61GA : *****
ZVS61GA : *****

Running  SVSCDR2
MA A                                                                 42/001
```

To send commands to your Guest z/VM System console, prefix your commands with:

CP SEND z/VM_Guest_System \cp vinput vmsg

To Start TCP/IP for z/VSE: **CP SEND ETPGsyy \cp vinput vmsg R RDR,TCPIP00**

To display active partitions: **CP SEND ETPGsyy \cp vinput vmsg D A**

To send CP commands to the z/VM Guest System, prefix your commands with:

CP SEND z/VM_Guest_System \cp vinput vmsg * cp

Example to request a tape mount:

cp send etpgsyy \cp vinput vmsg * cp msg svutil mount etp001 on 5A0 R/W 3590H

Logging on to your Guest z/VSE System

The following sections describe using the z/VM DIAL, via the IBM Z Dallas ISV Center Secure portal, command and a TN3720 client session to connect directly to an IP address via the INTERNET or Dallas VPN, for accessing applications through a full screen interface. The sections continue by describing TELNET for accessing applications through a line mode interface.

For Early Test Program (ETP) systems, users are required to **DIAL** to the individual Guest z/VSE System ID to interact with applications such as CICS running on that guest z/VSE system.

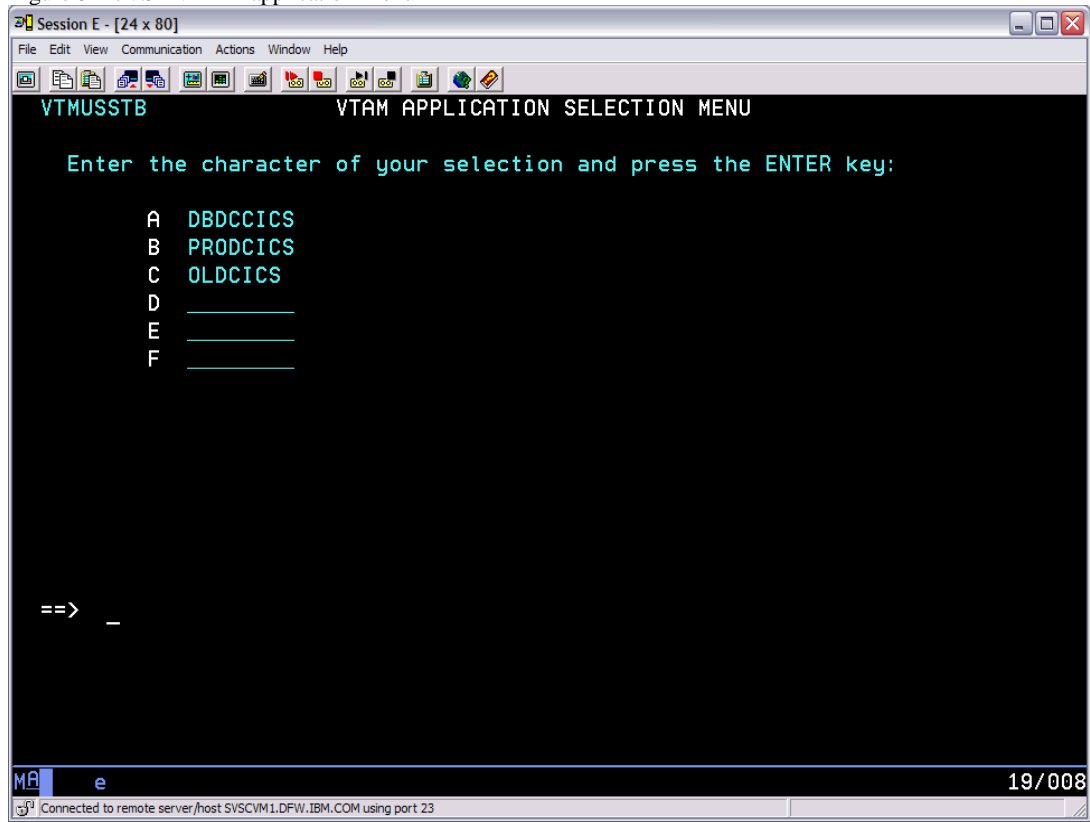
Accessing your Guest z/VSE System using z/VM DIAL

1. Connect to the IBM Z Dallas ISV Center Secure Portal, as instructed in “**How to access the IBM Z Dallas ISV Center z Systems server**” on page 4.
2. Select the z Systems server on which the guest z/VSE system was started (See Error: Reference source not found on page Error: Reference source not found).
3. Connect using the DIAL command as described below:
 - a) Enter the z/VM **DIAL** command on the COMMAND line of the Z SystemsSVSCDR2 LOGO screen specifying the name of the guest z/VSE system ID. The system will automatically connect the terminal to the first available VTAM terminal in the guest z/VSE system. For example, to DIAL to system name ETPGSyy, type the following command:

DIAL ETPGSyy

Note: **D** may be used as an abbreviation for the DIAL command. See Error: Reference source not found below

Figure 8 - z/VSE VTAM application Menu



Accessing your Guest z/VSE System directly using a TN3270 Client and your allocated IP Address

Refer to the system delivery email to obtain the assigned TCPIP address. If the assigned IP address requires the use of Client VPN, please refer to the system delivery email for instructions for downloading the Cisco VPN Client software and using it to log into the VPN.

Configure a TN3270 client session using the assigned IP address and port **23**. Do Not configure or enable SSL support for this session. Once the session is configured, select the option to connect to the system.

Once connected, select 'DBDCCICS' from the VTAM Application Selection Menu to logon to VSE. See Error: Reference source not found above.

System Operation

The following user names are delivered with the z/VSE system:

USER NAME and Description	PASSWORD
SYSA (System administrator)	SYS1
SYSB (Backup administrator)	SYSB
SVSC (Backup administrator)	SYSC
PROG (default programmer)	PROG
OPER (default operator)	OPER

Table 8.1: z/VSE system user names

PLEASE RESET PASSWORDS after logging on your system.

New users may be added using the path “Resource Definition” – “User Interface Tailoring” – “Maintain User Profiles” (fastpath 211) from the z/VSE main selection menu.

Using the z/VSE VM Interface

There will be a time when you will need to access some IBM z Systems Server z/VM utilities and commands.

How to make these requests on how you logged on to the z/VM server.

If you logged as the z/VSE system guest, to interact with the IBM z Systems server your z/VSE Guest system is running on, from the z/VSE console, prefix your commands with “* CP”.

For example, the following command will provide a list of tapes assigned to your system when executed from your z/VSE Guest System Console:

*** cp msg svutil listtapes**

If you do not currently have any tapes for use, you will receive the following response from z Systems server when the z/VSE console is cleared:

SVUTIL: No tapes found in Tape Inventory for ETPGSxx

If you logged on to your z/VM personal user id, to interact with the IBM z Systems server **FOR** your z/VSE Guest system is running on, from the z/VSE console, prefix your commands with:

CP SEND ETPGsyy * cp

For example, the following command will provide a list of tapes assigned to your system when executed from your z/VSE Guest System Console:

CP SEND ETPGsyy * cp msg svutil listtapes

If you do not currently have any tapes for use, you will receive the following response from z Systems server when the z/VSE console is cleared:

SVUTIL: No tapes found in Tape Inventory for ETPGSxx

If you require access to tapes from the z/VSE guest system, contact IBM Z Dallas ISV Center for further instructions.

System Shutdown and Recovery

Although the message reply-prefixes may vary, to provide orderly shutdown of the VSE system from the console follow the process below.

Stop TCPIP

Check to see if TCPIP is running, to Display Active partitions type: **D A**

If TCPIP is running you need to notice which partition it is using.

The default TCPIP partition is: F7

From the z/VSE Guest System console: **MSG F7,data=shutdown**

From your personal user id: **CP SEND z/VM_Guest_System \cp viput vmsg MSG F7,data=shutdown**

Stop CICS/s

Check to see if CICS is running. There may be several CICS regions running on your system, so note the partitions You will need to repeat the following for each CICS partition.

To Display active partitions type: **D A**

From the z/VSE Guest System console: **MSG F2,data='CEMT P SHUT I'**

From your personal user id: **CP SEND z/VM_Guest_System \cp viput vmsg MSG F2,data='CEMT P SHUT I'**

Wait for similar messages for each CICS partition which was running on your system.

F2 0002 DFHKE1799 DBDCCICS TERMINATION OF CICS IS COMPLETE.

F2 0002 EOJ CICSICCF MAX.RETURN CODE=0000
DATE 06/29/2011, CLOCK 08/39/21, DURATION 00/33/00

F2 0001 1Q4DI JOB CICSICCF 30383 FINISHED PROCESSING IN
PARTITION F2

F2 0001 1Q34I F2 WAITING FOR WORK

Stop VTAM

From the z/VSE Guest System console: **z net,quick**

From your personal user id: **CP SEND z/VM_Guest_System \cp viput vmsg z net,quick**

Wait For: ...

F3 0003 IST102I VTAM IS NOW INACTIVE

F3 0003 EOJ VTAMSTRT MAX.RETURN CODE=0000

DATE 03/14/2009, CLOCK 16/34/35, DURATION 20/12/16 F3 0001 1Q34I F3 WAITING
FOR WORK

Stop POWER

From the z/VSE Guest System console: **pend**

From your personal user id: **CP SEND z/VM_Guest_System \cp viput vmsg pend**

Wait For: ...

FB-0011 1C10D PLEASE ASSIGN SYSRDR.

...

F1 0001 EOJ POWSTART MAX.RETURN CODE=0000

DATE 03/14/2009, CLOCK 16/35/35, DURATION 20/13/19 F1-0001 1C10D

PLEASE ASSIGN SYSRDR.

Issue: **0 rod** (clean up logs)

Wait For: BG-0000 1I90D END OF DAY =

Issue: 0 y

Wait For: BG 0000 1I93I RECORDER FILE IS 1% FULL BG 0000 1I82I RECORDING
COMPLETE.

BG-0000

Issue: * **cp logoff** (to log off the z/VSE system)

System Basics

A domain name server has NOT been configured.

Basic Security Manager is in effect.

Documentation and other information may be found from the z/VSE home page,

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

Hardware Configuration

The following devices are defined to the z/VSE system:

Device table z/VSE 6.2.0

ADDRESS	DEVICE	DEVICE TYPE CODE	COMMENT
009	3270CONS	3277	SYSTEM CONS VSE51
00C	3505	3505	VMREADER
00D	3525P	3525P	VM PUNCH
00E	PRT1	PRT1	VM LINE PRINTER
05E	4248	4248	DUMMY PRINTER
0123	3390-E	ECKD	DOSRES VOLUME
0124	3390-E	ECKD	SYSWK1 VOLUME
0125	3390-E	ECKD	SYSWK2 (user)
0126	3390-E	ECKD	VSELPP VOLUME
0127	3390-E	ECKD	SYSWK3 (user)
400	QDIO	OSAX	TCPIP DEVICE
401	QDIO	OSAX	TCPIP DEVICE
402	QDIO	OSAX	TCPIP DEVICE
560	3490E	3490-08	VIRTUAL TAPE
561-565	3592-E05	TPAT896	VM TAPE
570-575	3592-E07	TPA21K	VIRTUAL TAPE
FDF	FBAV	FBAV	VIRTUAL DISK
FEC	DUMMY	3505	VSE/POWER RDR
FEC	DUMMY	2520B2	VSE/POWER PUN
FEE	DUMMY	PRT1	VSE/POWER LST
FEF	DUMMY	PRT1	VSE/POWER LST
FF0-FF9	24X80Q	3277	3270 DIAL
FFA	DUMMY	3505	INTERNAL
FFC	DUMMY	3505	INTERNAL
FFD	DUMMY	2520B2	INTERNAL
FFE	DUMMY	PRT1	INTERNAL
FFF	DUMMY	CONS	INTERNAL
FFA	DUMMY	3505	INTERNAL
FFC	DUMMY	3505	INTERNAL
FFD	DUMMY	2520B2	INTERNAL
FFE	DUMMY	PRT1	INTERNAL
FFF	DUMMY	CONS	INTERNAL
FFA	DUMMY	3505	INTERNAL
FFC	DUMMY	3505	INTERNAL
FFD	DUMMY	2520B2	INTERNAL
FFE	DUMMY	PRT1	INTERNAL
FFF	DUMMY	CONS	INTERNAL

Device table z/VSE 6.1.0

ADDRESS	DEVICE	DEVICE TYPE CODE	COMMENT
009	3270CONS	3277 Mode EML	VM System Console
00C	3505	3505	VM READER
00D	3525	3525P	VM PUNCH
00E	PRT1	PRT1	VM LINE PRINTER
05E	4248	4248	VSE PRINTER
123	3390-X	ECKD	DOSRES Volume
124	3390-X	ECKD	SYSWK1 Volume
125	3390-X	ECKD	SYSWK2 (user) Volume
126	3390-X	ECKD	SYSWK3 (user) Volume
181	3590	TPA Mode 08	VM TAPE
190	3390-X	ECKD	VM Disk
191	3390-X	ECKD	VM Disk
19E	3390-X	ECKD	VM Disk
400	OSAX	OSAX	TCPIP DEVICE
401	OSAX	OSAX	TCPIP DEVICE
402	OSAX	OSAX	TCPIP DEVICE
560	3490E	3490E Mode 08	Virtual Tape - ONLY
565	3592-E05	TPA896 Mode 08	VM TAPE
570	3592-E07	TPA21K Mode 08	VM TAPE
FDF	FBAV	FBAV	Virtual Disk
FEC	DUMMY	3505	INTERNAL
FED	DUMMY	2520B2	INTERNAL
FEE	DUMMY	PRT1	INTERNAL
FEF	DUMMY	PRT1	INTERNAL
FF0-FF9	24X80Q	3277	VM 3270 Dial Terminal Devices
FFA	DUMMY	3505	INTERNAL
FFC	DUMMY	3505	INTERNAL
FFD	DUMMY	2520B2	INTERNAL
FFE	DUMMY	PRT1	INTERNAL
FFF	DUMMY	CONS	INTERNAL

Device table z/VSE 5.1.0

ADDRESS	DEVICE	DEVICE TYPE CODE	COMMENT
009	3270CONS	3277	SYSTEM CONS VSE51
00C	2540-R	2540R	VM READER
00D	2540-P	2540P	VM PUNCH
00E	1403	1403	VM LINE PRINTER
01F	3270CONS	3277	SYSTEM CONS
0123	3390-E	ECKD	DOSRES VOLUME
0124	3390-E	ECKD	SYSWK1 VOLUME
0125	3390-E	ECKD	SYSWK2 (user)
0126	3390-E	ECKD	VSELPP VOLUME
0127	3390-E	ECKD	SYSWK3 (user)
400	QDIO	OSAX	TCPIP DEVICE
401	QDIO	OSAX	TCPIP DEVICE
402	QDIO	OSAX	TCPIP DEVICE
560-59F	3490	3490-DC	VIRTUAL TAPE VSE51
590-59F	3590-B	TPA128	VM TAPE VSE51
590	3490E	3490E	VIRTUAL TAPE
591	3490E	3490E	VIRTUAL TAPE
5A0	3590-H	TPA	VM TAPE
5A1	3590-H	TPA	VM TAPE
5C5	CTCA	CTCA	TCPIP DEVICE
5C6	CTCA	CTCA	TCPIP DEVICE
FDF	FBAV	FBAV	VIRTUAL DISK
FEC	DUMMY	3505	VSE/POWER RDR
FEC	DUMMY	2520B2	VSE/POWER PUN
FEE	DUMMY	PRT1	VSE/POWER LST
FEF	DUMMY	PRT1	VSE/POWER LST
FF0-FF9	24X80Q	3277	3270 DIAL
FFA	DUMMY	3505	INTERNAL
FFC	DUMMY	3505	INTERNAL
FFD	DUMMY	2520B2	INTERNAL
FFE	DUMMY	PRT1	INTERNAL
FFF	DUMMY	CONS	INTERNAL
FFA	DUMMY	3505	INTERNAL
FFC	DUMMY	3505	INTERNAL
FFD	DUMMY	2520B2	INTERNAL
FFE	DUMMY	PRT1	INTERNAL
FFF	DUMMY	CONS	INTERNAL
FFA	DUMMY	3505	INTERNAL
FFC	DUMMY	3505	INTERNAL
FFD	DUMMY	2520B2	INTERNAL
FFE	DUMMY	PRT1	INTERNAL
FFF	DUMMY	CONS	INTERNAL

Tape Handling Procedures

Using Tapes

Please be a responsible user and help others by detaching tape devices as soon as they are no longer needed.

Table 11.1: Hours of Operation

Tape operators will mount tapes continuously from 23:00 Sunday to 23:00 Friday, from 07:00 to 15:00 on Saturday. All times are US Central time and exclude IBM USA holidays. From time to time the tape mount hours are changed to meet business requirements. For tape mounts at a particular time of day, please contact the IBM Z Dallas ISV Center.

If you have questions regarding handling tapes, please refer to “Technical support “on page 4.

Problems with pending tape mounts can be reported 07:00 to 19:00 US Central time Monday through Friday except IBM USA holidays. Please send an email to zTech@us.ibm.com describing the problem. Include all appropriate messages, the guest z/VSE system name, and contact information.

Tape devices are a limited **real** resource and are only attached to the guest z/VSE system when needed to satisfy a tape mount request. When the tape is loaded on the tape drive by the tape operator the mount request will be satisfied.

Note: *Never* put the z/VSE system to sleep with an attached tape device. *Always* detach tape devices before putting the system to sleep. Failure to do so will result in an automatic forced detach of the tape device from the system after five minutes; when this is done it will result in a permanent I/O error condition which causes the virtual tape address to be unusable until the system is IPLd.

Scratch Tapes: The IBM Z Dallas ISV Center does not provide scratch tapes. Scratch tapes are the responsibility of the Solution Developer and should be handled the same as any tape (i.e. product tape) during the duration of the Test Program.

From the VSE console, use command `"* CP MSG SVUTIL LISTTAPES"` to list the tape inventory

From: [Ingolf's z/VSE Blog \(08-08-2016\)](#) - Are you using the z/VSE virtual tape support (VTAPE) ?

Just a few words to our virtual tape support (VTAPE), if you are not yet aware of it.

z/VSE's virtual tape support provides the ability to read and write to a virtual tape in the same way as if it were a physical tape. The full range of the capabilities of a physical tape has not been implemented and there are some restrictions. However, the intention is to keep the virtual tape support transparent to applications. You may define VSE/VSAM virtual tapes or remote virtual tapes. For VSE/VSAM virtual tapes the tape image is stored in a VSE/VSAM ESDS file. Remote virtual tapes require a TCP/IP connection between z/VSE and a remote workstation. With the VTAPE command you can define the location of the virtual tape.

The virtual tape support consists of three functional components:

The virtual tape simulator is part of z/VSE and ready for use after z/VSE installation. It controls virtual tape processing, provides status information, receives requests and forwards them to the virtual tape data handler.

The virtual tape data handler is also part of z/VSE and ready for startup after z/VSE installation. It is required to handle read or write requests to a virtual tape - located in VSE/VSAM or remote. The virtual tape support is activated or deactivated via the VTAPE command.

The virtual tape server is required for remote virtual tapes only. It is the workstation counterpart to the virtual tape data handler on z/VSE. It must be installed on a Java-capable workstation.. Virtual tapes are represented by a file in AWSTAPE format.

You may use virtual tapes to back up and restore data, transfer virtual tapes between workstations and z/VSE, back up data using the Tivoli Storage Manager (TSM), Fast Service Upgrade (FSU) from a virtual tape, and more.

Details are available in the [z/VSE Administration book](#) and on our [web page](#).

Mounting Tapes

Here is a brief outline of the process used to mount tapes, followed by a description of the tape mounting method.

1. The tape is received by the IBM Z Dallas ISV Center, logged and stored in a secure room. Email notification will be sent when the tape is available for use.
2. A mount request is sent in the form of a message to a z/VM service machine called SVUTIL.
3. The SVUTIL service machine reads the message. When the tape number requested is in the virtual tape library, the SVUTIL service machine will:
 - Verify that the request is from an authorized user ID.
 - Translate the requested tape number to a physical rack number.
 - Attach a tape drive to the requesting system at the requested address.
 - Send a message to the tape operator requesting that the tape be mounted on the attached drive.
 - Send informational messages to SYSLOG on the guest z/VSE system.
4. The tape operator retrieves the tape from the physical tape library and mounts the tape on the tape drive displayed in the message generated by the mount request. This may take a few minutes.
5. The job runs.
6. The Solution Developer detaches the tape device from the guest z/VSE system.

z/VSE Tape Device Definitions

Tape device numbers for a guest z/VSE system are defined in the table below:

Table 13.2: Tape device table

Tape Drive Type	Device number range	Comments	Mount Request
3590	181	3590-H devices	3590H
3592	565	3592-E05 (TPAT896)	3592A
3592	570	3592-E07 (TPAT2K)	3592B

Request to Mount a Tape

To request a tape mount, issue the following from the z/VM control user ID:

```
* CP MSG SVUTIL MOUNT <refno> ON <vdev> <mode> <devtype>
```

where *<refno>* is the reference number assigned to the tape, *<vdev>* is the virtual tape device number in the guest z/VSE system on which to mount the tape, *<mode>* is either **R/O** or **R/W** indicating READ ONLY or READ/WRITE (may also be indicated as RO or RW), and *<devtype>* is the correct device type for the media being used. All parameters except devtype are required.

For example, to mount the tape with reference number ETP123 on virtual tape device 5A0 Read/Only, enter command:

```
* CP MSG SVUTIL MOUNT ETP123 ON 5A0 R/O 3590H
```

For cartridge tapes, optionally specify up to six tapes to be loaded simultaneously in the autoloader. For example, to mount tapes ETP001 and ETP002(in that order) on virtual tape device 5A0 Read/Write (all must be either Read/Only or Read/Write), enter command:

```
* CP MSG SVUTIL MOUNT ETP001 ETP002 ON 5A0 R/O 3590H
```

This command will send a message to the SVUTIL service machine requesting a tape mount for the guest z/VSE system from which the request was issued. An error response (if there is one) will be sent back within seconds in the form of a z/VM message to the z/VM control user ID.

The following messages will be displayed after issuing the SVUTIL MOUNT command:

TAPE 06C9 ATTACHED TO ETPGSyy 05A0

SVUTIL: Mount Request sent to TapeOps

To check the tape mount, issue command: **CP REW 5A0**

You will see message: **REWIND COMPLETE**

To display syntax, help for MOUNT, enter the CP command: **MSG SVUTIL HELP MOUNT**
When finished with the tape(s) and the tape device, please issue the CP command DETACH the virtual device from the guest z/VSE system. For example, to DETACH virtual device 5A0, enter commands:

*** CP DETACH 5A0**

The z/VSE Virtual Tape (VTAPE) utility

The z/VSE Virtual Tape Utility to your workstation, you MUST use tape drive 560 which is a 3490-E device which is only supported by VTAPE.

NOTE: THERE ARE NO REAL 3490 TAPE DEVICES IN THE DALLAS CENTER. IF YOU HAVE REAL TAPES THEN USE THE TAPE DEVICES IN THE TAPE DEVICE TABLE.

Sending and Receiving tapes to and from the IBM Z Dallas ISV Center

Please attach an external reference number that is easily identifiable and unique to each tape sent to IBM. This reference number will be used when requesting a tape mount for the guest z/VSE system.

All tapes (including scratch tapes) to be used on the system should be mailed to:

IBM Corp
3rd Floor - Dallas ISV z Center
1000 Belleview Street
Dallas, TX 75215
Attn: Tim Raley

Proper Tape Identification: Please include the following information with ALL TAPES (product, scratch, etc.) mailed to IBM for use in the Remote Access Program.

Remote Access Program Name and Guest System (IPL Console) ID External
 Reference Number (to be used when requesting a tape mount) Company Name,
 Program Contact, Phone Number and Email Address Company Return Address

Reference Number: Remember to attach an external reference number that is easily identifiable and unique to each tape sent to IBM. It may (but need not be) the same as the volume ID for an IBM standard label tape. The reference number must be 1-10 alpha- numeric characters with no imbedded blanks or special characters. This reference number will be used when requesting a tape mount for the guest z/VSE system.

Please allow sufficient lead time for the tape to be received and logged in the tape library. IBM (RDP/ETP Administration) will contact via email to verify receipt of the tape.

Tapes will not be returned at the end of the program unless otherwise requested. Please call one of the numbers listed below if tapes must be returned before the end of the program.

Note: The IBM Z Dallas ISV Center cannot support 3420 tape reels.

z/VSE V6.2.0 Installed Software

The following software components are installed on the z/VSE V6.2.0 system.

NOTE: Products in the 'IJSYSRS' and 'PRD1' libraries are a result of the z/VSE 6.2.0 base installation.

Products in the 'PRD2' library are components of the z/VSE 'Extended Base' feature.

Table V6.2.0 product list

Product	Description	Component	Library
A011FY	C/VSE V1R1	5686-A0100	PRD2.DBASE
A011G4	C/VSE V1R1	5686-A0101	PRD2.DBASE
A026G8	DT/VSE BASE V1R1M1	5686-A0200	PRD2.PROD
A026G9	DT/VSE JPN V1R1M1	5686-A0201	PRD2.PROD
A071JS	CCCA.VSE...2.1.0	5686-A0700	PRD2.PROD
BS1F10	Z/VSE 6.2.0 - IPV6 1.3.0	5686-BS100	PRD2.TCPIPB
CS1FTP	Z/VSE 6.2.0 - TCP/IP 2.1.0	5686-CS100	PRD2.TCPIPC
DS21NM	Z/VSE 6.2.0 - ICKDSF 1.17.0	5658-99201	IJSYSRS.SYSLIB
F422NR	QMF/VSE...7.2.0	5668-72101	PRD2.PROD
F423NP	DB2 FOR VSE DATA RESTORE FEATURE 7.3.0	5697-F4205	PRD2.RCV730
F423NQ	DB2CC/VSE.7.3.0 - 5697-F42	5697-F4206	PRD2.CCF730
F424NO	ASN/VSE...7.4.0	5697-F4201	PRD2.ASN740
F425NC	DB2 FOR VSE...7.5.C	5697-F4207	PRD2.DB2750C
F66750	RBDcobolRT.7.5.0	5648-F6600	PRD2.DBASE

RG1O42	RPGIL.....1.3.0 5746-RG1 DOS/VS RPG II RELEASE 1.3.0	5746-RG100	PRD2.PROD
SM334A	DFSORT/VSE.3.4.0 - 5746-SM3	5746-SM310	PRD2.PROD
VSEB3P	Z/VSE 6.2.0 - CICS TS FOR VSE 2.2.0	5655-VSE00	PRD1.BASE
VS662C	Z/VSE 6.2.0 - VSE BASE PROGRAMS 9.4.0	5686-VS611	IJSYSRS.SYSLIB
		5686-VS610	
		5686-VS610	
		5686-VS609	
		5686-VS608	
		5686-VS607	
		5686-VS606	
		5686-VS605	
		5686-VS603	
		5686-VS601	
VS662D	Z/VSE 6.2.0 - VSE IUI ENGLISH 9.4.0	5686-VS602	IJSYSRS.SYSLIB
VS662G	Z/VSE 6.2.0 - VSE AF/PWR/VSAM MACROS 9.4.0	5686-VS606	PRD1.MACLIB
		5686-VS605	
		5686-VS603	
VS662I	Z/VSE 6.2.0 - REXX/VSE 9.4.0	5686-VS616	PRD1.BASE
		5686-VS612	
VS662K	ZVSE 6.2.0 - LE/VSE BASE 1.4.10	5686-VS632	PRD2.SCEEBASE
VS662L	Z/VSE 6.2.0 - LE/VSE C 1.4.10	5686-VS633	PRD2.SCEEBASE
VS662M	Z/VSE 6.2.0 - LE/VSE DBCS LOCALE 1.4.10	5686-VS634	PRD2.SCEEBASE
VS662N	Z/VSE 6.2.0 - VSE CONNECTOR 9.4.0	5686-VS635	PRD1.BASE
VS662O	Z/VSE 6.2.0 - OSA/SF 9.4.0	5686-VS630	PRD1.BASE
VS662P	Z/VSE 6.2.0 - VSE CONNECTOR WORKSTATION 9.4.0	5686-VS638	PRD2.PROD
VS662S	Z/VSE 6.2.0 - CRYPTO SERVICES 9.4.0	5686-VS617	PRD1.BASE
VS662V	Z/VSE 6.2.0 - OS/390 API 9.4.0	5686-VS614	PRD2.OS390
VS662W	Z/VSE 6.2.0 - LE/VSE COBOL 1.4.10	5686-VS636	PRD2.SCEEBASE
VS662Y	Z/VSE VERSION 6.2.0 - ENCRYPT/FAC 1.2.0	5686-VS640	PRD2.PROD
VS662Z	Z/VSE 6.2.0 - LE/VSE PLI 1.4.10	5686-VS637	PRD2.SCEEBASE
XE7H06	VSE/ACLR...1.2.1	5746-XE700	PRD2.PROD
XXT228	SDF II VSE BASE.1.6.0 - 5746-XXT	5746-XXT01	PRD2.PROD
XX12IO	DLI/VSE...1.12.0	5746-XX100	PRD2.DBASE
040DC0	PSF/VSE....2.2.1	5686-04001	PRD2.AFP
040DH0	COMPATS.U240	5686-04054	PRD2.AFP
040DH1	COMPATS.B240	5686-04055	PRD2.AFP
040FR9	CODEPAGE.B240	5686-04015	PRD2.AFP
040FS0	CODEPAGE.B300	5686-04021	PRD2.PROD
0571EA	GDDM/VSE...3.2.0	5686-05701	PRD2.PROD

Table V6.2 product list (continued)

Product	Description	Component	Library
0571EP	GDDM/VSE.A.3.2.0	5686-05702	PRD2.PROD
062FW0	ACIF/VSE...2.2.1	5648-06201	PRD2.AFP
062FW1	AFPAPI/VSE...2.2.1	5648-06202	PRD2.AFP
065FE6	Z/VSE 6.2.0 - ACF/VTAM VERSION 4.2.0	5686-06501	PRD1.BASE
06818M	COB.BASE...1.1.0	5686-06800	PRD2.PROD
06818N	COB.ENU....1.1.0	5686-06801	PRD2.PROD
06818O	COB.JPN....1.1.0	5686-06802	PRD2.PROD
06918P	PLI.VSE...1.1.0	5686-06900	PRD2.PROD
09936O	Z/VSE 6.2.0 - DITTO/ESA VERSION 1.3.0	5648-09901	PRD1.BASE
1131BM	COMPATS.B300	5648-11310	PRD2.AFP
190A03	PPFA/370...1.1.0	5688-19001	PRD2.AFP
2346IM	HLASM.TLKT.1.6.0	5696-23401	PRD2.PROD
234689	Z/VSE 6.2.0 - HLASM 1.6.0	5696-23400	PRD1.BASE
260E00	Z/VSE 6.2.0 - EREP VERSION 3.5.0	5656-26001	PRD1.BASE
7231FF	GDDM-IVU...1.1.3	5668-72301	PRD2.PROD
8011FG	GDDM-IMD...2.1.3	5668-80101	PRD2.PROD
8121F5	GDDM-PGF...2.1.3	5668-81201	PRD2.PROD
0571EP	GDDM/VSE.A.3.2.0	5686-05702	PRD2.PROD

z/VSE V6.1.0 Installed Software

The following software components are installed on the z/VSE V6.1.0 system.

NOTE: Products in the 'IJSYSRS' and 'PRD1' libraries are a result of the z/VSE 6.1.0 base installation.

Products in the 'PRD2' library are components of the z/VSE 'Extended Base' feature.

Table V6.1.0 product list

Product	Description	Component	Library
A011FY	C/VSE V1R1	5686-A0100	PRD2.DBASE
A011G4	C/VSE V1R1	5686-A0101	PRD2.DBASE
A026G8	DT/VSE BASE V1R1M1	5686-A0200	PRD2.PROD
A026G9	DT/VSE JPN V1R1M1	5686-A0201	PRD2.PROD
A071JS	CCCA.VSE...2.1.0	5686-A0700	PRD2.PROD
BS1D10	Z/VSE 6.1.0 - IPV6 1.2.0	5686-BS100	PRD2.TCPIPB
CS1ETP	Z/VSE 6.1.0 - TCP/IP 2.1.0	5686-CS100	PRD2.TCPIPC
DS21NM	Z/VSE 6.1.0 - ICKDSF 1.17.0	5658-99201	IJSYSRS.SYSLIB
F422NR	QMF/VSE ...7.2.0	5668-72101	PRD2.PROD
F422NS	QMF/VSE.U..7.2.0	5648-06102	PRD2.PROD
F423NP	DB2 FOR VSE DATA RESTORE FEATURE 7.3.0	5697-F4205	PRD2.RCV730
F423NQ	DB2CC/VSE.7.3.0 - 5697-F42	5697-F4206	PRD2.CCF730
F424NO	Z/VSE 6.1.0 - ASN/VSE 7.4.0	5697-F4201	PRD2.ASN740
F425NC	Z/VSE 6.1.0 - DB2/VSE CLIENT EDITION 7.5.0	5697-F4207	PRD2.DB2750C
F425NN	Z/VSE 6.1.0 - DB2/VSE 7.5.0	5697-F4201	PRD2.DB2750
F66750	RBDCOBOLRT.7.5.0	5648-F6600	PRD2.DBASE
RG1O42	RPGIL.....1.3.0 5746-RG1 DOS/VS RPG II RELEASE 1.	5746-RG100	PRD2.PROD
SM334A	DFSORT/VSE.3.4.0 - 5746-SM3	5746-SM310	PRD2.PROD
VSEB2P	Z/VSE 6.1.0 - CICS TS FOR VSE 2.1.0	5655-VSE00	PRD1.BASE
VS661C	Z/VSE 6.1.0 - VSE BASE PROGRAMS 9.3.0	5686-VS601	IJSYSRS.SYSLIB
		5686-VS603	
		5686-VS606	
		5686-VS607	
		5686-VS608	
		5686-VS609	
		5686-VS610	
		5686-VS611	
VS661D	Z/VSE 6.1.0 - VSE IUI ENGLISH 9.3.0	5686-VS602	IJSYSRS.SYSLIB
VS661G	Z/VSE 6.1.0 - VSE AF/PWR/VSAM MACROS 9.3.0	5686-VS603	PRD1.MACLIB
		5686-VS605	
		5686-VS606	
VS661I	Z/VSE 6.1.0 - REXX/VSE 9.3.0	5686-VS612	PRD1.BASE
		5686-VS616	
VS661J	Z/VSE 6.1.0 - VSE AF GENERATION FEATURE 9.3.0	5686-VS606	PRD2.GEN1
VS661K	Z/VSE 6.1.0 - LE/VSE BASE 1.4.9	5686-VS632	PRD2.SCEEBASE
VS661L	Z/VSE 6.1.0 - LE/VSE C 1.4.9	5686-VS633	PRD2.SCEEBASE
VS661M	Z/VSE 6.1.0 - LE/VSE DBCS LOCALE 1.4.9	5686-VS634	PRD2.SCEEBASE

Table V6.1.0 product list (continued)

Product	Description	Component	Library
VS661N	Z/VSE 6.1.0 - VSE CONNECTOR 9.3.0	5686-VS635	PRD1.BASE
VS661O	Z/VSE 6.1.0 - OSA/SF 9.3.0	5686-VS630	PRD1.BASE
VS661P	Z/VSE 6.1.0 - VSE CONNECTOR WORKSTATION 9.3.0	5686-VS638	PRD2.PROD
VS661S	Z/VSE 6.1.0 - CRYPTO SERVICES 9.3.0	5686-VS617	PRD1.BASE
VS661V	Z/VSE 6.1.0 - CF OS/390 API 9.3.0	5686-VS614	PRD2.PROD
VS661W	Z/VSE 6.1.0 - LE/VSE COBOL 1.4.9	5686-VS636	PRD2.SCEEBASE
VS661Y	Z/VSE VERSION 6.1.0 - ENCRYPT/FAC 1.2.0	5686-VS640	PRD2.PROD
VS661Z	Z/VSE 6.1.0 - LE/VSE PLI 1.4.9	5686-VS637	PRD2.SCEEBASE
XE7H06	VSE/ACLR...1.2.1	5746-XE700	PRD2.PROD
XXT228	SDF II VSE BASE.1.6.0 - 5746-XXT	5746-XXT01	PRD2.PROD
XX12IO	DLI/VSE...1.12.0	5746-XX100	PRD2.DBASE
0571EA	GDDM/VSE...3.2.0	5686-05701	PRD2.PROD
0571EP	GDDM/VSE.A.3.2.0	5686-05702	PRD2.PROD
065FE6	Z/VSE 6.1.0 - ACF/VTAM VERSION 4.2.0	5686-06501	PRD1.BASE
06818M	COB.BASE...1.1.0	5686-06800	PRD2.PROD
06818N	COB.ENU....1.1.0	5686-06801	PRD2.PROD
06818O	COB.JPN.....1.1.0	5686-06802	PRD2.PROD
06918P	PLI.VSE...1.1.0	5686-06900	PRD2.PROD
09936O	Z/VSE 6.1.0 - DITTO/ESA VERSION 1.3.0	5648-09901	PRD1.BASE
190A03	PPFA/370...1.1.0	5688-19001	PRD2.AFP
2346IM	HLASM.TLKT.1.6.0	5696-23401	PRD2.PROD
234689	Z/VSE 6.1.0 - HLASM 1.6.0	5696-23400	PRD1.BASE
260E00	Z/VSE 6.1.0 - EREP VERSION 3.5.0	5656-26001	PRD1.BASE
7231FF	GDDM-IVU...1.1.3	5668-72301	PRD2.PROD
8011FG	GDDM-IMD...2.1.3	5668-80101	PRD2.PROD
8121F5	GDDM-PGF...2.1.3	5668-81201	PRD2.PROD

z/VSE V5.1.0 Installed Software

The following software components are installed on the z/VSE V5.1.0 system.

NOTE: Products in the 'IJSYSRS' and 'PRD1' libraries are a result of the z/VSE 5.1.0 base installation.

Products in the 'PRD2' library are components of the z/VSE 'Extended Base' feature.

Table V5.1.0 product list

Product	Description	Component	Library
A011FY	C/VSE VIR1	5686-A0100	PRD2.DBASE
A011G4	C/VSE VIR1	5686-A0101	PRD2.DBASE
A026G8	DT/VSE BASE VIR1M1	5686-A0200	PRD2.PROD
A026G9	DT/VSE JPN VIR1M1	5686-A0201	PRD2.PROD
A04BTP	Z/VSE 5.1.0 - TCP/IP 1.5.0	5686-A0400	PRD1.BASE
A071JS	CCCA.VSE...2.1.0	5686-A0700	PRD2.PROD
BS1B10	Z/VSE 5.1.0 - IPV6/VSE 1.1.0	5686-BS100	PRD2.TCPIPB
CF951C	Z/VSE 5.1.0 - VSE CENTRAL FUNCTIONS 9.1.0	5686-CF911 5686-CF910 5686-CF909 5686-CF908 5686-CF907 5686-CF906 5686-CF905 5686-CF903 5686-CF901	IJSYSRS.SYSLIB
CF951D	Z/VSE 5.1.0 - VSE IUI ENGLISH 9.1.0	5686-CF902	IJSYSRS.SYSLIB
CF951G	Z/VSE 5.1.0 - VSE AF/PWR/VSAM MACROS 9.1.0	5686-CF906 5686-CF905 5686-CF903	PRD1.MACLIB
CF951I	Z/VSE 5.1.0 - VSE REXX/OLTEP 9.1.0	5686-CF916 5686-CF912	PRD1.BASE
CF951K	Z/VSE 5.1.0 - LE/VSE BASE 1.4.8	5686-CF932	PRD2.SCEEBASE
CF951L	Z/VSE 5.1.0 - LE/VSE C 1.4.8	5686-CF933	PRD2.SCEEBASE
CF951M	Z/VSE 5.1.0 - LE/VSE DBCS LOCALE 1.4.8	5686-CF934	PRD2.SCEEBASE
CF951N	Z/VSE 5.1.0 - VSE CONNECTOR 9.1.0	5686-CF935	PRD1.BASE
CF951O	Z/VSE 5.1.0 - OSA/SF 9.1.0	5686-CF930	PRD1.BASE
CF951P	Z/VSE 5.1.0 - VSE CONNECTOR WORKSTATION 9.1.0	5686-CF938	PRD2.PROD
CF951S	Z/VSE 5.1.0 - CRYPTO SERVICES 9.1.0	5686-CF917	PRD1.BASE
CF951V	Z/VSE 5.1.0 - CF OS/390 API 9.1.0	5686-CF914	PRD2.OS390
CF951W	Z/VSE 5.1.0 - LE/VSE COBOL 1.4.8	5686-CF936	PRD2.SCEEBASE
CF951Z	Z/VSE 5.1.0 - LE/VSE PLI 1.4.8	5686-CF937	PRD2.SCEEBASE
DS21NM	Z/VSE 5.1.0 - ICKDSF 1.17.0	5658-99201	IJSYSRS.SYSLIB
F422NR	QMF/VSE.....7.2.0	5668-72101	PRD2.PROD
F423NP	DB2 FOR VSE DATA RESTORE FEATURE 7.3.0	5697-F4205	PRD2.RCV730
F423NQ	DB2CC/VSE.7.3.0 - 5697-F42	5697-F4206	PRD2.CCF730
F424NO	Z/VSE 5.1.0 - ASN/VSE 7.4.0	5697-F4201	PRD2.ASN740
F425NC	Z/VSE 5.1.0 - DB2/VSE CLIENT EDITION 7.5.0	5697-F4207	PRD2.DB2750C
F425NN	Z/VSE 5.1.0 - DB2/VSE 7.5.0	5697-F4201	PRD2.DB2750
F66750	RBDCOBOLRT.7.5.0	5648-F6600	PRD2.DBASE
RG1O42	RPGII.....1.3.0 5746-RG1 DOS/VS RPG II RELEASE 1.3.0	5746-RG100	PRD2.PROD
SM334A	DFSORT/VSE.3.4.0 - 5746-SM3	5746-SM310	PRD2.PROD
U97300	WMQZVSE....3.0.0 - 5655-U97	5655-U9700	PRD2.WMQZVSE
XE7H06	VSE/ACLR...1.2.1	5746-XE700	PRD2.PROD
XXT228	SDF II VSE BASE.1.6.0 - 5746-XXT	5746-XXT01	PRD2.PROD
XX12IO	DLI/VSE...1.12.0	5746-XX100	PRD2.DBASE
0111NL	CICSVR/VSE.1.2.0 - 5686-011	5686-01101	PRD2.PROD
054B0P	Z/VSE 5.1.0 - CICS TS FOR VSE 1.1.1	5648-05400	PRD1.BASE

Table V5.1.0 product list (continued)

Product	Description	Component	Library
0571EA	GDDM/VSE...3.2.0	5686-05701	PRD2.PROD
0571EP	GDDM/VSE.A.3.2.0	5686-05702	PRD2.PROD
065FE6	Z/VSE 5.1.0 - ACF/VTAM VERSION 4.2.0	5686-06501	PRD1.BASE
06818M	COB.BASE...1.1.0	5686-06800	PRD2.PROD
06818N	COB.ENU 1.1.0	5686-06801	PRD2.PROD
06818O	COB.JPN 1.1.0	5686-06802	PRD2.PROD
06918P	PLI.VSE...1.1.0	5686-06900	PRD2.PROD
09936O	Z/VSE 5.1.0 - DITTO/ESA VERSION 1.3.0	5648-09901	PRD1.BASE
191AA0	OGL/370-ENGLISH LANGUAGE FEATURE	5688-19102	PRD2.AFP
191AA1	OGL/370-GERMAN LANGUAGE FEATURE	5688-19103	PRD2.AFP
191AA2	OGL/370-JAPANESE LANGUAGE FEATURE	5688-19104	PRD2.AFP
191A05	OGL/370. 1.1.0	5688-19101	PRD2.AFP
234689	Z/VSE 5.1.0 - HLASM 1.6.0	5696-23400	PRD1.BASE
260E00	Z/VSE 5.1.0 - EREP VERSION 3.5.0	5656-26001	PRD1.BASE
7231FF	GDDM-IVU...1.1.3	5668-72301	PRD2.PROD
8011FG	GDDM-IMD...2.1.3	5668-80101	PRD2.PROD
8121F5	GDDM-PGF...2.1.3	5668-81201	PRD2.PROD

