

3.2

IBM ISPF Quick Start Guide for VM



Edition notice

This edition applies to ISPF for VM Version 3 Release 2 of the licensed program (program number 5684-043) and to all subsequent releases and modifications until otherwise indicated in new editions.

IBM welcomes your comments. For information on how to send comments, see [“How to send your comments to IBM” on page ix](#).

© **Copyright International Business Machines Corporation 2015, 2021.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

- Figures..... V**
- About this Document..... vii**
- How to send your comments to IBM..... ix**
- Chapter 1. Installing ISPF V3R2 for VM..... 1**
 - Step 1. Define the ISPV virtual machine and minidisks.....1
 - A. Create the ISPV virtual machine directory entry.....2
 - B. Update the MAINT directory entry..... 3
 - C. Set up the XAUTOLOG statement..... 3
 - D. Format the ISPF minidisks.....3
 - Step 2. Define the ISPF DCSS area 4
 - Step 3. Install the ISPF product and build the DCSS..... 4
 - A. Log on to installation user ID and access minidisks..... 4
 - B. Load product specific files to the Software Inventory Disk, MAINT 51D..... 4
 - C. Install ISPF using the VMFINS EXEC..... 5
 - D. Save the ISPF DCSS.....5
 - E. Update RACF definitions (optional).....6
 - F. Start the ISPF Disconnected Machine.....6
 - Step 4. Verify the installation of ISPF V3R2 for VM..... 6
 - Customizing options.....7
- Trademarks..... 0**

Figures

1. Sample Directory Entry for ISPVM..... 2

About this Document

This document provides the steps required to complete a quick installation and activate the functions for ISPF V3R2 for VM.

The requirements and assumptions for this quick installation method follow:

- You are installing ISPF VM on z/VM V7.1, or a later version or release.
- You are installing ISPF VM on minidisks, not a shared file system (SFS).
- You are installing ISPF VM for the first time on this z/VM system and you are **not** upgrading from a previous release of ISPF VM.
- You are installing ISPF VM from a product envelope.

If you are installing ISPF for use with *IBM zSecure for RACF z/VM* and you meet the requirements stated above, this document can be used in place of *Program Directory for use with ISPF V3 for VM*.

If you do not meet the installation requirements, see *Program Directory for use with ISPF V3 for VM* (GI11-1448) for complete instructions on how to install ISPF V3 for VM.

For step-by-step procedures for planning and customizing the functions of ISPF V3.2.0 for VM, see *ISPF and ISPF/PDF Planning and Customizing* (SC34-4271).

How to send your comments to IBM

Your feedback is important in helping to provide the most accurate and high-quality information.

If you have any comments about this book or any other ISPF documentation, use one of the following methods to send your comments:

1. Send an email to zvmtools@us.ibm.com
2. Mail the comments to the following address:

IBM Corporation
Attention: MHVRCFS Reader Comments
Department H6MA, Building 707
2455 South Road
Poughkeepsie, NY 12601-5400
US

3. Fax the comments to us, as follows:

From the United States and Canada: 1+845+432-9405

From all other countries: Your international access code +1+845+432-9405

Include the following information:

- Your name and address
- Your email address
- Your telephone or fax number
- The publication title and order number:

IBM ISPF Quick Start Guide Version 3 Release 2 for VM
GI13-3554-00

- The version of ISPF for z/VM
- The topic and page number that is related to your comment (for example, a page number or table number) and your comment.

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute the comments in any way appropriate without incurring any obligation to you.

IBM or any other organizations use the personal information that you supply to contact you only about the issues that you submit.

If you have a technical problem, do not use the feedback methods that are listed for sending comments. Instead, take one of the following actions:

- Contact your IBM service representative.
- Call IBM technical support.

Chapter 1. Installing ISPF V3R2 for VM

Before you install ISPF, note the following considerations and recommendations:

- Use the default name, ISPVM, for the ISPF disconnected virtual machine.
- Use the ISPVM 192 minidisk as the ISPF product minidisk.
- ISPF installation files are loaded to the ISPVM 191 and 192 minidisks. You must format the ISPF product disk, ISPVM 192, and the virtual machine's A-disk, ISPVM 191. See [“Step 1. Define the ISPVM virtual machine and minidisks”](#) on page 1 for detailed information.
- Keep service and modifications on a separate minidisk to prevent accidental loss.

After the installation is complete, remove or change any default passwords for security purposes.

Installation checklist

The following checklist guides you through the installation steps:

Step 1. Define the ISPVM virtual machine and minidisks.

- A. Create the ISPVM virtual machine directory entry.
- B. Update the MAINT directory entry.
- C. Set up the XAUTOLOG statement.
- D. Format the ISPF minidisks.

Step 2. Define the ISPF DCSS area.

Step 3. Install the ISPF product and build the DCSS.

- A. Log on to installation user ID and link to required minidisks.
- B. Load product specific files to the software inventory disk, MAINT 51D.
- C. Install ISPF by using the VMFINS EXEC.
- D. Save the ISPF DCSS.
- E. Update RACF definitions (optional).
- F. Start the ISPF disconnected machine.

Step 4. Verify the installation of ISPF V3R2 for VM.

Step 1. Define the ISPVM virtual machine and minidisks

You must first run ISPF on the ISPVM virtual machine. ISPF uses the Virtual Machine Communication Facility (VMCF) to communicate with the user's virtual machine. ISPVM is intended to be run in the disconnected state and is automatically started when z/VM is restarted. This is done by putting the XAUTOLOG command in the PROFILE EXEC of the AUTOLOG1 virtual machine. If you are using RACF or other External Security Manager, this is done by putting the XAUTOLOG command in the PROFILE EXEC of the AUTOLOG2 virtual machine. It is recommended that ISPVM be given a higher dispatching priority than a general users because ISPVM serves as a serial resource for all ISPF users.

ISPVM requires the DEVINFO directory option to execute a CP DIAGNOSE instruction. To use ISPVM to build a DCSS, privilege class E is required. It is recommended that only the system programmer is allowed to use the password to log on to ISPVM.

Note: Only one ISPF disconnected machine can be used on a system. If you do not use the same disconnected virtual machine, an integrity exposure occurs when multiple WRITE accesses are attempted on the same minidisk.

A. Create the ISPVM virtual machine directory entry

You must use the appropriate directory maintenance procedures for your site to create and activate the directory entry for ISPVM. See [Figure 1 on page 2](#) for a sample directory entry.

```
IDENTITY ISPVM pw 32M 1G EG
BUILD ON * USING SUBCONFIG ISPVM-1
OPTION DEVINFO
MACHINE ESA
IPL CMS
CONSOLE 009 3215 T
SPOOL 00C 2540 READER *
SPOOL 00D 2540 PUNCH A
SPOOL 00E 1403 A
LINK MAINT 190 190 RR
LINK MAINT 19D 19D RR
LINK MAINT 19E 19E RR
MDISK 192 3390 cylstart 025 volser RR ALL
SUBCONFIG ISPVM-1
MDISK 191 3390 cylstart 003 volser MR
```

Figure 1. Sample Directory Entry for ISPVM

where:

ISPVM

User ID of the ISPVM virtual machine.

pw

Password of the ISPVM virtual machine.

32M

Recommended virtual machine size (see note [“1” on page 2](#)).

1G

Maximum virtual machine size (installation option).

EG

Privilege classes required (see note [“2” on page 3](#)).

OPTION DEVINFO

Required to execute a CP DIAGNOSE instruction.

MDISK 191

ISPVM A-disk (see note [“3” on page 3](#) for A-disk size information).

MDISK 192

ISPF product minidisk where the ISPF product files are loaded at installation time (see note [“3” on page 3](#) and note [“6” on page 3](#)).

cylstart

Starting cylinder for the minidisk.

volser

Volser of the DASD volume.

Notes:

1. The virtual machine size indicated is a recommended minimum size. You might need to increase this size depending on your applications. For example, if many users are reading data from a shared

minidisk, serialization contention might occur and users might receive Enqueue/Dequeue or storage errors. If this occurs, increase the size of the ISPVM virtual machine to eliminate the storage errors.

2. If you use ISPVM to build a DCSS, class E is required. If you use another User ID to build the DCSS, ISPVM requires only privilege class G.
3. Minidisk sizes assume 3390 DASD. Use appropriate conversion formulas to calculate cylinders for other device types.
4. It is recommended that you use a different disk to store any customization changes. The ISPF disconnected virtual machine, ISPVM, links to the ISPF product minidisk, ISPVM 192, to obtain access to the ISPVM MODULE file loaded during installation. Make sure that you do not have any additional copies in the search order of the ISPF disconnected virtual machine's minidisks.
5. All ISPF users must have READ access to the ISPF system minidisk, ISPVM 192, to run the product.
6. An ISPVM 192 minidisk of 25 3390 cylinders can hold the ISPF system files and one language file.
7. Define ISPVM as an IDENTITY user. When you install in an SSI cluster, define the ISPVM 192 disk in the IDENTITY entry with link mode RR and a 191 disk defined for each SSI member in the SUBCONFIG entry. This allows a common 192 disk on all members with each system having a unique 191 disk.
8. If you have two or more members in your SSI cluster, update the existing BUILD ON statement and add additional BUILD ON statements to reflect each member.

B. Update the MAINT directory entry

Add the following statement to the MAINT-1 SUBCONFIG entry for MAINT:

```
LINK MAINTvrn 319 319 RR
```

Use the appropriate directory maintenance procedures for your site to update and activate the directory entry for MAINT.

C. Set up the XAUTOLOG statement

To automatically start the ISPVM virtual machine each time z/VM is started, insert the following command in the PROFILE EXEC of your AUTOLOG1 or AUTOLOG2 virtual machine:

```
CP XAUTOLOG ISPVM
```

D. Format the ISPF minidisks

You must format the ISPVM 191 and 192 minidisks before you can use them.

To format the minidisks, enter the following commands:

```
LINK userid devaddr1 devaddr2 MR  
FORMAT devaddr2 filemode  
1  
label  
REL devaddr2 (DET
```

where:

userid

User ID of the disk you are formatting, for example, ISPVM.

devaddr1

Virtual device address to be formatted for specified user ID, for example, 191 and 192.

devaddr2

Available virtual device address.

filemode

Available file mode.

label

Minidisk label, for example, ISP191.

Step 2. Define the ISPF DCSS area

ISPF runs from a discontinuous shared segment (DCSS) area. In z/VM, a DCSS is defined by using a CP command and it resides in a spool file. If you need to rebuild an existing DCSS, you must first redefine it; otherwise an error occurs.

Note: If you plan to install the ISPF/PDF product, you must define both DCSS areas below the 16 MB line or both DCSS areas above the 16 MB line. Results are unpredictable if one DCSS is defined above the 16 MB line and the other is defined below the 16 MB line.

The following example shows the CP command to define the ISPF DCSS:

```
DEFSEG ISPDCSS 30000-300FF SR
```

Your DCSS name might be different from the example and the address range specified must be an available address range for a DCSS on your system. The address range used in the example is valid on default z/VM V7.1 and later installations. For further information about how to define the DCSS by using a different name or address range, see *CP Commands and Utilities Reference*.

Step 3. Install the ISPF product and build the DCSS

When you install ISPF from an electronic envelope, the envelope must reside on a minidisk accessed as 'C' by the installation ID. It is recommended that you place the envelope on the MAINTvrm 500 minidisk. Ensure that you format the product minidisks, ISPVM 191 and 192 before you install ISPF.

A. Log on to installation user ID and access minidisks

Log on to the installation user ID MAINTvrm.

To access the minidisk where the product envelope resides, enter the following command:

```
ACCESS 500 C
```

To establish READ access to the VMSES/E build disk, enter the following command:

```
ACCESS 5E5 B
```

To establish WRITE access to the Software Inventory minidisk, enter the following command:

```
ACCESS 51D D
```

B. Load product specific files to the Software Inventory Disk, MAINT 51D

When you install from a product envelope, enter the following command:

```
VMFINS INSTALL INFO (NOMEMO ENV envelope_filename
```

Note: The NOMEMO option loads memos from the product envelope but does not issue a prompt to send them to the system printer. Specify the MEMO option if you want to be prompted to print the memo.

This command is used to perform the following steps:

- Loads the memo to users.
- Loads various product control files, including the Product. Parameter File (PPF) and PRODPART files on your A-disk.
- Creates the VMFINS PRODLIST on your A-disk.

C. Install ISPF using the VMFINS EXEC

When you install from a product envelope, enter the following command:

```
VMFINS INSTALL PPF $5684043 ISPDMPRD (NOMEMO ENV envelope_filename
```

The system output is shown below:

```
VMFUTL2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2601R Do you want to create an override for :PPF
$5684043 ISPDMPRD :PRODID$5684043%ISPDMPRD?
Enter 0 (No), 1 (Yes) or 2 (Exit)

      0                               Enter 0 to bypass creating an override file (recommended)
                                       Enter 1 to create an override, change the PPF name,
                                       and change minidisk definitions
                                       Enter 2 to exit the VMFINS exec

VMFINS2603I Processing product :PPF $5684043 ISPDMPRD :PRODID $5684043%ISPDMPRD
.....
VMFREC2760I VMFREC processing completed successfully
VMFINT2603I Product installed
VMFINS2760I VMFINS processing completed successfully
Ready; T=0.76/0.81 10:36:24
```

To review the install message log, \$VMFINS \$MSGLOG, enter the following command:

```
VMFVIEW INSTALL
```

If necessary, correct any problems before you proceed. For information about handling specific installation messages, see the appropriate z/VM manual.

D. Save the ISPF DCSS

Log on to ISPVM, MAINT or MAINTvrm. See [Note 1](#).

To define storage to include the DCSS area in the virtual machine, enter the following command:

```
CP DEF STOR 1024M
```

To establish write access to the ISPF system minidisk, enter the following command:

```
LINK ISPVM 192 xxx MR  
ACCESS xxx G
```

To run ISPSAVE to save the ISPF DCSS, enter the following command:

```
ISPSAVE sysname
```

where *sysname* is the DCSS name you selected in [“Step 2. Define the ISPF DCSS area”](#) on page 4 for the ISPF shared segment. If null input is specified, the default name ISPDCSS is used.

Notes:

- The user ID from which the ISPSAVE EXEC is to be executed must have class E to save the shared segment.
- Before you run the ISPSAVE EXEC procedure, you must define virtual storage to include the DCSS area in the virtual machine.
- The ISPSAVE EXEC finds the address of the DCSS that you previously defined and loads ISPF at that location. If the specified DCSS does not exist, an error message is issued and a prompt is displayed to enter the name again or quit.
- If you defined the ISPF DCSS close to the beginning of the CMS nucleus and cannot obtain storage to load the ISPF TEXT files, try starting CMS before saving the DCSS. If storage is not obtained, redefine the ISPF DCSS in a location farther away from the CMS nucleus.

- The ISPSAVE EXEC explicitly loads each ISPF CSECT to optimize the code page references. This operation causes many loader warning messages to be displayed in the load map, but they are resolved by the end of the load process.
- When you use the LOAD command to resolve references, it searches for TEXT files in your minidisk search sequence. Ensure that none of the predecessor disks in your search order contains any TEXT files whose name is the same as any of the ISPF TEXT files. All ISPF TEXT files have a file name that starts with "ISP".
- The ISPSAVE EXEC saves the load map on your A-disk in a file named 'sysname MAP' where *sysname* is the ISPF DCSS name. The load map occupies up to 360 blocks of disk space, each in 1 kB in size. Make sure that your A-disk has sufficient space for the load map. You can refer to this load map to identify and report ISPF problems.

E. Update RACF definitions (optional)

If you are using RACF, log on to an ID with RACF SPECIAL authorization and enter the following commands to grant ISPVM READ access to the DIAG0E4 resource in the VMCMD class, which must be active:

```
RAC RDEFINE VMCMD DIAG0E4 UACC(NONE)
RAC PERMIT DIAG0E4 CLASS(VMCMD) ID(ISPVM) ACCESS(READ)
```

Note: If the resource is defined or READ access is granted, the command fails with no changes and you can continue.

F. Start the ISPF Disconnected Machine

From MAINT or MAINTvrm, enter the following command to start the ISPVM user ID before you invoke ISPF:

```
XAUTOLOG ISPVM
```

Step 4. Verify the installation of ISPF V3R2 for VM

Before you verify ISPF V3R2 for VM, define your virtual storage below the start of the ISPF DCSS and restart CMS. The following example lists the steps to verify the installation:

1. Enter the following command:

```
DEFINE STOR 256M
IPL CMS
```

If you cannot use your user ID to set its virtual storage to 256 MB, set the storage to the default amount for the ID.

2. Link to and access the ISPF system disk in READ mode. An example of the VMLINK command to perform this task follows:

```
VMLINK ISPVM 192
```

3. To run the ISPSTART EXEC procedure to show the default ISPF panel, enter the following command:

```
ISPSTART
```

4. After the ISPF copyright panel is displayed, press ENTER. The EXEC procedure is completed if the ISPF master application panel is displayed. To exit this panel, enter "X" as the option.

To tailor the ISPF program product for your particular installation, see *ISPF and ISPF/PDF Planning and Customizing*.

Customizing options

You can use the following options to modify the distributed release of ISPF for your specific installation requirements:

- Preallocating a list or log files by using the CMS FILEDEF command
- Overriding commands in the ISPF command table
- Preprocessing panel utility
- Selecting panel update utility
- Creating ISPF translate tables
- Using ISPF parameters (user profile data) convert utility
- Using ISPF-to-APL2 terminal type mappings
- Tailoring ISPF defaults
- Using ISPF installation exits
- Using ISPF national language support
- Loading APL2 workspace
- Using ISPDCS command.

These customizing options are described in detail in the *ISPF and ISPF/PDF Planning and Customizing*.



Product Number: 5684-043

GI13-3554-01

