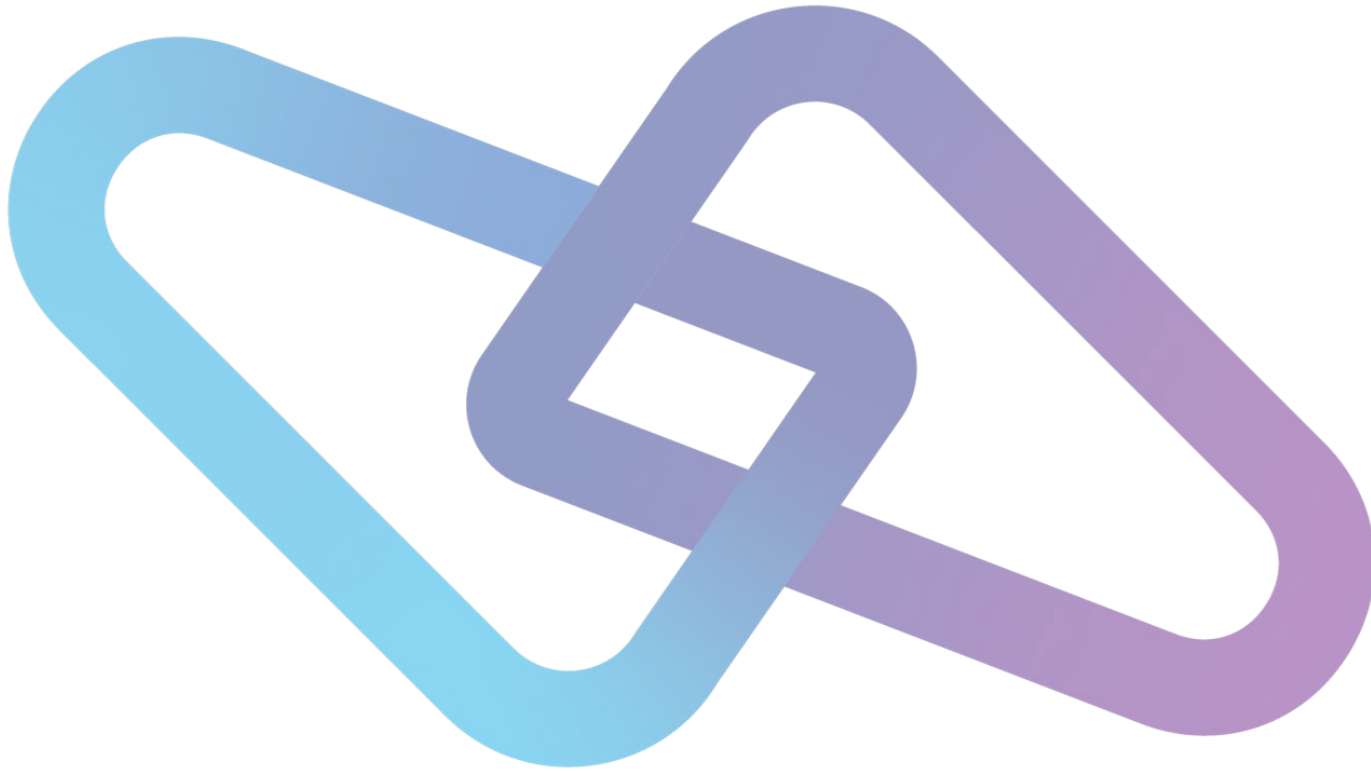


VSEⁿ 6.4

Installation, Upgrade and System License Key



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Technical Support Engineer I

Agenda



INSTALLATION

FSU (FAST
SERVICE
UPGRADE)

SYSTEM
LICENSE KEY

Why 6.4?



1. Modern Platform & Performance z14+ architecture baseline unlocks compiler/middleware optimizations for better performance and lower CPU costs, supporting through the latest z17.



2. Seamless Upgrades Fast System Upgrade (FSU) from VSE[®] 6.1–6.3 with no layout changes; multi-release SCRT support smooths MSU peak reporting during transitions.



3. Flexible & Resilient Licensing New System License Key tied to machine identity with up to 10 concurrent keys — ensuring continuity through DR failovers and capacity changes.



4. Security & Connectivity OpenSSL upgraded 1.1.1t → 3.0.11 with modern cipher support; TCP/IP and IPv6 updated; REST API now covers Batch workloads; Connectors available as container images for Kubernetes, OpenShift, and Docker on Linux on Z.

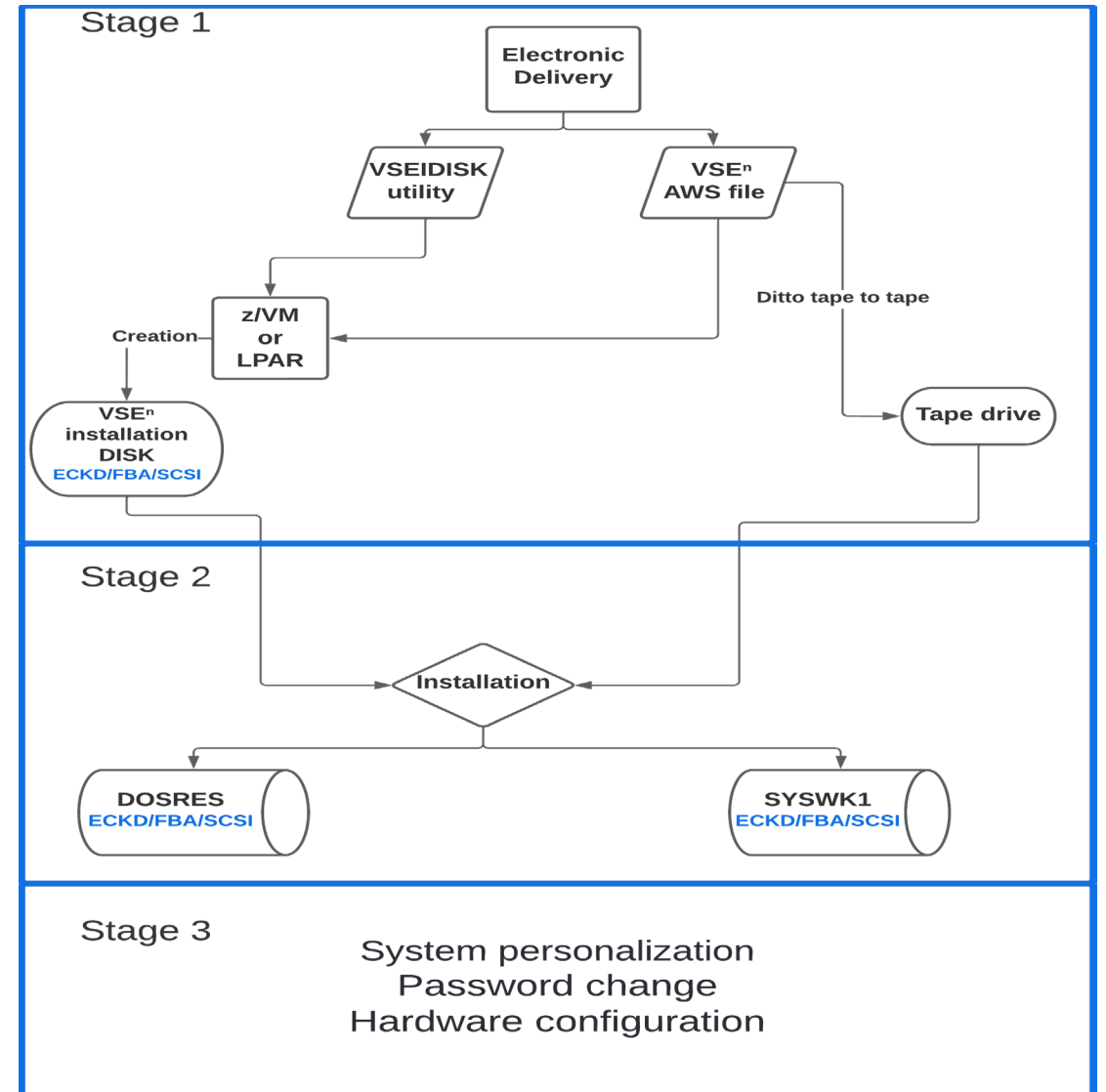


5. No Additional Cost — VSE[®] 6.4 is available at no additional charge for existing VSE[®] 6.3 customers.

Installation Processes

There are 3 stages to Installation

- Creating Installation Disk
- Installing
- System Personalization/Customization



Stage I: Creating an Installation Disk



Step 1 — Navigate in Box

Folder: 21CS VSEn 6.4 GA
Subfolder: Base AWS Image + Inst Disk Utilities
Inside: VSEN640.AWS
VSEN640_Install_KIT.zip

✓ Select both items and click Download

- VSEIDISK.EXEC
VSEIDISK.HELPCMS
VSEIDISK.MODULE

For IBM z/VM installation
- VSEN640.INS
VSEN640.IPL
VSEN640.PSW
VSEN640D.INS
VSEN640D.LP
VSEN640I.INS
VSEN640I.LP
VSEN640ID.INS
VSEN640ID.LP
install_instructions.txt

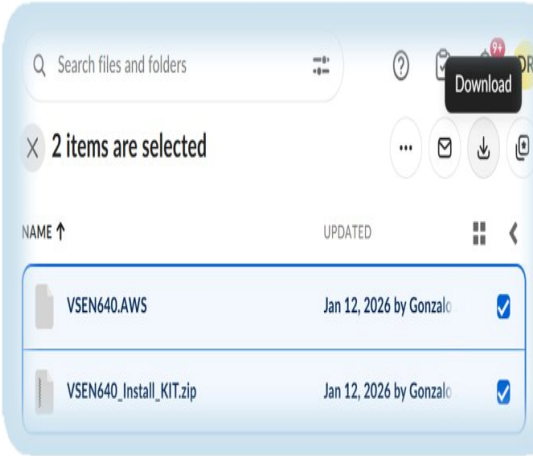
For native LPAR installation

Step 2 — Extract

- 1. Extract Base AWS Image + Inst Disk Utilities
- 2. Extract VSEN640_Install_KIT

Files needed to create the installation disk under IBM z/VM

File	Description
VSEN640.AWS	VSE ⁿ base tape in AWS format.
VSEIDISK.EXEC	REXX script to create a VSE ⁿ installation disk in an IBM z/VM CMS environment.
VSEIDISK.MODULE	Utility program to create a VSE ⁿ installation disk in an IBM z/VM CMS environment.
VSEIDISK.HELPCMS	Help text in standard IBM z/VM CMS format.



Stage I: Creating an Installation Disk(cont.)



- To create a VSEⁿ Installation Disk under IBM z/VM it is recommended to provide two minidisks. (193 and 194 will be used for this presentation)
- At least 400 cylinders are needed of a 3390 CMS formatted disk to accomodate the upload of the VSEIDISK utility programs and the VSEN640.AWS installation tape file.
- The second minidisk will be the installation disk.
- The creation of the second minidisk, or the VSEⁿ installation disk, is done by running the utility programs and the AWS installation tape uploaded to the first minidisk.
- See more infromation about this topic in **VSEⁿ Version 6 Release 4 Installation** manual.

Type	Minimum Capacity
IBM 3390 DASD	500 Cylinders
FBA (IBM z/VM Virtual Disk or Emulated FBA or Minidisk)	600000 Blocks
FCP-attached SCSI	600000 Blocks

Please note: IBM 3380 DASD is not supported

Stage I: Creating an Installation Disk(cont.)

- The following files: **VSEIDISK.EXEC**, **VSEIDISK.HELPCMS** and **VSEIDISK.MODULE** extracted from the VSEⁿ Install Kit ZIP file and the **VSEN640.AWS** installation tape file, should be binary uploaded to the first disk that is CMS formatted.
- There are two ways to upload the files to the CMS minidisk:
 1. Via IND\$FILE by using the the 3270 emulator UPLOAD function as a **BINARY** file.
 2. Via FTP binary transfer by using the **BINARY** mode.
- The binary and record format options should be carefully observed to avoid losing the required characteristics of the files.

Stage I: Creating an Installation Disk(cont.)



- After uploading the files it is necessary to deblock the VSEIDISK files in CMS:
 - `PIPE < VSEIDISK MODULE W | DEBLOCK CMS | > VSEIDISK MODULE W`
 - `PIPE < VSEIDISK EXEC W | DEBLOCK CMS | > VSEIDISK EXEC W`
 - `PIPE < VSEIDISK HELPCMS W | DEBLOCK CMS | > VSEIDISK HELPCMS W`
- Replace the filemode `W` in the commands above with the proper filemode in which the VSEIDISK programs are uploaded.
- After deblocking the files, they should have the following characteristics:

Cmd	Filename	Filetype	Fm	Format	Lrecl	Records	Blocks	Date	Time
	VSEIDISK MODULE	W1	V		32768	4	26	5/18/26	5:49:41
	VSEIDISK HELPCMS	W1	V		12720	1	4	5/18/26	5:49:34
	VSEIDISK EXEC	W1	V		13952	2	5	5/18/26	5:49:26
	VSEN640 AWS	W1	V		32768	8013	64103	5/18/26	5:49:02



Cmd	Filename	Filetype	Fm	Format	Lrecl	Records	Blocks	Date	Time
	VSEIDISK EXEC	W1	V		13952	2	5	5/18/26	6:08:08
	VSEIDISK HELPCMS	W1	V		12720	1	4	5/18/26	6:07:57
	VSEIDISK MODULE	W1	V		32768	5	26	5/18/26	6:07:50
	VSEN640 AWS	W1	V		32768	8013	64103	5/18/26	5:49:02



Cmd	Filename	Filetype	Fm	Format	Lrecl	Records	Blocks	Date	Time
	VSEIDISK HELPCMS	W1	V		80	155	4	5/18/26	6:10:58
	VSEIDISK EXEC	W1	V		80	703	5	5/18/26	6:10:34
	VSEIDISK MODULE	W1	V		65535	4	26	5/18/26	6:10:07
	VSEN640 AWS	W1	V		32768	8013	64103	5/18/26	5:49:02

1= Help 2= Refresh 3= Quit 4= Sort(type) 5= Sort(date) 6= Sort(size)
7= Backward 8= Forward 9= FL /n 10= 11= XEDIT/LIST 12= Cursor

====> `PIPE < VSEIDISK MODULE W | deblock cms | > VSEIDISK MODULE W`

Stage I: Creating an Installation Disk(cont.)

- To create the the VSEⁿ installation disk on the second 3390 disk allocated with 600 cylinders (assuming **194** as the target disk number), the following command should be done:
- Where VSEN640 AWS W are respectively the fn, ft and fm of the AWS file in the 193 disk attached as W, 194 is the destination disk.
- **VSEIDISK VSEN640 AWS W 194**

- **Disk 194** serves as the installation source. Create a Virtual Machine(VM) with two disks (DOSRES and SYSWK1), link it to the 194 disk, then **IPL 194** to begin installing VSEⁿ to the target disks.
- VSEIDISK utility has some optional parameters. To see them all, just type VSEIDISK without any other parameter.

```
vseidisk vsen640 aws W 194
```

VM READ PTHVMDR



```
Ready: T=0.01/0.01 06:11:54  
VSEIDISK VSEN640 AWS W 194  
IDSK151D REPLY 'CONTINUE' TO ALTER DASD 194, ELSE 'CANCEL'
```

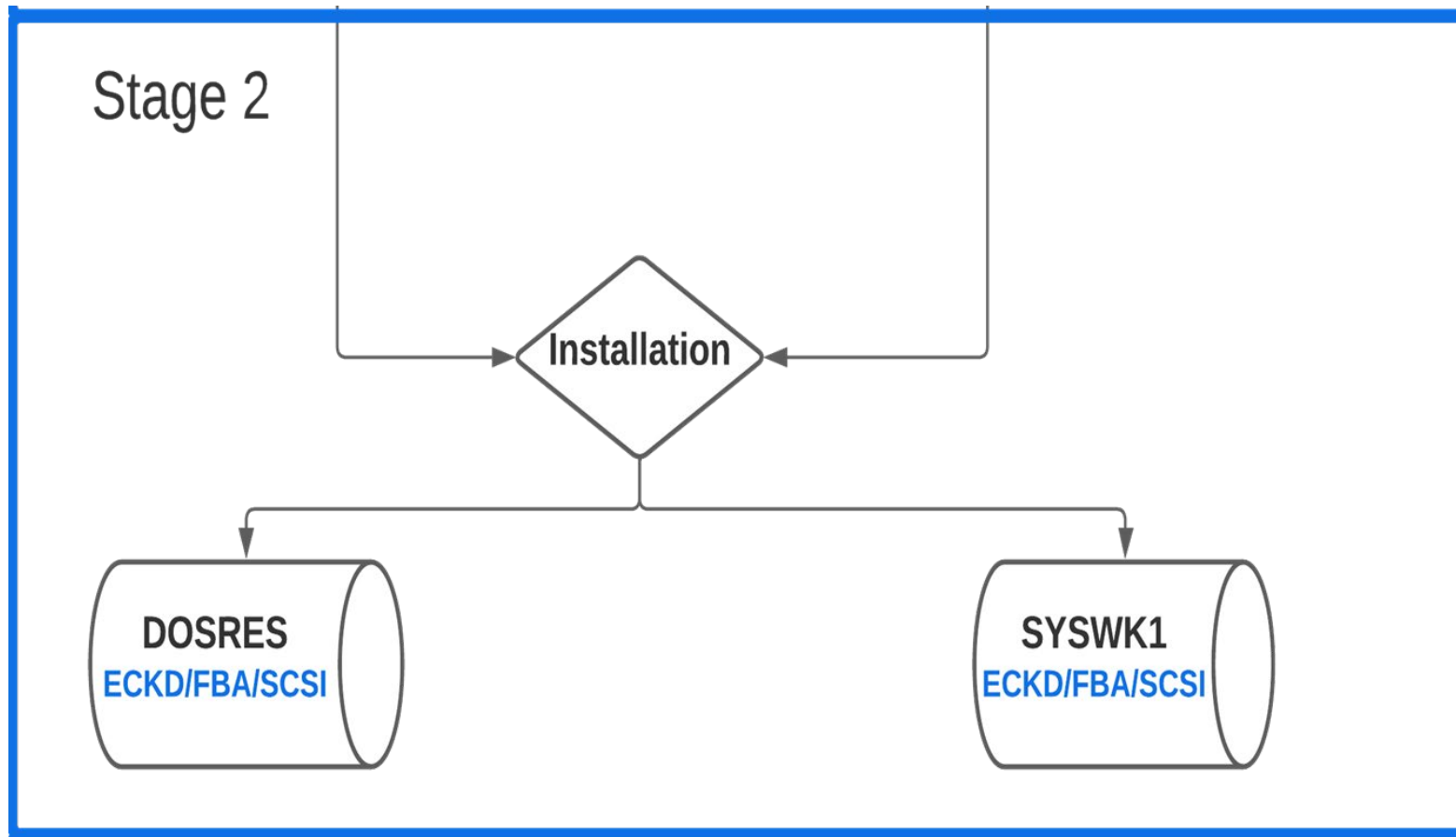


continue_

```
IDSK009I WRITING TAPE IMAGE TO DISK ...  
IDSK009I VSEn INSTALLATION DISK CREATED SUCCESSFULLY  
Ready; T=0.10/0.58 06:12:43
```

VM READ PTHVMDR

Stage II: Installing



Stage II: Installing(cont.) – Automatic or Manual, Printer, Disk Type, Disk Selection

```
SYSTEM: VSEn VSEn 6.4 TURBO (01) USER: SYS
VM USER ID:PTHVSE80 TIME: 00:13:16
BG-0000 SI01D DO YOU WANT TO DO AN AUTOMATIC INSTALLATION (YES/NO)?

==> _

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
Mâ F 20/006
```

```
SYSTEM: VSEn VSEn 6.4 TURBO (01) USER: SYS
VM USER ID:PTHVSE80 TIME: 00:15:44
BG-0000 SI01D DO YOU WANT TO DO AN AUTOMATIC INSTALLATION (YES/NO)?
0 yes
BG-0000 SA02D IF YOU WANT A LISTING, SPECIFY PCUU OF PRINTER, ELSE (ENTER)

==> 0 00e_

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
Mâ F 20/011
```

```
SYSTEM: VSEn VSEn 6.4 TURBO (01) USER: SYS
VM USER ID:PTHVSE80 TIME: 00:16:29
BG-0000 SI01D DO YOU WANT TO DO AN AUTOMATIC INSTALLATION (YES/NO)?
0 yes
BG-0000 SA02D IF YOU WANT A LISTING, SPECIFY PCUU OF PRINTER, ELSE (ENTER)
0 00e
BG-0000 SI70D IF YOU WANT TO INSTALL VSEn ON SCSI SPECIFY YES, ELSE NO
0 no
BG-0000 SI02D ENTER PCUU OF DOSRES

==> _

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
Mâ F 20/006
```

Stage II: Installing(cont.) – Disk Selection, Confirmation



```
SYSTEM: VSEn VSEn 6.4 TURBO (01) USER: SYS
VM USER ID: PTHVSE80 TIME: 00:17:48
BG-0000 SI01D DO YOU WANT TO DO AN AUTOMATIC INSTALLATION (YES/NO)?
0 yes
BG-0000 SA02D IF YOU WANT A LISTING, SPECIFY PCUU OF PRINTER, ELSE (ENTER)
0 00e
BG-0000 SI70D IF YOU WANT TO INSTALL VSEn ON SCSI SPECIFY YES, ELSE NO
0 no
BG-0000 SI02D ENTER PCUU OF DOSRES
0 240
BG-0000 SI03D ENTER PCUU OF SYSWK1

==> 0 241_

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
Mâ F 20/011
```

```
SYSTEM: VSEn VSEn 6.4 TURBO (01) USER: SYS
VM USER ID: PTHVSE80 TIME: 00:18:12
BG-0000 SI01D DO YOU WANT TO DO AN AUTOMATIC INSTALLATION (YES/NO)?
0 yes
BG-0000 SA02D IF YOU WANT A LISTING, SPECIFY PCUU OF PRINTER, ELSE (ENTER)
0 00e
BG-0000 SI70D IF YOU WANT TO INSTALL VSEn ON SCSI SPECIFY YES, ELSE NO
0 no
BG-0000 SI02D ENTER PCUU OF DOSRES
0 240
BG-0000 SI03D ENTER PCUU OF SYSWK1
0 241
BG 0000 SI08I DOSRES IS 240, DEVICE TYPE ECKD
BG 0000 SI09I SYSWK1 IS 241, DEVICE TYPE ECKD
BG-0000 SI10D START WITH AUTOMATIC INSTALLATION (YES/NO)?

==> 0 yes_

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
Mâ F 20/011
```

Stage II: Installing(cont.) – IPL From DOSRES

```
0I04I IPLDEV=X'0240',VOLSER=DOSRES,CPUID=  
0J65I TURBO DISPATCHER ACTIVATED
```



Stage II: Installing(cont.) – License Key Input



```
SYSTEM:  VSEn          VSEn 6.4          TURBO (01)          USER:  SYS
VM USER ID: PTHVSE80          TIME:  16:18:45
BG 0000          31-BIT SYSTEM GETVIS AREA ROUNDED BY 832K
BG 0000 0J73I ACTUAL NUMBER OF USER SDL ENTRIES IS 716
AR 0030 VMCF10I CMS-VSEn CONSOLE INTERFACE ACTIVATED
BG 0000 0J39I ACTUAL BUFSIZE IS 1502
BG 0000 0J83I ACTUAL SYSTEM TIME ZONE=EAST/08/00,WAT
BG-0000 0K01A Enter VSEn License Key (alphanumeric only):

==> 0 WelcomeToMyPresentationOnVSEn6.4JoinsUs!!!!!!_
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
_
```

Stage II: Installing(cont.) – TCP/IP, Environment, Security Selection



```
SYSTEM: VSEn          VSEn 6.4          TURBO (01)          USER:  SYS
VM USER ID:PTHVSE80          TIME:  00:21:29
BG 0000 EOJ BGINIT          MAX.RETURN CODE=0000
          DATE 06/05/2026, CLOCK 00/21/27, DURATION  00/00/04
BG 0001 1Q47I          BG INSTALL 00002 FROM (SYSA) , TIME= 0:21:27 , TKN=00000002
BG 0000 // JOB INSTALL VSEN INSTALL PROGRAM
          DATE 06/05/2026, CLOCK 00/21/27
BG-0000 IESI0051D DO YOU WANT TO CONFIGURE TCP/IP DURING INITIAL STARTUP?
YES/NO

==> 0 no_

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
-
MÂ  F          20/010
```

```
SYSTEM: VSEn          VSEn 6.4          TURBO (01)          USER:  SYS
VM USER ID:PTHVSE80          TIME:  00:22:03
BG 0000 EOJ BGINIT          MAX.RETURN CODE=0000
          DATE 06/05/2026, CLOCK 00/21/27, DURATION  00/00/04
BG 0001 1Q47I          BG INSTALL 00002 FROM (SYSA) , TIME= 0:21:27 , TKN=00000002
BG 0000 // JOB INSTALL VSEN INSTALL PROGRAM
          DATE 06/05/2026, CLOCK 00/21/27
BG-0000 IESI0051D DO YOU WANT TO CONFIGURE TCP/IP DURING INITIAL STARTUP?
YES/NO
0 no
BG-0000 IESI0078D SELECT AN ENVIRONMENT OUT OF A (SMALL), B (MEDIUM) OR C
(LARGE).

==> 0 b_

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
-
MÂ  F          20/009
```

```
SYSTEM: VSEn          VSEn 6.4          TURBO (01)          USER:  SYS
VM USER ID:PTHVSE80          TIME:  00:22:35
BG 0000 EOJ BGINIT          MAX.RETURN CODE=0000
          DATE 06/05/2026, CLOCK 00/21/27, DURATION  00/00/04
BG 0001 1Q47I          BG INSTALL 00002 FROM (SYSA) , TIME= 0:21:27 , TKN=00000002
BG 0000 // JOB INSTALL VSEN INSTALL PROGRAM
          DATE 06/05/2026, CLOCK 00/21/27
BG-0000 IESI0051D DO YOU WANT TO CONFIGURE TCP/IP DURING INITIAL STARTUP?
YES/NO
0 no
BG-0000 IESI0078D SELECT AN ENVIRONMENT OUT OF A (SMALL), B (MEDIUM) OR C
(LARGE).
0 b
BG-0000 IESI0079D DO YOU WANT TO RUN YOUR SYSTEM WITH SECURITY ON? YES/NO
0 no
BG-0000 IESI0062D CHECK YOUR ANSWERS. DO YOU WANT TO CONTINUE? YES/NO

==> 0 yes_

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
-
MÂ  F          20/011
```

Stage II: Installing(cont.) – SNA, Terminal Selections



```
SYSTEM: VSEn VSEn 6.4 TURBO (01) USER: SYS
VM USER ID: PTHVSE80 TIME: 00:22:57
BG 0000 E0J BGINIT MAX.RETURN CODE=0000
DATE 06/05/2026, CLOCK 00/21/27, DURATION 00/00/04
BG 0001 1Q47I BG INSTALL 00002 FROM (SYSA), TIME= 0:21:27, TKN=00000002
BG 0000 // JOB INSTALL VSEN INSTALL PROGRAM
DATE 06/05/2026, CLOCK 00/21/27
BG-0000 IESIO051D DO YOU WANT TO CONFIGURE TCP/IP DURING INITIAL STARTUP?
YES/NO
0 no
BG-0000 IESIO078D SELECT AN ENVIRONMENT OUT OF A (SMALL), B (MEDIUM) OR C
(LARGE).
0 b
BG-0000 IESIO079D DO YOU WANT TO RUN YOUR SYSTEM WITH SECURITY ON? YES/NO
0 no
BG-0000 IESIO062D CHECK YOUR ANSWERS. DO YOU WANT TO CONTINUE? YES/NO
0 yes
BG-0000 IESIO065D IS THE LOCAL CONTROL UNIT AN SNA CU? YES/NO

==> 0 no_

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
```

```
SYSTEM: VSEn VSEn 6.4 TURBO (01) USER: SYS
VM USER ID: PTHVSE80 TIME: 00:23:40
0 no
BG 0000 IESIO064I DEFINE UP TO 3 LOCAL VCDD TERMINALS
BG-0000 IESIO059D ENTER A 3270 ADDRESS (PCUU) OR "END"
0 080
BG-0000 IESIO059D ENTER A 3270 ADDRESS (PCUU) OR "END"

==> 0 081_

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
```

```
SYSTEM: VSEn VSEn 6.4 TURBO (01) USER: SYS
VM USER ID: PTHVSE80 TIME: 00:24:42
0 no
BG 0000 IESIO064I DEFINE UP TO 3 LOCAL VCDD TERMINALS
BG-0000 IESIO059D ENTER A 3270 ADDRESS (PCUU) OR "END"
0 080
BG-0000 IESIO059D ENTER A 3270 ADDRESS (PCUU) OR "END"
0 081
BG-0000 IESIO059D ENTER A 3270 ADDRESS (PCUU) OR "END"
0 082
BG-0000 IESIO062D CHECK YOUR ANSWERS. DO YOU WANT TO CONTINUE? YES/NO

==> 0 yes_

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
```

Stage II: Installing(cont.) – Completion of Initial Installing Processing



- Completion of Initial Installation Processing.
The job **CLEANUP** completes initial installation processing. Messages from job CLEANUP might be displayed, together with messages from the OLTP/ICCF startup job.

```
SYSTEM:  VSEn          VSEn 6.4          TURBO (01)          USER:  SYS
VM USER  ID:PTHVSE80          TIME:  00:26:31
BG 0000 *   INSTALL PROCESS MUST BE PERFORMED USING THE VSEn DIALOGS
BG 0000 *
BG 0000 EOJ CLEANUP    MAX.RETURN CODE=0000
          DATE 06/05/2026, CLOCK 00/26/24, DURATION    00/00/00
BG 0001 1Q34I    BG WAITING FOR WORK

==> _

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  F  20/006
```

Stage III: Personalization/Customization



Since we installed under z/VM, we dial into one of our 3 terminals that we defined earlier.

(Where XX is the VSEn Guest user number example VSEN02, VSEN03 and so on.)

```
z/VM ONLINE

      / VV      VVV MM      MM
      / VV      VVV MMM      MMM
ZZZZZZ / VV      VVV MMMM      MMMM
      ZZ / VV      VVV      MM MM MM MM
      ZZ / VV VVV      MM      MMM MM
      ZZ / VVVV      MM      M      MM
      ZZ / VV      MM      MM
ZZZZZZ / V      MM      MM

      built on IBM Virtualization Technology

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

COMMAND ==> d vsenXX 080 _

RUNNING PTHVMDR
```

Stage III Personalization/Customization (cont.): - VSEⁿ Sign on Panel

- Sign on to the system from the VSEⁿ SIGN ON panel using the predefined
- user ID POST and the password BASE.
- USER-ID..... POST
- PASSWORD..... BASE

```

IESADMS01                                VSEn ONLINE
5609-VSE and Other Materials (C) Copyright IBM Corp. 2016 and other dates
2121-VN6 (c) Copyright 21st Century Software, Inc. 2022

      VV  VV  SSSSS  EEEEEEE  nn  nn
      VV  VV  SSSSSSS  EEEEEEE  nnnnnnn
      VV  VV  SS      EE      nn  nn
      VV  VV  SSSSSSS  EEEEEEE  nn  nn
      VV  VV  SSSSSSS  EEEEEEE  nn  nn
      VV  VV      SS      EE
      VVV  SSSSSSS  EEEEEEE
      VV      SSSSS  EEEEEEE

Your terminal is L304 and its name in the network is D72L304
Today is 06/07/2022 To sign on to DBDCCICS -- enter your:

USER-ID..... POST_      The name by which the system knows you.
PASSWORD..... -         Your personal access code.

PF1=HELP      2=TUTORIAL      4=REMOTE APPLICATIONS
                                10=NEW PASSWORD
  
```

Stage III Personalization/Customization (cont.): - Personalizing the History File

- Type in your name, address and telephone number in the required fields.
- In the last field, type in the name of the person who is responsible for maintaining the system.
- This is usually the system administrator. After entering all required information, press ENTER.

```
ADM$FST5          COMPLETE INITIAL INSTALLATION

Enter the required data and press ENTER.

This panel accepts information for your System History File.
This information uniquely identifies your installation, and is placed in the
general header record of the history file.

CUSTOMER NAME ....
ADDRESS .....
PHONE NUMBER .....
PROGRAMMER NAME ..

PF1=HELP      2=REDISPLAY  3=END
```

Stage III Personalization/Customization (cont.): -Initial Installation Complete

```
ADM$MAS2                COMPLETE INITIAL INSTALLATION                Page 001  of 001

Initial Installation is complete.

- Final Housekeeping is finished.

- An MSHP job stream has been submitted to:
  - Add your installation data to the History File.
  - Print a Retrace History Report.

- Hardware Configuration table has been validated.

Press ENTER and continue as directed in VSEN 6.4
Installation Guide.

PF3=END

USE ONLY THE ENTER KEY OR ONE OF THE KEYS LISTED ABOVE.
```

Stage III Personalization/Customization (cont.): -Initial Installation Complete

```
IESADMS01                                VSEn ONLINE
5609-VSE and Other Materials (C) Copyright IBM Corp. 2016 and other dates
2121-VN6 (c) Copyright 21st Century Software, Inc. 2022

      VV   VV   SSSSS   EEEEEEE   nn  nn
      VV   VV   SSSSSSS  EEEEEEE   nnnnnnnn
      VV   VV   SS      EE         nn   nn
      VV   VV   SSSSSSS  EEEEEEE   nn   nn
      VV   VV   SSSSSSS  EEEEEEE   nn   nn
      VV   VV   SS      EE
      VVVV   SSSSSSSS  EEEEEEE
      VV     SSSSS   EEEEEEE

Your terminal is L304 and its name in the network is D72L304
Today is 06/07/2022 To sign on to DBDCCICS -- enter your:

USER-ID..... SYSA_____ The name by which the system knows you.
PASSWORD..... _         Your personal access code.

PF1=HELP      2=TUTORIAL      4=REMOTE APPLICATIONS
                  10=NEW PASSWORD

M A  A  19/029
```

USER-ID..... SYSA
PASSWORD..... SYSA
Enter
You are now requested
to change the
password the press
Enter

```
IESADMS02                                VSEn SIGN-ON WITH NEW PASSWORD

Enter your new password in both places below then enter your current
password for sign-on verification.
Then press the ENTER key.

NEW PASSWORD ==>                3 - 8 characters

NEW PASSWORD ==>                Re-Enter new password for verification

OLD PASSWORD ==>                _         Current password

PF1=HELP                                3=END

YOUR PASSWORD HAS EXPIRED. SPECIFY A NEW TO SIGN-ON TO VSEn.

M A  A  11/029
```


Stage III Personalization/Customization (cont.): - Hardware



- If the column DEVICE is marked by a question mark “?”, the device type is missing and you must specify it using OPTION 1.

```
ADM$HDWF          HARDWARE CONFIGURATION: UNIDENTIFIED DEVICE LIST

OPTIONS:  1 = DEFINE A DEVICE      5 = DELETE A DEVICE
          6 = ALTER MAPPING
          '=' = REPEAT LAST DEFINED DEVICE

  OPT   VSEn  PHYSICAL  DEVICE  DEVICE TYPE  DEVICE  SPECIFICATION
        ADDR  ADDR      CODE          (MODE)

  1     009   0009      3270CONS  3277
  1     01F   001F      3270CONS  3277
  1     080   0080      24X80Q    3277
  1     081   0081      24X80Q    3277
  1     082   0082      24X80Q    3277

  -
  -
  -
  -
  -
PF1=HELP      2=REDISPLAY  3=END                      5=PROCESS
```

Stage III Personalization/Customization (cont.): - Hardware

- PF5 to process your input
- The system displays the panel shown in Hardware Configuration: Unit Address List (Information Added). This panel contains the information you added.

ADM\$HDWB HARDWARE CONFIGURATION: UNIT ADDRESS LIST

OPTIONS: 2 = ALTER DEVICE TYPE CODE/MODE 3 = SELECT FOR FURTHER PROCESSING
4 = LIST SIMILAR DEVICES 5 = DELETE A DEVICE

OPT	VSEn ADDR	PHYSICAL ADDR	DEVICE	DTYPE CODE	DEVICE MODE	DEVICE DOWN	DEF INCOMPL
—	001	8F00	FCP	FCP			
—	009	0009	3270CONS	3277			
—	00C	000C	2540-R	2540R			
—	00D	000D	2540-P	2540P			
—	00E	000E	1403	1403			
—	01F	001F	3270CONS	3277			
—	080	0080	24X80Q	3277			
—	081	0081	24X80Q	3277			
—	082	0082	24X80Q	3277			
—	083	0083	24X80Q	3277			

POSITION NEAR ADDR == >

PF1=HELP 2=REDISPLAY 3=END 5=PROCESS 6=ADD ADDR
8=FORWARD 9=PRINT 10=SORT PHY

THE DEVICES ARE SORTED BY THE VSEn ADDRESS.

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Stage III Personalization/Customization (cont.): - Hardware



- Press PF5 again to process your input and display the following panel
The system displays the panel shown in Hardware Configuration: Unit Address List (Information Added). This panel contains the information you added.
- This Panel will generate a job called Startup which catalogs the changes into the ipl procedure \$IPLESA.
- Press enter and then shutdown your system and reipl.

```
ADM$CRE1      HARDWARE CONFIGURATION: CATALOG STARTUP MEMBERS

Press ENTER to catalog the objects marked by an X. You may add or delete
an X as needed.

      X      IPL Procedures
      X      VCDD Book with Startup Options
      X      VCDD Books for Model Terminal Support
      X      VCDD Book for Local Non-SNA Terminals
      -      VCDD Book Local SNA Terminals
      -      VCDD Books for OSA or 3172 attached Terminals
      X      OLTP CSD Group for terminals-VSETERM1
      -      OLTP CSD Group for terminals-VSETERM2
      -      OLTP CSD Group for terminals-VSETERM3

PF1=HELP      2=REDISPLAY  3=END

IPLPROC ATCSTR00 VTAM CSD      SOURCE CREATED.
```

```
SUB$PR05      JOB DISPOSITION

Enter the required data and press ENTER.

JOB DESTINATION..... 3      Enter 1 to submit the job to batch.
                                Enter 2 to file in library.
                                Enter 3 to do both.
JOB NAME..... STARTUP      The name under which the job will be
                                saved in VSEn/ICCF.
PRIORITY..... 3      Priority 0-9 for this job.
CLASS..... *      Changing * has no effect.
DISPOSITION..... D      D,H,K or L. Changing * has no effect.
JOB ACCOUNTING.....
HOLD LIST IN QUEUE..... 2      Enter 1 to hold output in list queue.
                                Enter 2 to print output immediately
TIME EVENT SCHEDULING..... 2      Enter 1 if TIME EVENT SCHEDULING
                                required, otherwise enter 2.
OTHER PARAMETERS..... 2      Enter 1 to change any other POWER JOB
                                parameters, otherwise enter 2.

PF1=HELP      2=REDISPLAY  3=END
```

Stage III Personalization/Customization (cont.): - Hardware

- Shut down OLTP for VSEⁿ as follows: MSG F2,DATA='CEMT P SHUT I'
- Shut down VCDD for VSEⁿ as follows: Z NET,QUICK
- Shut down VSEⁿ/POWER as follows: PEND
- REIPL from DOSRES as follows: REIPL CUU

Agenda

INSTALLATION

FSU (FAST
SERVICE
UPGRADE)

SYSTEM
LICENSE KEY

Motives

When is FSU possible?

- VSEn 6.1, VSEn 6.2, VSEn 6.3.0, and VSEn 6.3.1 FSU is possible
- No change of the system disk architecture (DOSRES, SYSWK1)
- An English system language
- No Switch from the 2-digit subarea naming convention to the 4-digit subarea naming convention.

FSU Processing and Space Requirements

- Library structure names: IJSYSRS.SYSLIB, PRD1.*, PRD2.CONFIG, PRD2.SAVE, PRD2.SCEEBASE, PRD2.TCPIPC, PRD2.TCPIPB
- System volumes names must be DOSRES and SYSWK1
- The Master and User catalog must be available
- Check if there is enough VSAM space available

Considerations with Fast Service Upgrade

- Don't modify members in the ICCF system libraries
- Don't delete the user "AAAA"
- Don't save or copy members of IJSYSRS into PRD2.SAVE
- Don't save your own generated Power phases in PRD2.CONFIG or PRD2.SAVE
- PRD2.SAVE must not contain any phases
- Prior to initiating the FSU from VSEn 6.3.0 to VSEn 6.4, uninstall SMDMMU (DITTO). Since DITTO is an optional product in VSEn 6.3.0, failing to remove it beforehand may result in library catalog conflicts.

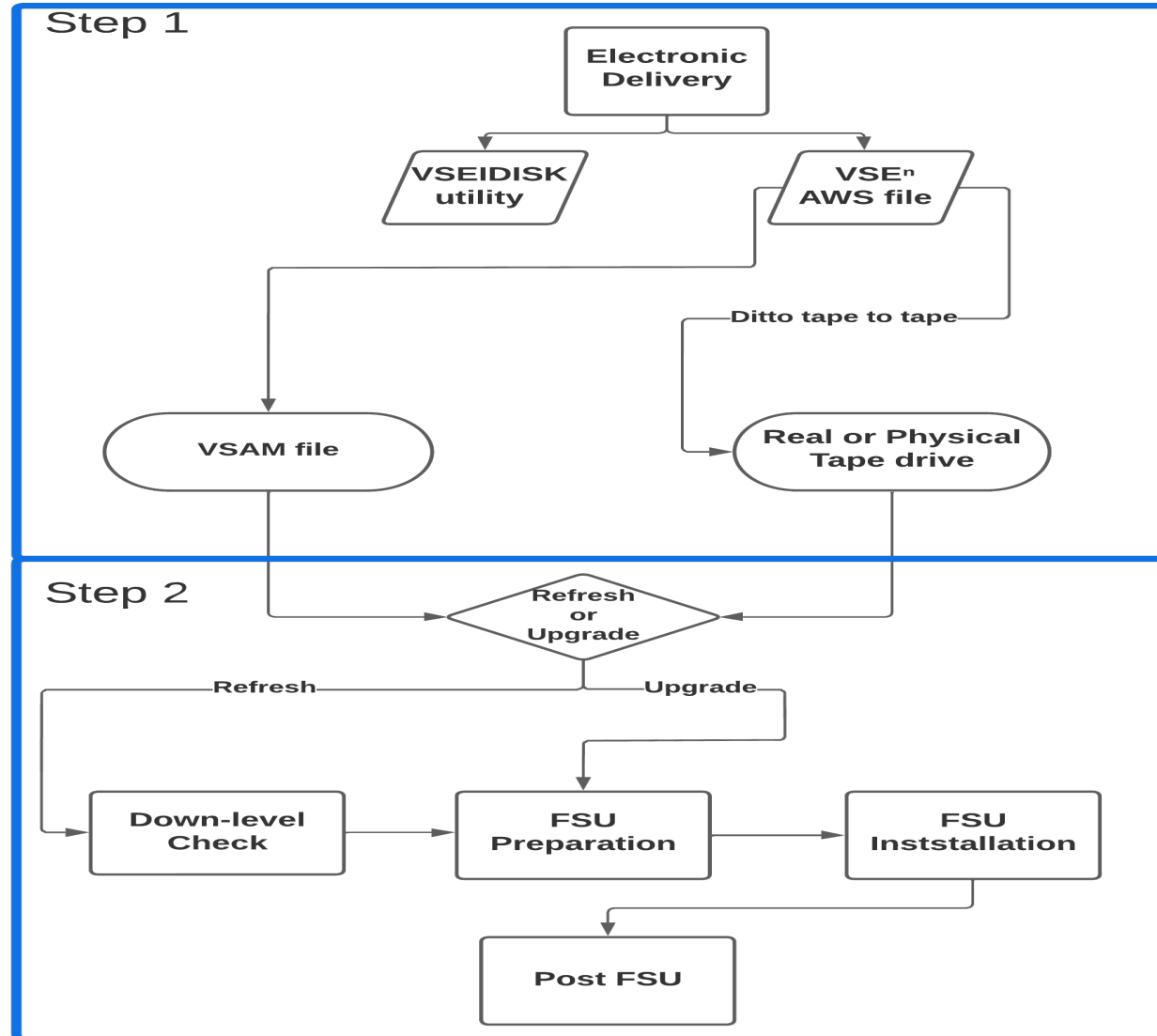
Backups

- DOSRES
- SYSWK1
- DITSECUR.PHASE and DITSECUR.A (if you have created your own)

Tasks

- After FSU:
 - Order VSEⁿ optional programs and install them after FSU

Tape Preparation



Prepare FSU from a Real Tape

- Connection to a tape library
- Copy the tape image into a volume
- Mount the volume with LIBSERV

Prepare FSU from a VSAM Virtual Tape File

- Need LFP or TCPIP
- Define two tape units with the type 3490E (for SKVTACPY)
- Define VSAM space in the user catalog
- Connector Tool: VTAPE Server up and running
- Create a virtual tape file with SKVTAPE in ICCF 59
- Use SKVTASTJ in ICCF 59 to catalog TAPESRVR and LDVTA, then load TAPESRVR

Continued

Now the tape image can be transferred into a VSAM file with one of the following methods:

- Using FTP with TCP/IP
- Using IND\$FILE transfer to a host transfer file (not recommended)

FSU Stages

1. Down-level Check
2. FSU Preparation
3. FSU Installation

Down-level Check

Version or Release Upgrade	Service Refresh
Do not perform a down-level check	Perform a down-level check Your current system status is checked and compared with the refresh level. This step does not change your system.

- IJSYSRS.SYSLIB
- PRD1.BASE PRD1.MACLIB
- PRD2.SCEEBASE PRD2.GEN1 PRD2.TCPIPC PRD2.TCPIPB
- For example, a Down-level check would be done if 6.4.0 is already installed and 6.4.1 is planning on installing

FSU Preparation

Version or Release Upgrade	Service Refresh
Perform the FSU preparation A job stream is created which restores the latest level of the FSU function from tape. In this case, it is the FSU function from the new VSE ⁿ system.	Perform the FSU preparation A job stream is created which restores the latest level of the FSU function from tape.

- 1. DTRSTFSU:** Builds the Job Manager environment.
- 2. DTRFSU02:** Loads the FSU program into IJSYSRS.SYSLIB.
- 3. DTRFSU03:** Loads FSU skeletons into VSEⁿ/ICCF library.
- 4. DTRFSU04:** Job Manager Environment clean up.
- 5. DTRCLFSU:** Does a final clean up, and connect the DTSTFILE.

Do not run the FSU Installation dialog until these jobs have completed successfully

Continued



Fast Path 1432
Enter Tape Unit Address and Choose if Virtual Tape
Press Enter once done

SRV\$FS01		FAST SERVICE UPGRADE	
Enter the required data and press ENTER.			
TAPE UNIT ADDRESS.....		181	For a list of valid addresses see HELP
VIRTUAL TAPE.....		1	Enter 1 if FSU is to be done from virtual (VSAM) tape, enter 2 if a real tape is used.
			Virtual tape is only possible if the installation tape is loaded to VSAM. If virtual tape is selected, enter the VSAM file name:
VSAM FILE NAME.....		VTAPE1	Unique name of the VSAM file
PF1=HELP 2=REDISPLAY 3=END			

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Continued



Press Enter once everything is selected correctly

SUB\$PR05		JOB DISPOSITION
Enter the required data and press ENTER.		
JOB DESTINATION.....	3	Enter 1 to submit the job to batch. Enter 2 to file in library. Enter 3 to do both.
JOB NAME.....	FSUPREP	The name under which the job will be saved in VSE/ICCF.
PRIORITY.....	9	Priority 0-9 for this job.
CLASS.....	0	Changing * has no effect.
DISPOSITION.....	*	D,H,K or L. Changing * has no effect.
JOB ACCOUNTING.....		
HOLD LIST IN QUEUE.....	2	Enter 1 to hold output in list queue. Enter 2 to print output immediately
TIME EVENT SCHEDULING.....	2	Enter 1 if TIME EVENT SCHEDULING required, otherwise enter 2.
OTHER PARAMETERS.....	2	Enter 1 to change any other POWER JOB parameters, otherwise enter 2.
PF1=HELP 2=REDISPLAY 3=END		
A JOB MANAGED SEQUENCE IS GENERATED => JOBNAME-PREFIX "DTR" IS USED		

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Continued



```
SYSTEM:  z/VSE                      z/VSE 6.1          TURBO (01)      USER:  SYS
VM USER  ID:PTHVSE80                      TIME:  14:51:40
BG 0000 *          TO CONTINUE   THIS JOB DESTROYING THE CURRENT JOBSEQUENCE
BG 0000 *          REPLY "(END/ENTER)"  AT THE FOLLOWING PAUSE-STATEMENT.
BG 0000 *
BG 0000 * -----
BG-0000 // PAUSE
0
BG 0000 EOJ DTRSTFSU  MAX.RETURN CODE=0004
          DATE 06/08/2026, CLOCK 14/50/52, DURATION   00/00/31
BG 0001 1Q47I  BG DTRFSU02 00146 FROM (SYSA) , TIME=14:50:52 , TKN=00000037
BG 0000 // JOB DTRFSU02
          DATE 06/08/2026, CLOCK 14/50/52
BG 0000 * -----
BG 0000 * STEP 02:  RESTORE FSU PROGRAM SRV$FSU INTO IJSYSRS.SYSLIB
BG 0000 * -----
BG 0000 *          1)  MOUNT NEW TAPE Z/VSE X.X.X-YY ON TAPE-DRIVE 220
BG 0000 *          AND REPLY "(END/ENTER)" TO CONTINUE
BG 0000 * -----
==> _

1=HLP 2=CPY 3=END          6=CNCL 7=BWD 8=FWD 9=EXPL 10=INP 11=PCUU 12=INFO
FILTER:  ALL              BWD                      MODE:  REDISPLAY
MA  C                                                              20/006
```

```
SYSTEM:  z/VSE                      z/VSE 6.2          TURBO (01)      USER:  SYS
TIME:  10:44:37
R1 0045 * // OPTION SVABUF=YES
R1 0045 * // OPTION LRGBUF=YES
BG 0000 1YM4I  TAPE DATA HANDLER INITIALIZATION COMPLETED
BG 0000 1YM6I  TAPE DATA HANDLER ACCESSED SPECIFIED FILE SUCCESSFULLY
BG-0000 // PAUSE  VIRTUAL TAPE READY?

==> 0

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
MA  F                                                              20/006
```

```
SYSTEM:  z/VSE                      z/VSE 6.1          TURBO (01)          USER:  SYS
VM USER ID: PTHVSE80                TIME:  14:51:58
BG 0000 * -----
BG-0000 // PAUSE
0
BG 0000 IESIO230I MEMBER SRV$SYS.PROC DOES NOT EXIST IN LIBRARY PRD2.CONFIG .
PROCESSING CONTINUES, IN CASE OF NO ERRORS OCCUR THE MEMBER WILL BE CREATED.
BG 0000 EOJ DTRFSU02  MAX.RETURN CODE=0004
          DATE 06/08/2026, CLOCK 14/50/59, DURATION  00/00/07
BG 0001 1Q47I  BG DTRFSU03 00147 FROM (SYSA) , TIME=14:50:59 , TKN=00000038
BG 0000 // JOB DTRFSU03
          DATE 06/08/2026, CLOCK 14/50/59
BG 0000 * -----
BG 0000 * STEP 03:  RESTORE FSU RELATED ICCF MEMBERS
BG 0000 * -----
BG 0000 *          1)  EITHER  TERMINATE VSE/ICCF
BG 0000 *          OR   /DISCONN DTSFILE  BEFORE PROCESSING
BG 0000 * -----
BG-0000 // PAUSE
==> /disconn dtsfile_

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  C                                                                20/022
```

Continued

```
SYSTEM:  Z/VSE                      Z/VSE 6.1          TURBO (01)      USER:  SYS
VM USER  ID:PTHVSE80
DATE 06/08/2026, CLOCK 14/52/36, DURATION 00/00/00
BG 0001 1Q47I  BG DTRCLFSU 00149 FROM (SYSA) , TIME=14:52:36 , TKN=0000003A
BG 0000 // JOB DTRCLFSU
DATE 06/08/2026, CLOCK 14/52/36
BG 0000 * -----
BG 0000 *                               FINAL CLEANUP
BG 0000 * -----
BG 0000 *                               **      FSU PREPARATION SUCCESSFUL COMPLETED      **
BG 0000 *
BG 0000 *                               DTSFILE NO LONGER OCCUPIED, YOU MAY START VSE/ICCF
BG 0000 *                               OR      /CONN DTSFILE
BG 0000 *
BG 0000 *                               *****      NOW YOU CAN PERFORM FSU INSTALLATION      *****
BG 0000 *                               *****      PRESS ENTER TO CONTINUE      *****
BG 0000 * -----
BG-0000 // PAUSE
==> _

1=HLP 2=CPY 3=END                      6=CNCL 7=BWD 8=FWD 9=EXPL 10=INP 11=PCUU 12=INFO

FILTER:  ALL                          BWD                                MODE:  REDISPLAY
MA  C                                20/006

SYSTEM:  Z/VSE                      Z/VSE 6.1          TURBO (01)      USER:  SYS
VM USER  ID:PTHVSE80
TIME: 14:53:28
BG 0000 *                               *****      NOW YOU CAN PERFORM FSU INSTALLATION      *****
BG 0000 *                               *****      PRESS ENTER TO CONTINUE      *****
BG 0000 * -----
BG-0000 // PAUSE
/conn dtsfile
AR 0015 1C39I  COMMAND PASSED TO VSE/ICCF
F2 0125 K001I  DEVICE TYPE IS ECKD
F2 0125 K088I  HI FILE RECORDS= 740,060 (84%)
F2 0125 K019I  ICCF LIBRARY TEMPORARY AREAS NOT FREED
F2 0125 K129I  DTSFILE IS CONNECTED
0
BG 0000 EOJ DTRCLFSU  MAX.RETURN CODE=0000
DATE 06/08/2026, CLOCK 14/53/28, DURATION 00/00/51
BG 0001 1Q34I  BG WAITING FOR WORK

==> _

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
MA  C                                20/006
```

FSU Installation

Version or Release Upgrade	Service Refresh
Perform the FSU installation Your system is replaced by the new VSE ⁿ version.	Perform the FSU installation Your system is replaced by the new service refresh.

FSU installation consist of two stages:

Stage 1: Running From DOSRES

Stage 2: Running From SYSWK1

Continued

Fasth Path 1433



```
SRV$FS02                                FAST SERVICE UPGRADE

Enter the required data and press ENTER.

TAPE UNIT ADDRESS.....                For valid addresses see HELP

Enter 1 if FSU is to be done from virtual tape, else enter 2 for real
tape.
VIRTUAL TAPE..... 2                    FSU from virtual (VSAM) tape?
If virtual tape is selected, enter:
VSAM FILE NAME.....                    Unique name of the VSAM file

Enter 1 for YES and 2 for NO to the following questions.
REORGANIZE DTSFILE..... 2                Do you want to reorganize DTSFILE ?
BACKUP LIBRARIES..... 2                  Do you want to backup base libraries?
BACKUP DTSFILE..... 2                    Do you want to backup the DTSFILE ?
OWN POWER PARAMETERS..... 2              Do you have your own POWER parameters
                                         (Phase, Partition allocs, Partition
                                         size, or PFX value) ?

PF1=HELP      2=REDISPLAY  3=END
```

```
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SUB$PR05                                JOB DISPOSITION

Enter the required data and press ENTER.

JOB DESTINATION..... 3                  Enter 1 to submit the job to batch.
                                         Enter 2 to file in library.
                                         Enter 3 to do both.
JOB NAME..... DTRFSU                    The name under which the job will be
                                         saved in VSE/ICCF.
PRIORITY..... 9                          Priority 0-9 for this job.
CLASS..... 0                             Changing * has no effect.
DISPOSITION..... *                       D,H,K or L. Changing * has no effect.
JOB ACCOUNTING.....
HOLD LIST IN QUEUE..... 2                Enter 1 to hold output in list queue.
                                         Enter 2 to print output immediately
TIME EVENT SCHEDULING..... 2             Enter 1 if TIME EVENT SCHEDULING
                                         required, otherwise enter 2.
OTHER PARAMETERS..... 2                  Enter 1 to change any other POWER JOB
                                         parameters, otherwise enter 2.

PF1=HELP      2=REDISPLAY  3=END

A  JOB MANAGED SEQUENCE IS GENERATED ==> JOBNAME-PREFIX "DTR" IS USED
```

Stage 1

- Installs IJSYSR1.SYSLIB (base code and NLS) to SYSWK1 and PRD1.MACLIB
- Optionally, the generation feature into PRD2.GEN1

```
SYSTEM:      z/VSE                      z/VSE 6.1          TURBO (01)          USER:  SYS
VM USER ID: PTHVSE80                      TIME:  15:02:41
BG 0000 * STEP 11:  CHECK IF A JOBSEQUENCE IS ALREADY ACTIVE
BG 0000 * -----
BG 0000 E0J DTRSTFSU  MAX.RETURN CODE=0004
          DATE 06/08/2026, CLOCK 15/02/41, DURATION    00/00/00
BG 0001 1Q47I  BG DTRFSU14 00210 FROM (SYSA) , TIME=15:02:41 , TKN=0000004C
BG 0000 // JOB DTRFSU14
          DATE 06/08/2026, CLOCK 15/02/41
BG 0000 * -----
BG 0000 *      FSU STAGE I
BG 0000 *      THIS FAST SERVICE UPGRADE IS
BG 0000 *      FROM  Z/VSE 6.1 TO VSEn 6.4
BG 0000 *      IF ABOVE UPGRADE IS NOT EXPECTED, YOU MAY HAVE MISSED TO RUN
BG 0000 *      THE PREPARATION STEP.
BG 0000 *      REPLY  "(END/ENTER)"  TO CONTINUE THE UPGRADE, OR CANCEL
BG 0000 *      THE JOB AND RERUN THE PREPARATION STEP.
BG-0000 // PAUSE

==> _

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  C                                                                20/006
```

Continued

```

SYSTEM:  z/VSE                      z/VSE 6.1          TURBO (01)      USER:  SYS
VM USER ID:PTHVSE80                  TIME:  15:14:25
BG 0000 *          2. COPY SYSTEM-HISTORY-FILE TO WORK-HISTORY-FILE
BG 0000 * -----
BG 0000 EOJ DTRFSU14  MAX.RETURN CODE=0000
          DATE 06/08/2026, CLOCK 15/13/59, DURATION  00/11/18
BG 0001 1Q47I  BG DTRFSU15 00211 FROM (SYSA) , TIME=15:13:59 , TKN=0000004D
BG 0000 // JOB DTRFSU15
          DATE 06/08/2026, CLOCK 15/13/59
BG 0000 * -----
BG 0000 * STEP 15A: REFRESH SYSRES:
BG 0000 *          1. MOUNT VSEn6.X.X-YY ON TAPE-DRIVE 220
BG 0000 *          AND REPLY "(END/ENTER)" TO CONTINUE.
BG 0000 *          2. ON MESSAGE M235 REPLY "GO (END/ENTER)"
BG 0000 *          3. IF MESSAGE M222 OCCURS, REPLY "GO (END/ENTER)", BUT
BG 0000 *          SAVE THE LISTING OF THE DOWNLEVEL DELTA, BECAUSE
BG 0000 *          YOU HAVE TO REAPPLY THIS SERVICE.
BG 0000 * -----
BG-0000 // PAUSE
==>  _

1=HLP 2=CPY 3=END          6=CNCL 7=BWD 8=FWD 9=EXPL 10=INP 11=PCUU 12=INFO
FILTER:  ALL              FWD                      MODE:  REDISPLAY
MA  C                                                              20/006

```

Continued

```

SYSTEM:  z/VSE                      z/VSE 6.1          TURBO (01)          USER:  SYS
VM USER ID: PTHVSE80                TIME:  15:15:30
BG 0000 * -----
BG 0000 *   STAGE 1 OF FSU IS SUCCESSFULLY FINISHED.
BG 0000 *
BG 0000 *
BG 0000 *   1.  REPLY "(END/ENTER)" TO FINISH THIS JOB.  IF YOU HAVE YOUR OWN
BG 0000 *       POWER PHASE, YOU SHOULD ASSEMBLE IT NOW, IT SHOULD BE
BG 0000 *       CATALOGUED INTO THE SUBLIBRARY SPECIFIED IN THE FSU DIALOG.
BG 0000 *   2.  SHUTDOWN ALL PARTITIONS EXCEPT POWER.  ISSUE FOLLOWING COMMAND
BG 0000 *       TO BACKUP THE POWER FILES:
BG 0000 *       POFFLOAD BACKUP,ALL,CUU,,NOREW      CUU OF TAPE
BG 0000 *       SHUTDOWN POWER.
BG 0000 *       THE POWER FILES WILL BE MIGRATED TO THE NEW LEVEL.  IF ERRORS
BG 0000 *       OCCUR AFTER MIGRATION IN STAGE 2, YOU MIGHT SWITCH BACK TO
BG 0000 *       THE OLD SYSTEM ON DOSRES USING THIS BACKUP AND THE OLD POWER
BG 0000 *       PHASE.  A COLD START IS THEN REQUIRED.
BG 0000 *   3.  IPL FROM SYSWK1 (IJSYSR1) USING YOUR OWN IPL-PROC
BG 0000 *   AND THE JCL-PROC $$JCLFSU PROVIDED BY 21CSW
==>
1=HLP 2=CPY 3=END                    6=CNCL 7=BWD 8=FWD 9=EXPL 10=INP 11=PCUU 12=INFO
FILTER:  ALL                          BWD                                MODE:  REDISPLAY
MA  C                                                                    20/006

```

Continued

Now the first stage is finished and we need to shut down the system then reipl from syswk1

```
SYSTEM:  z/VSE                z/VSE 6.1          TURBO (01)      USER:  SYS
VM USER ID: PTHVSE80          TIME:  15:23:28
BG 0000 *
BG 0000 * A. IN ORDER TO MAKE SURE THAT THE WORKFILES IJSYS01 - IJSYS04
BG 0000 * ARE AVAILABLE, LABELS ARE DELETED AND ADDED AGAIN WITH
BG 0000 * SYSTEM DEFAULT VALUES. THIS AVOIDS PROBLEMS WITH WORKFILES
BG 0000 * DEFINED ON VIRTUAL DISKS.
BG 0000 * -----
BG-0000 // PAUSE
0
BG 0000 EOJ DTRCLFSU  MAX.RETURN CODE=0000
        DATE 06/08/2026, CLOCK 15/19/49, DURATION  00/04/28
BG 0001 1Q34I  BG WAITING FOR WORK
msg f2
AR 0015 1I40I  READY
F2-0120

==> 120 cemt p shut i_

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
MA  C                                                              20/023
```

Continued

```
0I04I IPLDEV=X'0241',VOLSER=SYSWK1,CPUID=FF0111103932  
0I03D ENTER SUPERVISOR PARAMETERS OR ASI PARAMETERS
```

—

Stage 2

- System License Key Catalog
- Restores DTSFILES (base and NLS)
- Installs LE into PRD2.SCEEBASE
- Installs PRD1.BASE products
- Restores the OME
- Refreshes IESTRFL, updates CSD file
- Copies back IJSYSR1, updates refresh level in history file
- Copies back work history file and changes residence information
- Starts basic OLTP and VCDD for first steps on new level

Continued

```
SYSTEM: VSEn          VSEn 6.4          TURBO (01)      USER: SYS
VM USER ID: PTHVSE80      TIME: 15:33:23
BG 0000 0J39I ACTUAL BUFSIZE IS 1547
BG 0000 0J83I ACTUAL SYSTEM TIME ZONE=EAST/00/00
BG-0000 0K01A Enter VSEn License Key (alphanumeric only):

==> 0 WELCOME TO MY PRESENTATION USE THIS KEY_
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 C                      ↑                      20/047
```

• 6.4 License Key after IPL

Continued

```

SYSTEM:  VSEn          VSEn 6.4          TURBO (01)          USER:  SYS
VM USER  ID:PTHVSE80
BG 0001 1Q47I  BG DTRCLFSU 00258 FROM (SYSA) , TIME=15:54:26 , TKN=0000005D
BG 0000 // JOB DTRCLFSU
          DATE 06/08/2026, CLOCK 15/54/26
BG 0000 * -----
BG 0000 * STAGE 2          FINAL CLEANUP
BG 0000 * -----
PDELETE RDR,CEL$OPT*
AR 0015 1C39I COMMAND PASSED TO VSEn/POWER
F1 0001 1R88I  OK : 1 ENTRY PROCESSED BY PDELETE RDR,CEL$OPT*
PDELETE RDR,CEEWAR*
AR 0015 1C39I COMMAND PASSED TO VSEn/POWER
F1 0001 1R88I  OK : 1 ENTRY PROCESSED BY PDELETE RDR,CEEWAR*
BG 0000 * -----
BG 0000 * STAGE 2 OF FSU HAS FINISHED SUCCESSFULLY.
BG 0000 *
BG 0000 * AFTER THIS JOB STEP THE -TP- PREPARATION WILL FOLLOW
BG 0000 * BRINGING UP OLTP-ICCF AND VCDD (IF REQUIRED).
==> _

1=HLP 2=CPY 3=END          6=CNCL 7=BWD 8=FWD 9=EXPL 10=INP 11=PCUU 12=INFO

FILTER:  ALL          BWD          MODE:  REDISPLAY
M  C          20/006

```

Continued

- FSU does not refresh the VCDD start job VTAMSTRT. If your VTAMSTRT job contains a VTAM password, the operator must reply to the console prompt with 3 Enter keystrokes during the FSU, and then complete the post-FSU step of submitting the updated VTAMSTRT job to the reader.
- Note: This applies when upgrading from VSEn 6.1/6.2 to 6.4. It does not apply when upgrading from VSEn 6.3.0 or above, as VTAMSTRT is already current in those releases.

```

SYSTEM:  VSEn                VSEn 6.4                TURBO (01)                USER:  SYS
VM USER ID: PTHVSE80                TIME:  15:54:57

BG 0000 *      BRINGING UP OLTP-ICCF AND VCDD (IF REQUIRED).
BG 0000 *      VCDD AND OLTP WILL BE STARTED IN BASIC START-UP MODE.
BG 0000 *
BG 0000 *      1. REPLY "(END/ENTER)" TO FINISH THIS JOB.
BG 0000 *      2. PERFORM ANY OPERATIONS TO TEST AND PREPARE YOUR OWN
BG 0000 *          ENVIRONMENT.
BG 0000 *      3. PERFORM POST FSU PROCESSING:
BG 0000 *          - UPDATE THE SYSTEM APPLICATION PROFILES AND
BG 0000 *              SYSTEM SELECTION PANELS.
BG 0000 *              (WITH USERID SYSA PRESS PF6 ON FASTPATHS 212 AND 213)
BG 0000 *          - REGENERATE YOUR OWN OLTP TABLES
BG 0000 *      4. SHUTDOWN THE SYSTEM
BG 0000 *      5. RE-IPL FROM DOSRES (IJSYSRS) USING 'REIPL CUU,LOADP=...'
BG 0000 *          COMMAND.
BG 0000 *      6. REBUILD THE STAND ALONE DUMP DEVICE (TAPE OR DISK).
BG 0000 * -----
BG-0000 // PAUSE
==>  -

1=HLP 2=CPY 3=END                6=CNCL 7=BWD 8=FWD 9=EXPL 10=INP 11=PCUU 12=INFO

FILTER:  ALL                FWD                MODE:  REDISPLAY

MA  C                20/006

```

Continued

```
SYSTEM:  VSEn          VSEn 6.4          TURBO (01)          USER:  SYS
VM USER ID: PTHVSE80          TIME:  15:56:11
BG 0000 *
BG 0000 *          VSEn      6.4.0      10/02/2025      *
BG 0000 *
BG 0000 * *****
BG 0000 * LICENSED MATERIALS - PROPERTY OF IBM      *
BG 0000 * 5686-VS6 AND OTHER MATERIALS © COPYRIGHT *
BG 0000 * IBM CORP. 2016 AND OTHER DATES      *
BG 0000 * US GOVERNMENT USERS RESTRICTED RIGHTS - *
BG 0000 * USE, DUPLICATION OR DISCLOSURE      *
BG 0000 * RESTRICTED BY      *
BG 0000 * GSA ADP SCHEDULE CONTRACT WITH IBM CORP. *
BG 0000 * 2121-VN6 (C) COPYRIGHT      *
BG 0000 * 21ST CENTURY SOFTWARE, INC. 2025      *
BG 0000 * *****
BG 0000 * START MODE FOR BG-PARTITION IS BASIC
BG 0000 IESI0065D IS THE LOCAL CONTROL UNIT AN SNA CU? YES/NO
BG-0000
==> _

1=HLP 2=CPY 3=END          6=CNCL 7=BWD 8=FWD 9=EXPL 10=INP 11=PCUU 12=INFO
FILTER:  ALL          BWD          MODE:  REDISPLAY
MA  C          20/006
```

Shutdown the System and REIPL from DOSRES

1. MSG F2,DATA=CEMT P SHUT I
2. Z NET,QUICK
3. PEND
4. REIPL 240,LOADP=...

Post-Stage 2 Processing

- Update your selection panels
- Update your application profiles
- Perform OLTP updates
- For VSEn 6.1 and 6.2 upgrades, add the new TCP/IP keys post-FSU

Agenda

INSTALLATION

FSU (FAST
SERVICE
UPGRADE)

SYSTEM
LICENSE KEY

VSEⁿ 6.4 System License Key

More Flexibility for Testing

Streamline Audits

Designed to provide greater flexibility for test, evaluation, and production environments

Helps reduce audit overhead at customer sites

Each key is scoped to a specific:

- Release version
- Timeframe / expiration date
- Machine serial number
- Machine type and capacity model

Supports up to 10 registered keys simultaneously

Multiple active keys prevent disruption in the following scenarios:

- A key expires
- Machine serial changes (e.g., failover to a disaster recovery machine)
- A higher capacity model is activated during capacity-on-demand

VSEⁿ System License Key

- 21CS generates the System License Key (SLK) on the basis of customer information:
 - VSEn release
 - Machine serial number
 - Start date and end date
 - Processor (including machine type and model-capacity identifier)

All the fields (excluding start date and end date) from above can be found in the output of the AR command SIR as following:

```

SIR
AR 0015 CPUID   VM = 00036A2839328000          VSEn = FF01111039328000
AR 0015 PROCESSOR = IBM 3932-Q06 02 (46A2802)  LPAR = Z203          No. = 0003
AR 0015        CPUs = 0002 (Ded.=0000 Shr.=0002) Cap. = 33%
AR 0015 VM-SYSTEM = z/VM      7.2.0    (2302)  USERID = PTHVSE17 VMCF = ON
AR 0015        CPUs = 0002                      Cap. = 100%
AR 0015 PROC-MODE = z/Arch(64-BIT) IPL(240)    14:10:47      07/31/2025
AR 0015 SYSTEM    = VSEn          6.4.0              06/02/2025
AR 0015          VSEn/AF          9.6.0      DRIVER01      05/26/2025
AR 0015          VSEn/POWER       9.6.0      GA-LEVEL      08/07/2024
  
```

```

VSEn release: 6.4
Machine serial number: 46A2802
Processor: 3932-Q06
  
```

VSEⁿ System License Key

- During IPL the SLK subsystem reads the System License Key file from disk: IJBSLK.F.KEY file in IJSYSRS.SYSLIB sublibrary
- This file is not supplied with VSEⁿ and usually is created automatically when the System License Key is entered for the first time.
- If this file is not found on the disk, the SLK system asks to enter a valid System License Key provided by 21CS

```
BF-0000 0K01A Enter VSEn license key (alphanumeric only):
```

```
==> 0 RTWVU4YY4EMS7F489PH4WV3F414K8RU02
```

Note: System License Keys in this document are sample keys and are invalid for actual VSEⁿ systems.

If the key is invalid, the SLK system will reply with message:

```
OK02E VSEn license key is not valid.  
and requests to enter the key once more.
```

After 3 attempts of invalid key entering, the SLK system will be delayed with message:

```
OK07I System key service is temporary unavailable. Wait please.  
After the delay the System License Key can be entered again.
```

VSEⁿ System License Key

- The SLK system periodically checks the System License Key during the usual VSEⁿ system working. It validates the expiration time and other parameters of the system in the currently active System License Key
- If expiration date is less than 30 days but more than 7 days, it provides a weekly notification by displaying the message:

```
OK03I VSEn License key will expire in xx days
```

- If the time before the expiration is less than 7 days but more than 1 day, the SLK system notifies daily.
- If the time before expiration is less than 1 day, the SLK system notifies every 30 minutes, and the message will be:

```
OK04I VSEn will be stopped today at 24:00. Enter the new valid system  
license key.
```

Q & A

Thank you!