



**Program Directory for  
CICS VSAM RECOVERY VSE/ESA**

Version 1 Release 2, Modification Level 0

Program Number 5686-011

for Use with  
VSE/ESA

Document Date: December 17, 1999

GI10-4528-00

**Note!**

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

This program directory, dated December 17, 1999, applies to IBM CICS VSAM RECOVERY VSE/ESA (CICSVR/VSE) Version 1 Release 2 Modification 0, Program Number 5686-011 for the following:

<b>COMPIDs</b>	<b>Feature Numbers</b>	<b>System Name</b>
568601101	5881	VSE/ESA
	5882	
	5701	
	5884	

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## 1.0 Introduction

This program directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of CICSVR/VSE. You should read all of this program directory before installing the program and then keep it for future reference.

The program directory contains the following sections:

- 2.0, “Program Materials” on page 2 identifies the basic and optional program materials and documentation for CICSVR/VSE.
- 3.0, “Program Support” on page 5 describes the IBM support available for CICSVR/VSE.
- 4.0, “Program and Service Level Information” on page 6 lists the APARs (program level) and PTFs (service level) incorporated into CICSVR/VSE.
- 5.0, “Installation Requirements and Considerations” on page 7 identifies the resources and considerations for installing and using CICSVR/VSE.
- 6.0, “Installation Instructions” on page 9 provides detailed installation instructions for CICSVR/VSE.
- 7.0, “Verification of Installation” on page 16 provides detailed information on verifying the correct installation of CICSVR/VSE.

Before installing CICSVR/VSE, read 3.1, “Preventive Service Planning” on page 5. This section tells you how to find any updates to the information and procedures in this program directory.

---

## 2.0 Program Materials

An IBM program is identified by a program number. The program number for CICSVR/VSE is 5686-011.

The program announcement material describes the features supported by CICSVR/VSE. Ask your IBM marketing representative for this information if you have not already received a copy.

The following sections identify the basic and optional program materials available with this program.

---

### 2.1 Basic Machine-Readable Material

The distribution medium for this program is 9-track magnetic tape (written at 6250 BPI), 3480 cartridge, or 4mm Digital Audio Tape (DAT) cartridge. The tape or cartridge contains all the programs and data needed for installation. CICSVR/VSE is installed using MSHP. See 6.0, "Installation Instructions" on page 9 for more information about how to install the program. Figure 1 describes the tape or cartridge. Figure 2 describes the file content of the program tape or cartridge.

*Figure 1. Basic Material: Program Tape*

Medium	Feature Number	Physical Volume	External Label Identification	VOLSER
6250 Tape	5881	1	CICSVR/VSE V1R2M0	none
3480 Cart.	5882	1	CICSVR/VSE V1R2M0	none
4mm DAT Cart.	5701	1	CICSVR/VSE V1R2M0	none
QIC-120 Tape	5884	1	CICSVR/VSE V1R2M0	none

*Figure 2. Program Tape: File Content*

File No.	File Content Description
1	Header File
2	CICSVR/VSE History File
3	CICSVR/VSE Library File, Production Sublibrary
4	Null file (tapemark)
5	EOB (end of BACKUP information)
6	Null file (tapemark)



---

## 2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for CICSVR/VSE.

---

## 2.3 Program Publications

The following sections identify the basic and optional publications for CICSVR/VSE.

### 2.3.1 Basic Program Publications

Figure 3 identifies the basic program publications for CICSVR/VSE. One copy of each of these publications is included when you order the basic materials for CICSVR/VSE. For additional copies, contact your IBM representative.

*Figure 3. Basic Material: Unlicensed Publications*

<b>Publication Title</b>	<b>Form Number</b>
CICSVR/VSE User's Guide and Reference	SC26-7321
CICSVR/VSE Messages and Problem Determination	SC26-7322
CICSVR/VSE Licensed Program Specifications	GC26-7323

CICSVR/VSE publications are also available on CD-ROM in the following collections:

*Figure 4. Basic Material: Unlicensed Collection Kits*

<b>Collection Kit Title</b>	<b>Form Number</b>
IBM Online Library VSE Collection Kit	SK2T-0060
IBM Online Library Transaction Processing and Data Collection Kit	SK2T-0730

### 2.3.2 Optional Program Publications

There are no optional program publications for CICSVR/VSE.

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## 2.4 Program Source Materials

There are no source materials available for CICSVR/VSE.

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## 2.5 Publications Useful During Installation

The publications listed in Figure 5 may be useful during the installation of CICSVR/VSE. To order copies, contact your IBM representative.

*Figure 5. Publications Useful During Installation*

<b>Publication Title</b>	<b>Form Number</b>
VSE/ESA Installation Version 2 Release 1-3	SC33-6604
VSE/ESA Installation Version 2 Release 4	SC33-6704
VSE/ESA System Control Statements Version 2 Release 1-3	SC33-6613
VSE/ESA System Control Statements Version 2 Release 4	SC33-6713
VSE/AF V4R1 Diagnosis Reference MSHP	SC33-6335
VSE/ICCF V6R4 Administration and Operation	SC33-6738
VSE/ICCF V6R4 User's Guide	SC33-6739

---

## 3.0 Program Support

This section describes the IBM support available for CICSVR/VSE.

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### 3.1 Preventive Service Planning

Before installing CICSVR/VSE, check with your IBM Support Center or use either Information/Access or SoftwareXcel Extended to see whether there is additional Preventive Service Planning (PSP) information that you should know. To obtain this information, specify the following UPGRADE and SUBSET values:

*Figure 6. PSP Upgrade and Subset ID*

UPGRADE	SUBSET	RETAIN Release
CICSVR	A11	1NL

If you have received CICSVR/VSE from IBM Software Distribution, you should also check with your IBM Support Center or use either Information/Access or SoftwareXcel Extended to see if there is additional PSP information that you should know before installing CICSVR/VSE.

---

### 3.2 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 7 identifies the component IDs (COMPID) for CICSVR/VSE.

*Figure 7. Component IDs*

COMP ID	Component Name	REL
568601101	CICSVR/VSE	120

---

## **4.0 Program and Service Level Information**

This section identifies the program and any relevant service levels of CICSVR/VSE. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs that were integrated. Information about the cumulative service tape is also provided.

---

### **4.1 Program Level Information**

This release of CICSVR/VSE is a total product rewrite based on the CICSVR/MVS V2R3 product. No CICSVR/MVS V2R3 APARs have been incorporated because they are not applicable to VSE.

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### **4.2 Service Level Information**

No PTFs have been incorporated in this release, CICSVR/VSE 1.2.0.

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### **4.3 Cumulative Service Tape**

A cumulative service tape, containing PTFs not incorporated into this release, might be included with this program.

---

## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating CICSVR/VSE. See the *CICSVR/VSE User's Guide and Reference* (SC26-7321) for further information.

---

### 5.1 Operating System Requirements

CICSVR/VSE executes under any currently supported or subsequent level of the VSE/ESA release or modification level of the operating system.

CICSVR/VSE can be installed under the VSE/ESA operating system Version 1.4 and above.

You can install CICSVR/VSE any time after your operating system has been installed.

To install CICSVR/VSE, you must use the Maintain System History Program (MSHP).

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### 5.2 Machine Requirements

You can install and run CICSVR/VSE on any processor that supports the VSE/ESA releases listed above.

---

### 5.3 Programming Requirements

CICSVR/VSE requires the functions of the following CICS environments:

- CICS/VSE V2R3 (Product Number 5686-026) or
- CICS TS (Product Number 5648-054)

**Note:** If CICS TS is used, all of the CICSVR/VSE functions are available. If a lower level of CICS is used, then the backout function is not supported.

---

### 5.4 DASD Storage Requirements

*Figure 8. DASD Storage Requirements*

Device	Space Requirements	Library Blocks
3375	120 tracks	3010
3380	97 tracks	3010
3390	91 tracks	3010
9345	107 tracks	3010
All FBA disks	5975 blocks	3010

---

## 5.5 Storage Requirements

The minimum available partition program area requirement for CICSVR/VSE is 2048 KB.

Auxiliary storage space is required for:

- System History file (if not already allocated)
- Library space

---

## 5.6 Required Storage Devices

To install CICSVR/VSE, you need:

- At least one tape or cartridge device for loading the CICSVR/VSE distribution tape.
- Direct-access storage for the CICSVR/VSE library. You can choose any of the devices supported by your operating system for program residence.

To use CICSVR/VSE, you need devices supported by SAM and VSE/VSAM.

---

## 6.0 Installation Instructions

CICSVR/VSE is installed using the VSE/Advanced Functions Maintain System History Program (MSHP).

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### 6.1 Installing CICSVR/VSE

The basic machine-readable material, which consists of a history file and the production sublibrary, is built in a format for installation with MSHP. The user should be familiar with the MSHP information in *VSE/ESA System Control Statements* (SC33-6613 for VSE/ESA Version 2 Release 1-3; SC33-6713 for VSE/ESA Version 2 Release 4).

This program must be installed using the INSTALL PRODUCT function of MSHP. MSHP will invoke the appropriate system utilities to catalog the affected modules in the appropriate production sublibrary.

If you already have CICSVR/VSE R1 installed, see 6.2, “Installing CICSVR/VSE with Previous Release.”

There are two ways of installing CICSVR/VSE:

- Using batch jobs

See 6.3, “Installing the Basic Material.”

- Using the VSE/ESA installation dialog

See the *CICSVR/VSE User's Guide and Reference* (SC26-7321) and the appropriate VSE/ESA installation manuals listed below for further information on installation procedures and installation dialog:

- VSE/ESA Version 2 Release 1-3: SC33-6604, *Installation*
- VSE/ESA Version 2 Release 4: SC33-6704, *Installation*

---

### 6.2 Installing CICSVR/VSE with Previous Release

The default production sublibrary for installing CICSVR/VSE is PRD2.PROD. The CICSVR/VSE R1 and CICSVR/VSE R2 products can be installed in the same sublibrary because the module names for them are different.

---

### 6.3 Installing the Basic Material

If you do not use the installation dialog, then follow the instructions provided in this chapter to install CICSVR/VSE. Installing CICSVR/VSE includes the following steps:

- Step 1. Allocate Space for the Library (optional)
- Step 2. Install CICSVR/VSE
- Step 3. Install CICSVR/VSE Online Message Explanations

### 6.3.1 Step 1. Allocate Space for the Library (optional)

By default, CICSVR/VSE is installed into the PRD2.PROD sublibrary. If you decide to install CICSVR/VSE into a sublibrary other than PRD2.PROD, proceed with this step. If you decided to install CICSVR in the default sublibrary, go to 6.3.2, "Step 2. Install CICSVR/VSE" on page 13.

Decide where to allocate space for the CICSVR/VSE sublibrary. Identify the disk volume to be used for the library and suitable areas of free space. To do this, list the volume table of contents (VTOC) of the disk or disks to be used. You can use a job similar to the one in Figure 9.

```
// JOB LVTOC    LIST VOLUME TABLE OF CONTENTS      01
// ASSGN SYS004,DISK,TEMP,VOL=volser,SHR          02
// ASSGN SYS005,SYSLST                              03
// EXEC LVTOC                                       04
/ &                                                05
```

Figure 9. Job to List Volume Table of Contents

Line	Explanation
01	JOB statement. Introduces the LVTOC job in the system.
02	SYS004 must be assigned to the physical address of the disk on which the necessary volume is mounted. Change the variable <i>volser</i> in the VOL operand to your volume serial number.
03	SYS005 must be assigned to the device where the VTOC output is to be routed.
04	EXEC statement. Specifies that VTOC of the disk with serial number <i>volser</i> is to be listed.
05	End-of-job statement.

The disk space for the CICSVR/VSE library can be allocated as described by the allocation job shown in the sample in Figure 10.

```
// JOB CVRDEF  CREATE A LIBRARY FOR CICSVR          01
// OPTION LOG                                     02
// ASSGN SYS002,DISK,VOL=volser,SHR              03
// DLBL CICSVR,'CICSVR.LIBRARY',99/365,SD         04
// EXTENT SYS002,volser,,,rtrk,ntrk           05
// EXEC LIBR                                       06
DELETE LIB=CICSVR                                07
DEFINE LIB=CICSVR REPLACE=NO                     08
/*                                                09
/ &                                                10
```

Figure 10. Job to Allocate the CICSVR/VSE Library Space



Line	Explanation
01	JOB statement. Introduces the CVRDEF job in the system.
02	OPTION LOG statement. Lists columns 1-80 of all control statements and commands on SYSLST.
03	The ASSGN job control statement assigns the logical unit name to the device. Change the variable <i>volser</i> to your volume serial number.
04	The DLBL job control statement contains file label information. Change the <i>filename</i> ( <i>CICSVR</i> in the sample) and <i>file-id</i> (' <i>CICSVR.LIBRARY</i> ' in the sample) to the appropriate values.
05	The EXTENT job control statement defines the disk file extents. The variable <i>ntrk</i> indicates the number of blocks or tracks required for CICSVR/VSE installation. Change this variable to the appropriate value for the type of device being used for your installation. For the number of blocks or tracks required, see the information in 5.4, "DASD Storage Requirements" on page 7. The variable <i>rtrk</i> represents the start position of the extent. Change the variable <i>volser</i> to your volume serial number.
06	EXEC statement. Specifies that LIBR should be run.
07	The Librarian job step includes a DELETE command so the job can be rerun. The following messages will be issued when the job runs for the first time:  L101I LIBRARY CICSVR DOES NOT EXIST L027I ABNORMAL END DURING DELETE COMMAND PROCESSING L113I RETURN CODE OF DELETE IS 8  These messages may be ignored; the job continues to allocate the library.
08	The DEFINE command is used to create the library. Change the library name ( <i>CICSVR</i> in the sample) to your library name.
09-10	End-of-data file and end-of-job statements.

The sample shown in Figure 10 on page 10 defines a library in SAM space. For a library in SAM space, it is necessary to add label information for your library to the standard label area (SLA), as shown in Figure 11.

```

// JOB CICSSTD ADD AN INFORMATION LABEL TO SLA           01
// OPTION STDLABEL=ADD                                  02
// DLBL CICSVR, 'CICSVR.LIBRARY',99/365,SD            03
// EXTENT ,volser,,,rtrk,ntrk                        04
/*                                                       05
/&                                                       06
```

Figure 11. Job to Add an Information Label to Standard Label Area

Line	Explanation
01	JOB statement. Introduces the CICSSTD job in the system.

- 02 The STDLABEL=ADD operand of the OPTION job control statement causes label information to be stored permanently for all subsequent jobs in any partition.
  - 03 The DLBL job control statement contains file label information. Change the *filename* (CICSVR in the sample) and *file-id* ('CICSVR.LIBRARY' in the sample) to the appropriate values.
  - 04 The EXTENT job control statement defines the disk file extents. The variable *ntrk* indicates the number of blocks or tracks required for CICSVR/VSE installation. Change this variable to the appropriate value for the type of device being used for your installation. For the number of blocks or tracks required, see the information in 5.4, "DASD Storage Requirements" on page 7. The variable *rtrk* represents the start position of the extent. Change the variable *volser* to your volume serial number.
- 05-06 End-of-data file and end-of-job statements.

To provide label information for your library automatically during system startup, modify procedure STDLABUS.PROC through the STDLABUS skeleton. You must include statements similar to those shown in Figure 11, in procedure STDLABUS (except for // JOB and /&). This portion of the installation must be done by a system administrator.

A library always consists of one or more sublibraries. Programs, procedures and other data are stored as members in the sublibraries. Sublibraries vary in size. They are dynamically extended as required until the space assigned to the library is exhausted.

At least one sublibrary must be defined within the library before data members of any kind can be cataloged.

A sublibrary may contain any or all member types used at an installation. This allows you to store all members that belong to one application in one sublibrary.

To create the sublibrary named CVR12 in your library CICSVR, the job stream shown in Figure 12 is required. It is assumed that the label information is in the standard label area.

// JOB CICSDEF CREATE A SUBLIBRARY FOR CICSVR	01
// OPTION LOG	02
// EXEC LIBR	03
DEFINE SUBLIB=CICSVR.CVR12	04
/*	05
/ &	06

Figure 12. Job to Create the CICSVR/VSE Sublibrary

Line	Explanation
01	JOB statement. Introduces the CICSDEF job in the system.
02	OPTION LOG statement. Lists columns 1-80 of all control statements and commands on SYSLST.

- 03 EXEC statement. Calls LIBR.
- 04 The DEFINE command is used to create the sublibrary. Change the sublibrary name (*CICSVR.CVR12* in the sample) to your sublibrary name.
- 05-06 End-of-data file and end-of-job statements.

With the File and Catalog Management dialog of the Interactive Interface you can define the library in VSAM-managed space.

### 6.3.2 Step 2. Install CICSVR/VSE

The installation job stream for installing CICSVR uses the MSHP system history file that already exists as part of the VSE/ESA system. This system history file may already be defined in the system standard labels; if not, make sure that DLBL and EXTENT job control statements for the system history file are included in the job stream.

The CICSVR product tape may only contain the CICSVR product, or it could be a stacked tape containing one or more optional program products. The job shown in Figure 13 will handle both types of tapes.

Create and tailor the installation job shown in Figure 13, mount the distribution tape, and run the installation job.

```
// JOB CVRINST INSTALL CICSVR/VSE
// OPTION LOG
// ASSGN SYS006,181
// MTC REW,SYS006
// EXEC MSHP
  INSTALL PRODUCT FROMTAPE ID='CICSVR/VSE.1.2.0' -
    PROD INTO=PRD2.PROD
/*
// EXEC LIBR
  LISTDIR SUBLIB=PRD2.PROD -
    OUTPUT=NORMAL -
    UNIT=SYSLST
/*
// MTC RUN,SYS006
/&
```

Figure 13. Job to Install CICSVR/VSE

- The ASSGN job control statement assigns a logical unit SYS006 to the distribution tape unit. Replace '181' with the address of your tape unit. Alternatively, you can use the generic tape assignment  

```
// ASSGN SYS006,TAPE
```
- The MSHP statements to install CICSVR/VSE into a sublibrary are identified on the INTO operand of the INSTALL statement. If you are installing CICSVR/VSE into a sublibrary other than PRD2.PROD,

then the name of the sublibrary on the INTO operand must be changed to reflect your chosen sublibrary. For more information about the install options, see the *VSE/ESA System Control Statements*.

- The LIBR statements list the directory entries of the library where CICSVR/VSE is installed. The directory list can be used to check that all CICSVR/VSE phases are installed. Remove this step if a directory list is not required. If you are installing CICSVR/VSE into a sublibrary other than the installation default (PRD2.PROD), then the SUBLIB operand must be changed to reflect your chosen sublibrary.

Entries for CICSVR/VSE have a three character prefix of DWW to distinguish them from other products.

See the *CICSVR/VSE User's Guide and Reference (SC26-7321)* for further information.

### 6.3.3 Step 3. Install CICSVR/VSE Online Message Explanations

If you want to be able to display CICSVR/VSE message explanations on the console, load the CICSVR/VSE message explanations into the online message file using the VSE/ESA IESMSGSG utility. This utility is available with VSE/ESA V2.

Figure 14 contains a sample job that shows how to invoke the IESMSGSG utility.

```
// JOB DWWOME
// OPTION PARTDUMP,NOSYSDMP
// DLBL NEWMSGSG,'VSE.MESSAGES.ONLINE',,VSAM,CAT=IJSYSCT
// EXEC IESMSGSG,SIZE=60K,PARM='EU'
* $$ SLI MEM=DWWOME.Z,S=PRD2.PROD
/*
/ &
```

Figure 14. Load the CICSVR/VSE English Message Explanations into the Online Message File

Be sure to turn EXPLAIN OFF before you invoke the IESMSGSG utility. Otherwise the file will be in use and will not be updated. When IESMSGSG completes, turn EXPLAIN ON and the CICSVR/VSE explanations will be available.

If you are running a Spanish VSE/ESA Version 2 system, use:

```
// EXEC IESMSGSG,SIZE=60K,PARM='SU'
```

If you are running a German VSE/ESA Version 2 system, use:

```
// EXEC IESMSGSG,SIZE=60K,PARM='GU'
```

If you are running a Japanese VSE/ESA Version 2 system, use:

```
// EXEC IESMSGSG,SIZE=60K,PARM='JU'
```

**Note:** If you are using single-byte Katakana characters on your Japanese VSE/ESA Version 2 system, convert the mixed-case English member DWWOME.Z to uppercase English. You can use DITTO to convert DWWOME.Z to upper-case only.

To receive the message explanation on the console you should type in the message number in the command field (==>), then press PF9 (the EXPLAIN key).

**Note:** If you enter the message number in the command field, be sure that you entered a valid message number before taking any action recommended by the message description. If the number you entered is not valid, VSE/ESA issues the following message:

```
NO EXPLAIN/HELP DATA FOUND
```

---

## 7.0 Verification of Installation

The following sections include information on how to verify the correct installation of CICSVR/VSE.

---

### 7.1 CICSVR/VSE Verification Procedure

The sample program and jobs supplied with CICSVR/VSE provide minimal tests which show that the program has been successfully installed. The verification consists of the following steps:

- Creating a sample of an archived log
- Creating a sample of a VSAM sphere
- Invoking CICSVR/VSE functions directly
- Verifying the data

See the *CICSVR/VSE User's Guide and Reference* (SC26-7321) for further information.

---

### 7.2 Creating a Sample of an Archived Log

Use the DWWSLOG job to create a sample of an archived log. The DDWSLOG job resides in the CICSVR/VSE installation sublibrary with name DWWSLOG.Z. Store the job as a member in your VSE/ICCF library using the LIBRP macro and submit it for execution. The following figure shows the DWWSLOG job.

```

// JOB DWWSLOG CICSVR/VSE SAMPLE LOG CREATION
/. I ****8****/
/. I $MAC(DWWSLOG ) COMP(5686-011): */
/. I ****8****/
* DELETE LOG FILE
// OPTION NOSYSDMP
// EXEC IDCAMS,SIZE=AUTO
    DELETE DWW.LOGTS CAT(VSESP.USER.CATALOG) PURGE
    SET MAXCC=0
/*
// OPTION NODUMP,ACANCEL,JCANCEL
// OPTION LINK,NODECK
// EXEC ASSEMBLY,SIZE=100K
    PRINT OFF
*****
*
* DWWLOG
* SAMPLE PROGRAM FOR CICSVR/VSE INSTALLATION VERIFICATION.
*
*
* RETURN CODE: 0 - NORMAL COMPLETION
*****
LOGTSGEN CSECT
R0 EQU 0 PARAMETER REGISTERS: 0
R1 EQU 1 AND 1
R2 EQU 2
R3 EQU 3 BLOCK COUNTER
R5 EQU 5
R6 EQU 6 WORK REGISTER
BASE EQU 11 BASE REGISTER
R12 EQU 12 SAVE AREA REGISTER
R13 EQU 13 SAVE AREA REGISTER
R14 EQU 14 RETURN REGISTER
R15 EQU 15 ENTRY POINT REGISTER
    SAVE (14,12) SAVE REGISTERS
    BALR BASE,0 ESTABLISH BASE REGISTER
    USING *,BASE
    LA R13,SAVE GET NEW SAVE AREA ADDRESS
OPN01 OPEN OUTLOG OPEN LOG FILE
    SR R3,R3 CLEAN COUNTER
LP01 L R6,CURRENT LOAD CURRENT LOG DATA BLOCK ADDRESS
    SR R2,R2 CLEAN BLKSIZE REGISTER
    ICM R2,3,0(R6) LOAD DATA BLOCK SIZE
    LTR R2,R2 EOF?
    BZ EXIT1 YES, EXIT

```

Figure 15 (Part 1 of 14). DWWSLOG - Creating a Sample of an Archived Log

```

*      FILL LOG BUFFER
      MVC LOGDATA+0(256),0(R6)      MOVE 1/4 MAX BLOCK
      MVC LOGDATA+256(256),256(R6)  MOVE 1/4 MAX BLOCK
      MVC LOGDATA+512(256),512(R6)  MOVE 1/4 MAX BLOCK
      MVC LOGDATA+768(256),768(R6)  MOVE 1/4 MAX BLOCK
      PUT OUTLOG          PUT LOG BLOCK TO FILE
      LA  R3,1(,R3)      INCREMENT BLOCK COUNTER
      AR  R6,R2          GET NEXT BLOCK ADDRESS
      ST  R6,CURRENT     SAVE IT
      B   LP01          PROCESS NEXT BLOCK
EXIT1  CLOSE OUTLOG     CLOSE OUTPUT LOG FILE
      CVD R3,DWD        CONVERT COUNTER
      UNPK MSG(2),DWD+6(2) PUT IT INTO THE MESSAGE
      OI  MSG+1,X'F0'    INSERT CHARACTER ZONE
COMPL0 OPEN  OUTLST     OPEN SYSLST FOR MESSAGE
      PUT  OUTLST      PUT MESSAGE
      CLOSE OUTLST     CLOSE SYSLST
      SR  R15,R15
      IC  R15,RET+1    SET RETURN CODE
      EOJ RC=(R15)     END OF THE PROGRAM
*      DTF FOR LOG FILE
OUTLOG DTFSD BLKSIZE=MAX,          C
      IOAREA1=LOGBUF,            C
      RECFORM=UNDEF,            C
      RECSIZE=(2),              C
      TYPEFLE=OUTPUT
LOGBUF DC 2F'0'
LOGDATA DC 4CL256' ' LOG BLOCK BUFFER
RET DC F'0'
*      DTF FOR OUTPUT MESSAGE
OUTLST DTFDI IOAREA1=OUTBOX,RECSIZE=121,DEVADDR=SYSLST
OUTBOX DC CL1' '
OUTBUF DC CL28'*$$$$ CICSVR/VSE SAMPLOG: '
MSG DC CL92' SAMPLE LOG BLOCKS CREATED '
DWD DC D'0' WORK FIELD TO CONVERT BINARY
SAVE DC 18F'0' SAVE AREA
      LTORG
*****
*      SAMPLE LOG DATA *
*****
CURR EQU *
CURRENT DC A(JBL00)
      DC 0F'0'
JBL00 EQU *
JBL01 DC XL4'00E40000'

```

Figure 15 (Part 2 of 14). DWWSLOG - Creating a Sample of an Archived Log



---

```

JR011 DC XL4'002A0000'
      DC XL16'80450000001C0100001C0099105F001C'
      DC XL16'0000000000001627117F1626427F0099'
      DC XL6'105F00000000'
JR012 DC XL4'001E0000'
      DC XL10'80580000002C00140000'
      DC XL16'02C9C9C91627117FC3E2E2E800000000'
JR013 DC XL4'00980000'
      DC XL16'86540000003C0014000000C9C9C91627'
      DC XL16'117FC3E2E2E80000000007A0000C4C3'
      DC XL16'E3400072C6C4E2C78200007000000000'
      DC XL16'0040000000000010000000040404040'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL4'00400000'
JBL02 DC XL4'007C0000'
JR021 DC XL4'002A0000'
      DC XL12'80450000001C0100002C0099'
      DC XL16'105F001C00000100B8801627118F1626'
      DC XL10'427F0099105F00000001'
JR022 DC XL4'004E0000'
      DC XL6'86540000002C'
      DC XL16'0014000000C9C9C91627118FC3E2E2E8'
      DC XL16'0000000000300000E4D9C44000280004'
      DC XL16'0000000000000010000000040404040'
      DC XL16'000000000000000A3BFCE7F0F2A9C00'
      DC XL4'00000000'
JBL03 DC XL4'004C0000'
JR031 DC XL4'002A0000'
      DC XL12'80450000001C0100003C0099'
      DC XL16'105F001C00000200B6001627118F1626'
      DC XL10'427F0099105F00000002'
JR032 DC XL4'001E0000'
      DC XL6'81580000002C'
      DC XL16'0014000000C9C9C91627118FC3E2E2E8'
      DC XL4'00000000'
JBL04 DC XL4'006A0000'
JR041 DC XL4'002A0000'
      DC XL12'80450000001C0100004C0099'
      DC XL16'105F001C00000300B3C01627124F1626'
      DC XL10'427F0099105F00000003'
JR042 DC XL4'001E0000'
      DC XL6'F1590000002C'
      DC XL16'0014000000C9C9C91627124FC3E2E2E8'
      DC XL4'00000000'

```

---

Figure 15 (Part 3 of 14). DWWSLOG - Creating a Sample of an Archived Log

---

```

JR043 DC XL4'001E0000'
      DC XL12'F2590000003C0014000000C9'
      DC XL14'C9C91627124FC3E2E2E800000000'
JBL05 DC XL4'03B20000'
JR051 DC XL4'002A0000'
      DC XL18'80450000001C0100005C0099105F001C0000'
      DC XL16'0400B1601627485F1626427F0099105F'
      DC XL4'00000004'
JR052 DC XL4'001E0000'
      DC XL12'F1590000002C0014000004C9'
      DC XL14'C9C91627136FC3E2E2E800000000'
JR053 DC XL4'001E0000'
      DC XL18'F3590000003C0014000000C9C9C91627136F'
      DC XL8'C3E2E2E800000000'
JR054 DC XL4'030C0000'
      DC XL8'F0CE0000004C0022'
      DC XL16'00000200035C1627485FC3C1E3C10000'
      DC XL16'0000E9C3D7400000A3BFCEC3FBACBD21'
      DC XL16'02DE0008D7F1F4F5F0F0F6400008C3C9'
      DC XL16'C3E2C9F0F2F002C6E3E94001D8C9F0F2'
      DC XL16'F091F2000402D6A22C000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000C000000C5D5E40000000180000000'
      DC XL16'30404040404040404040000000000000'
      DC XL16'000008080078018500000000FAE1A0'
      DC XL16'0001D800000000000002D5C030000000'
      DC XL16'00080000000000000102DD030000000'
      DC XL16'00000000002DE90C00000000000000'
      DC XL16'00000000000000000000000002DE60'
      DC XL16'300000000081000000000000000000'
      DC XL16'00000000000000000000084000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'0080000000000000000000CF1F200000'
      DC XL16'000000000C010000000000000040000'
      DC XL16'000000000000000000000000000000'
      DC XL16'00000000000000000000000000084'
      DC XL16'000000000000000000000000000000'
      DC XL16'00FFF0000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000060010'
      DC XL16'000400000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'000000000000000000000000000000'
      DC XL16'00000000000000000000000008A100'
      DC XL16'000000000000000000000000000000'
      DC XL16'00000000000000000002DDF001004400'
      DC XL16'00000016CCD40000000000014000000'

```

---

Figure 15 (Part 4 of 14). DWWSLOG - Creating a Sample of an Archived Log



---

JR065 DC XL4'00830000'  
 DC XL7'E3110000005C00' WA  
 DC XL16'250000000045C1636152FD2E4E2E3C9' (AL+AJ)  
 DC XL16'F0F2F0C3E4E2E3D6D4C5D90000000F0'  
 DC XL16'F0F0F1F500540000F0F0F0F1F5D1C5C6'  
 DC XL16'C6D9C9C5E2404040404040C3C8C1D9D3'  
 DC XL16'C5E240404040404040F1F240C8C1D9C4'  
 DC XL16'C3C1E2E3D3C540E2E3D9C5C5E3404040'  
 DC XL16'404040404040404040404040404040'  
 DC XL8'4040404040404040'  
 JBL07 DC XL4'00B10000'  
 JR071 DC XL4'002A0000'  
 DC XL8'80450000001C0100'  
 DC XL16'007C0099105F001C00000600A8401636'  
 DC XL14'153F1626427F0099105F00000006'  
 JR072 DC XL4'00830000'  
 DC XL2'E411' WAC  
 DC XL16'0000002C00250000000045C1636153F' (AL+AJ)  
 DC XL16'D2E4E2E3C9F0F2F0C3E4E2E3D6D4C5D9'  
 DC XL16'0000000F0F0F0F1F500540000F0F0F0'  
 DC XL16'F1F5D1C5C6C6D9C9C5E2404040404040'  
 DC XL16'C3C8C1D9D3C5E2404040404040F1F2'  
 DC XL16'40C8C1D9C4C3C1E2E3D3C540E2E3D9C5'  
 DC XL16'C5E34040404040404040404040404040'  
 DC XL13'404040404040404040404040404040'  
 JBL08 DC XL4'00B10000'  
 JR081 DC XL4'002A0000'  
 DC XL19'80450000001C0100008C0099105F001C000007'  
 DC XL16'00A5A01636153F1626427F0099105F00'  
 DC XL3'000007'  
 JR082 DC XL4'00830000'  
 DC XL13'E3110000002C00250000000004' WA  
 DC XL16'5C1636153FD2E4E2E3C9F0F2F0C3E4E2' (AL+AJ)  
 DC XL16'E3D6D4C5D90000000F0F0F0F9F00054'  
 DC XL16'0000F0F0F0F9F0C2C5D5E2D6D5404040'  
 DC XL16'4040404040D4C1D9E840C1D5D5C54040'  
 DC XL16'404040F1F440C6C1C9D9C1C3D9C540D3'  
 DC XL16'C1D5C540404040404040404040404040'  
 DC XL16'40404040404040404040404040404040'  
 DC XL2'4040'  
 JBL09 DC XL4'00B10000'  
 JR091 DC XL4'002A0000'  
 DC XL14'80450000001C0100009C0099105F'  
 DC XL16'001C00000800A3001636154F1626427F'  
 DC XL8'0099105F00000008'

---

Figure 15 (Part 6 of 14). DWWSLOG - Creating a Sample of an Archived Log



---

```

JR122 DC XL4'008F0000'
      DC XL9'EF110000002C002000'
      DC XL16'000000045C1636155FD2E4E2E3C9F0F2'
      DC XL16'F0D5C1D4C5D7C1E3C80000000011C4E6'
      DC XL16'E64BC34BE3E24BC3E4E2E3D6D4C5D940'
      DC XL16'404040404040404040404040404040'
      DC XL16'4040404040404040404011C4E6E64BC3'
      DC XL16'4BE3E24BD5C1D4C5D7C1E3C840404040'
      DC XL16'404040404040404040404040404040'
      DC XL16'4040404040404000002000050000005'
      DC XL2'D208'
JR123 DC XL4'008C0000'
      DC XL14'C1110000003C002E00000000045C'
      DC XL16'1636155FD2E4E2E3C9F0F2F0D5C1D4C5'
      DC XL16'D7C1E3C800000000C1C4C1D4E2404040'
      DC XL16'40404040404000540000F0F0F0F1F0C1'
      DC XL16'C4C1D4E24040404040404040E6C9D3'
      DC XL16'D3C9C1D440404040404040F2F740C5'
      DC XL16'D3D4E2C8C1E640D9D6C1C44040404040'
      DC XL16'404040404040404040404040404040'
      DC XL10'40404040404040404040'
JBL13 DC XL4'00660000'
JR131 DC XL4'002A0000'
      DC XL6'80450000001C'
      DC XL16'0100013C0099105F001C00000C0097E0'
      DC XL16'1636156F1626427F0099105F0000000C'
JR132 DC XL4'00380000'
      DC XL16'A2110000002C002E00000000045C1636'
      DC XL16'156FD2E4E2E3C9F0F2F0D5C1D4C5D7C1'
      DC XL16'E3C800000000C1C4C1D4E24040404040'
      DC XL4'40404040'
JBL14 DC XL4'00F90000'
JR141 DC XL4'002A0000'
      DC XL12'80450000001C0100014C0099'
      DC XL16'105F001C00000D0095801636158F1626'
      DC XL10'427F0099105F0000000D'
JR142 DC XL4'003F0000'
      DC XL6'C6110000002C'
      DC XL16'002000000000045C1636156FD2E4E2E3'
      DC XL16'C9F0F2F0D5C1D4C5D7C1E3C800000000'
      DC XL16'05F0F0F0F1F00EC1C4C1D4E240404040'
      DC XL5'4040404040'

```

TIEUP  
(VAR,AL+AJ)

RU  
(AL)

WDO  
(AJ)

WD  
(AL)

---

Figure 15 (Part 8 of 14). DWWSLOG - Creating a Sample of an Archived Log

---

JR143 DC XL4'008C0000'  
 DC XL11'E3110000003C002E000000'  
 DC XL16'00045C1636158FD2E4E2E3C9F0F2F0D5'  
 DC XL16'C1D4C5D7C1E3C800000000C3D6D6D7C5'  
 DC XL16'D94040404040404000540000F0F0F0'  
 DC XL16'F7F1C3D6D6D7C5D940404040404040'  
 DC XL16'C4D6D5C1D3C440404040404040F240'  
 DC XL16'40E2D7D9C9D5C7C6C9C5D3C440D9D6C1'  
 DC XL16'C44040404040404040404040404040'  
 DC XL13'4040404040404040404040404040'  
 JBL15 DC XL4'00BA0000'  
 JR151 DC XL4'002A0000'  
 DC XL3'804500'  
 DC XL16'00001C0100015C0099105F001C00000E'  
 DC XL16'0092801636159F1626427F0099105F00'  
 DC XL3'00000E'  
 JR152 DC XL4'008C0000'  
 DC XL11'E4110000002C002E000000'  
 DC XL16'00045C1636159FD2E4E2E3C9F0F2F0D5'  
 DC XL16'C1D4C5D7C1E3C800000000C3D6D6D7C5'  
 DC XL16'D94040404040404000540000F0F0F0'  
 DC XL16'F7F1C3D6D6D7C5D940404040404040'  
 DC XL16'C4D6D5C1D3C440404040404040F240'  
 DC XL16'40E2D7D9C9D5C7C6C9C5D3C440D9D6C1'  
 DC XL16'C44040404040404040404040404040'  
 DC XL13'4040404040404040404040404040'  
 JBL16 DC XL4'00B10000'  
 JR161 DC XL4'002A0000'  
 DC XL5'8045000000'  
 DC XL16'1C0100016C0099105F001C00000F008F'  
 DC XL17'C01636159F1626427F0099105F0000000F'  
 JR162 DC XL4'00830000'  
 DC XL15'E1110000002C002500000000045C16'  
 DC XL16'36159FD2E4E2E3C9F0F2F0C3E4E2E3D6'  
 DC XL16'D4C5D900000000F0F0F0F4F000540000'  
 DC XL16'F0F0F0F4F0E2D4C9E3C8404040404040'  
 DC XL16'404040C3C8D9C9E2E3D6D7C8C5D94040'  
 DC XL16'4040F5F440C3D9C1E5C5D540E6C1D3D2'  
 DC XL16'404040404040404040404040404040'  
 DC XL16'404040404040404040404040404040'  
 JBL17 DC XL4'005D0000'  
 JR171 DC XL4'002A0000'  
 DC XL16'80450000001C0100017C0099105F001C'  
 DC XL16'000010008D201636160F1626427F0099'  
 DC XL6'105F00000010'

WA  
(AL+AJ)

WAC  
(AL+AJ)

RU  
(AL+AJ)

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Figure 15 (Part 9 of 14). DWWSLOG - Creating a Sample of an Archived Log

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JR172 DC XL4'002F0000'
      DC XL10'A2110000002C00250000'
      DC XL16'0000045C1636160FD2E4E2E3C9F0F2F0'
      DC XL17'C3E4E2E3D6D4C5D90000000F0F0F0F4F0'
      WDO
      (AJ)
JBL18 DC XL4'00EB0000'
JR181 DC XL4'002A0000'
      DC XL15'8045000001C0100018C0099105F00'
      DC XL16'1C000011008AC01636160F1626427F00'
      DC XL7'99105F00000011'
JR182 DC XL4'00310000'
      DC XL9'C6110000002C002000'
      DC XL16'000000045C1636160FD2E4E2E3C9F0F2'
      DC XL16'F0C3E4E2E3D6D4C5D9000000005F0F0'
      DC XL4'F0F4F000'
      W
      (AL)
JR183 DC XL4'008C0000'
      DC XL12'C1110000003C002E00000000'
      DC XL16'045C1636160FD2E4E2E3C9F0F2F0D5C1'
      DC XL16'D4C5D7C1E3C800000000D7C5D9C3C9E5'
      DC XL16'C1D340404040404000540000F0F0F0F2'
      DC XL16'F0D7C5D9C3C9E5C1D34040404040D1'
      DC XL16'4BC24B40404040404040404040F1F5'
      DC XL16'40E6C9D3D3D6E640C3D9C5E2C3C5D5E3'
      DC XL16'404040404040404040404040404040'
      DC XL12'404040404040404040404040'
JBL19 DC XL4'00BA0000'
JR191 DC XL4'002A0000'
      DC XL4'80450000'
      DC XL16'001C0100019C0099105F001C00001200'
      DC XL18'87E01636160F1626427F0099105F00000012'
JR192 DC XL4'008C0000'
      DC XL14'E2110000002C002E00000000045C'
      DC XL16'1636160FD2E4E2E3C9F0F2F0D5C1D4C5'
      DC XL16'D7C1E3C800000000D7C5D9C3C9E5C1D3'
      DC XL16'40404040404000540000F0F0F0F2F0D7'
      DC XL16'C5D9C3C9E5C1D34040404040D1D6C8'
      DC XL16'D540C2D3C1C9D94040404040F1F540E6'
      DC XL16'C9D3D3D6E640C3D9C5E2C3C5D5E34040'
      DC XL16'404040404040404040404040404040'
      DC XL10'40404040404040404040'
JBL20 DC XL4'00B10000'
JR201 DC XL4'002A0000'
      DC XL6'80450000001C'
      DC XL16'0100020C0099105F001C000013008520'
      DC XL16'1636160F1626427F0099105F00000013'

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Figure 15 (Part 10 of 14). DWWSLOG - Creating a Sample of an Archived Log



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JR202 DC XL4'00830000'
      DC XL16'E1110000002C002500000000045C1636'
      DC XL16'160FD2E4E2E3C9F0F2F0C3E4E2E3D6D4'
      DC XL16'C5D900000000F0F0F0F9F000540000F0'
      DC XL16'F0F0F9F0C2C5D5E2D6D54040404040'
      DC XL16'4040D4C1D9E840C1D5D5C54040404040'
      DC XL16'F1F440C6C1C9D9C1C3D9C540D3C1D5C5'
      DC XL16'404040404040404040404040404040'
      DC XL15'404040404040404040404040404040'
JBL21 DC XL4'00B10000'
JR211 DC XL4'002A0000'
      DC XL17'80450000001C0100021C0099105F001C00'
      DC XL16'00140082801636160F1626427F009910'
      DC XL5'5F00000014'
JR212 DC XL4'00830000'
      DC XL11'E2110000002C0025000000'
      DC XL16'00045C1636160FD2E4E2E3C9F0F2F0C3'
      DC XL16'E4E2E3D6D4C5D900000000F0F0F0F9F0'
      DC XL16'00540000F0F0F0F9F0C2C5D5E2D6D540'
      DC XL16'40404040404040D4C1D9E840C1D5D540'
      DC XL16'404040404040F440C6C1C9D9C1C3D9C5'
      DC XL16'40D3C1D5C54040404040404040404040'
      DC XL16'404040404040404040404040404040'
      DC XL4'40404040'
JBL22 DC XL4'00B10000'
JR221 DC XL4'002A0000'
      DC XL12'80450000001C0100022C0099'
      DC XL16'105F001C000015007FE01636160F1626'
      DC XL10'427F0099105F00000015'
JR222 DC XL4'00830000'
      DC XL6'E1110000002C'
      DC XL16'002500000000045C1636160FD2E4E2E3'
      DC XL16'C9F0F2F0C3E4E2E3D6D4C5D900000000'
      DC XL16'F0F0F0F4F900540000F0F0F0F4F9D4C3'
      DC XL16'D2C1E84040404040404040D7C1E4D3'
      DC XL16'40404040404040404040F740C1D3C2'
      DC XL16'C5D9E340E2D8E4C1D9C5404040404040'
      DC XL16'404040404040404040404040404040'
      DC XL9'404040404040404040'
JBL23 DC XL4'005D0000'
JR231 DC XL4'002A0000'
      DC XL7'80450000001C01'
      DC XL16'00023C0099105F001C000016007D4016'
      DC XL15'36161F1626427F0099105F00000016'

```

RU  
(AL+AJ)

WU  
(AL+AJ)

RU  
(AL+AJ)

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Figure 15 (Part 11 of 14). DWWSLOG - Creating a Sample of an Archived Log

---

JR232 DC XL4'002F0000'  
 DC XL17'A2110000002C002500000000045C163616' WDO  
 DC XL16'1FD2E4E2E3C9F0F2F0C3E4E2E3D6D4C5' (AJ)  
 DC XL10'D900000000F0F0F0F4F9'

JBL24 DC XL4'00E20000'

JR241 DC XL4'002A0000'  
 DC XL6'80450000001C'  
 DC XL16'0100024C0099105F001C000017007AE0'  
 DC XL16'1636161F1626427F0099105F00000017'

JR242 DC XL4'00310000'  
 DC XL16'C6110000002C002000000000045C1636' WD  
 DC XL16'161FD2E4E2E3C9F0F2F0C3E4E2E3D6D4' (AL)  
 DC XL13'C5D90000000005F0F0F0F4F900'

JR243 DC XL4'00830000'  
 DC XL3'E31100' WA  
 DC XL16'00003C002500000000045C1636161FD2' (AL+AJ)  
 DC XL16'E4E2E3C9F0F2F0C3E4E2E3D6D4C5D900'  
 DC XL16'000000F0F0F0F7F200540000F0F0F0F7'  
 DC XL16'F2C6D3D6E6C5D9E2404040404040C6'  
 DC XL16'4BE34B404040404040404040F1F140'  
 DC XL16'C1D4C2D3C5E2C9C4C540C3D3D6E2C540'  
 DC XL16'404040404040404040404040404040'  
 DC XL12'4040404040404040404040404040'

JBL25 DC XL4'00B10000'

JR251 DC XL4'002A0000'  
 DC XL4'80450000'  
 DC XL16'001C0100025C0099105F001C00001800'  
 DC XL18'78001636161F1626427F0099105F00000018'

JR252 DC XL4'00830000'  
 DC XL14'E4110000002C002500000000045C' WAC  
 DC XL16'1636161FD2E4E2E3C9F0F2F0C3E4E2E3' (AL+AJ)  
 DC XL16'D6D4C5D900000000F0F0F0F7F2005400'  
 DC XL16'00F0F0F0F7F2C6D3D6E6C5D9E2404040'  
 DC XL16'40404040C64BE34B4040404040404040'  
 DC XL16'4040F1F140C1D4C2D3C5E2C9C4C540C3'  
 DC XL16'D3D6E2C5404040404040404040404040'  
 DC XL17'40404040404040404040404040404040'

JBL26 DC XL4'00B10000'

JR261 DC XL4'002A0000'  
 DC XL15'80450000001C0100026C0099105F00'  
 DC XL16'1C0000190075601636306F1626427F00'  
 DC XL7'99105F00000019'

JR262 DC XL4'00830000'  
 DC XL9'E1110000002C002500' RU  
 DC XL16'000000045C1636305FD2E4E2E3C9F0F2' (AL+AJ)  
 DC XL16'F0C3E4E2E3D6D4C5D900000000F0F0F0'  
 DC XL16'F7F200540000F0F0F0F7F2C6D3D6E6C5'  
 DC XL16'D9E240404040404040C64BE34B404040'

---

Figure 15 (Part 12 of 14). DWWSLOG - Creating a Sample of an Archived Log

---

```

DC XL16'40404040404040F1F140C1D4C2D3C5E2'
DC XL16'C9C4C540C3D3D6E2C5404040404040'
DC XL16'4040404040404040404040404040'
DC XL6'404040404040'
JBL27 DC XL4'00C10000'
JR271 DC XL4'002A0000'
DC XL10'80450000001C0100027C'
DC XL16'0099105F001C00001A0072C01636306F'
DC XL12'1626427F0099105F0000001A'
JR272 DC XL4'00930000'
DC XL4'C8110000'
DC XL16'002C00200000000045C1636306FD2E4'
DC XL16'E2E3C9F0F2F0C3E4E2E3D6D4C5D90000'
DC XL16'000011C4E6E64BC34BE3E24BC3E4E2E3'
DC XL16'D6D4C5D94040404040404040404040'
DC XL16'4040404040404040404040404011'
DC XL16'C4E6E64BC3F3F2F04BC3E4E2E3D6D4C5'
DC XL16'D940404040404040404040404040'
DC XL16'40404040404040404040400000200'
DC XL11'0050000005D20800045C01'
JBL28 DC XL4'00C10000'
JR281 DC XL4'002A0000'
DC XL5'8045000000'
DC XL16'1C0100028C0099105F001C00001B0070'
DC XL17'001636311F1626427F0099105F0000001B'
JR282 DC XL4'00930000'
DC XL15'C8110000002C00200000000045C16'
DC XL16'36310FD2E4E2E3C9F0F2F0D5C1D4C5D7'
DC XL16'C1E3C80000000011C4E6E64BC34BE3E2'
DC XL16'4BC3E4E2E3D6D4C5D9404040404040'
DC XL16'4040404040404040404040404040'
DC XL16'4040404011C4E6E64BC3F3F2F04BD5C1'
DC XL16'D4C5D7C1E3C8404040404040404040'
DC XL16'4040404040404040404040404040'
DC XL16'40000002000050000005D20800045C02'
JBL29 DC XL4'00C10000'
JR291 DC XL4'002A0000'
DC XL16'80450000001C0100029C0099105F001C'
DC XL16'00001C006D401636324F1626427F0099'
DC XL6'105F00000001C'
JR292 DC XL4'00930000'
DC XL10'C8110000002C00200000'
DC XL16'0000045C1636324FD2E4E2E3C9F0F2F0'
DC XL16'404040404040400000000011C4E6E6'
DC XL16'4BC34BE3E24BC3E4E2E3D6D4C5D94040'
DC XL16'4040404040404040404040404040'

```

BOFLGREC  
(AL)

BOFLGREC  
(AL)

BOFLGREC  
(AL)

---

Figure 15 (Part 13 of 14). DWWSLOG - Creating a Sample of an Archived Log

---

```

      DC XL16'404040404040404040004040404040'
      DC XL16'404040404040404040404040404040'
      DC XL16'404040404040404040404040404040'
      DC XL16'404040404040000000000000000000'
      DC XL5'0000000003'
JBL30 DC XL4'006A0000'
JR301 DC XL4'002A0000'
      DC XL11'80450000001C0100030C00'
      DC XL16'99105F001C00001D006A801636328F16'
      DC XL11'26427F0099105F0000001D'
JR302 DC XL4'001E0000'
      DC XL5'F159000000'
      DC XL16'2C001400000000045C1636328FD2E4E2'
      DC XL5'E3C9F0F2F0'
JR303 DC XL4'001E0000'
      DC XL11'F4590000003C0014000000'
      DC XL15'00045C1636328FD2E4E2E3C9F0F2F0'
JRTOP DC XL4'00000000'
      END
/*
// EXEC LNKEDT
// DLBL VSESPUC,'VSESP.USER.CATALOG',,VSAM
// DLBL OUTLOG,'DWW.LOGTS',60,VSAM,RECORDS=300,CAT=VSESPUC,      C
      RECSIZE=1024,DISP=(,KEEP)
      EXEC
/*
/ &

```

---

Figure 15 (Part 14 of 14). DWWSLOG - Creating a Sample of an Archived Log

---

## 7.3 Creating a Sample of a VSAM Sphere

Use the DWWSBASE job to create a sample of a VSAM sphere. The DDWSBASE job resides in the CICSVR/VSE installation sublibrary with name DWWSBASE.Z. Store the job as a member in your VSE/ICCF library using the LIBRP macro and submit it for execution. The following figure shows the DWWSBASE job.

```

* $$ JOB JNM=DWWSBASE,CLASS=Y
* $$ LST CLASS=D
/. I *****/
/. I $MAC(DWWSBASE) COMP(5686-011): */
/. I *****/
// JOB DWWSBASE
* -----*
* STEP0: DELETE BASE SPHERE *
* -----*
// DLBL IJSYSUC,'VSESP.USER.CATALOG',,VSAM
// DLBL VSESPUC,'VSESP.USER.CATALOG',,VSAM
// EXEC IDCAMS,SIZE=AUTO
DELETE DWW.CICSVR12.NAMES -
        ALTERNATEINDEX -
        CATALOG(VSESP.USER.CATALOG)
DELETE DWW.CICSVR12.CUSTPATH -
        PATH -
        CATALOG(VSESP.USER.CATALOG)
DELETE DWW.CICSVR12.CUSTOMER -
        CLUSTER -
        CATALOG(VSESP.USER.CATALOG)

SET MAXCC=0
/*
* -----*
* STEP1: DEFINE BASE - CLUSTER *
* -----*
// EXEC IDCAMS,SIZE=AUTO
DEFINE CLUSTER(
        NAME(DWW.CICSVR12.CUSTOMER) -
        RECORDS(25 0) -
        SHR(2) -
        INDEXED -
        ) -
DATA(
        NAME(DWW.CICSVR12.CUSTOMER.D) -
        VOL(SYSWK1) -
        RECSZ(60 80) -
        CISZ(512) -
        FSPC(0 0) -
        KEYS(5 0) /* NAMES */ -
        ) -
INDEX(
        NAME(DWW.CICSVR12.CUSTOMER.I) -
        VOL(SYSWK1) -
        CISZ(512) -
        ) CATALOG(VSESP.USER.CATALOG)

```

Figure 16 (Part 1 of 3). DWWSBASE - Creating a Sample of a VSAM Sphere

```

DEFINE PATH(
    NAME(DWW.CICSVR12.CUSTPATH) -
    PATHENTRY(DWW.CICSVR12.CUSTOMER) -
    UPDATE -
    ) CATALOG(VSESP.USER.CATALOG)

/*
* -----*
* STEP2: 'RESTORE' - LOAD THE DATASET *
* -----*
// DLBL OUTFILE,'DWW.CICSVR12.CUSTOMER',,VSAM,CAT=VSESPUC
// EXEC IDCAMS,SIZE=AUTO
REPRO -
    INFILE(SYSIPT) -
    OUTFILE(OUTFILE)
00010ADAMS WILLIAM 27 ELMSHAW ROAD
00020PERCIVAL J.B. 15 WILLOW CRESCENT
00030SMITH ALFRED 36 BRODIE AVENUE
00040SMITH CHRISTOPHER 54 CRAVEN WALK
/*
* -----*
* STEP3: DEFINE AN ALTERNATE INDEX *
* -----*
// EXEC IDCAMS,SIZE=AUTO
DEFINE ALTERNATEINDEX(
    NAME(DWW.CICSVR12.NAMES) -
    RELATE(DWW.CICSVR12.CUSTOMER) -
    VOL(SYSWK1) -
    TRACKS(2 2) -
    SHR(2) -
    KEYS(14 5) /* CUSTOMER */ -
    NONUNIQUEKEY -
    UPGRADE -
    )
DATA(
    NAME(DWW.CICSVR12.NAMES.D) -
    RECSZ(24 250) -
    CISZ(512) -
    FSPC(0 0) -
    )
INDEX(
    NAME(DWW.CICSVR12.NAMES.I) -
    CISZ(512) -
    ) CATALOG(VSESP.USER.CATALOG)
DEFINE PATH(
    NAME(DWW.CICSVR12.NAMEPATH) -
    PATHENTRY(DWW.CICSVR12.NAMES) -
    UPDATE -
    ) CATALOG(VSESP.USER.CATALOG)

/*

```

Figure 16 (Part 2 of 3). DWWSBASE - Creating a Sample of a VSAM Sphere

---

```

* -----*
* STEP4: BUILD THE INDEX                               *
* -----*
// DLBL IJSYSUC,'VSESP.USER.CATALOG',,VSAM
// DLBL IN1,'DWW.CICSVR12.CUSTOMER',,VSAM,CAT=VSESPUC
// DLBL OUT,'DWW.CICSVR12.NAMES',,VSAM,CAT=VSESPUC
// EXEC IDCAMS,SIZE=AUTO
  BLDINDEX
      -
      INDATASET(DWW.CICSVR12.CUSTOMER) -
      OUTDATASET(DWW.CICSVR12.NAMES)
/*
* -----*
* STEP5: PRINT THE DATASET BEFORE UPDATE             *
* -----*
// DLBL IN1,'DWW.CICSVR12.CUSTOMER',,VSAM,CAT=VSESPUC
// EXEC IDCAMS,SIZE=AUTO
  PRINT  INFILE(IN1)
/*
/&
* $$ E0J

```

---

Figure 16 (Part 3 of 3). DWWSBASE - Creating a Sample of a VSAM Sphere



---

## 7.4 Running CICSVR/VSE

Use the DWWSAMPL job to invoke the CICSVR/VSE functions directly. The DDWSAMPL job resides in the CICSVR/VSE installation sublibrary with name DWWSAMPL.Z. Store the job as a member in your VSE/ICCF library using the LIBRP macro, edit the LIBDEF job control statement, and submit it for execution. It performs archive utility, forward recovery, and backout. The following figure shows the DWWSAMPL job.

---

```
* $$ JOB JNM=DWWSAMPL,CLASS=8
* $$ LST CLASS=D
/. I *****/
/. I $MAC(DWWSAMPL) COMP(5686-011): */
/. I *****/
// JOB DWWSAMPL
// LIBDEF PHASE,SEARCH=(CICSVR.CVR120)
* -----*
* STEP1: PROVIDE LOG REPORT WITH ARCHIVE UTILITY *
* -----*
// ASSGN SYS003,SYSLST
// ASSGN SYS004,SYSLST
// DLBL VSESPUC,'VSESP.USER.CATALOG',,VSAM
// DLBL LOG1,'DWW.LOGTS',,VSAM,CAT=VSESPUC,DISP=(OLD,KEEP)
// EXEC DWWAR,SIZE=4024K
    ALLOCATE LOG(LOG1)
    ARCHIVE COPIES(0)
/*
* -----*
* STEP2: RECOVER DWW.CICSVR12.CUSTOMER BACKUP *
* -----*
// ASSGN SYS003,SYSLST
// ASSGN SYS004,SYSLST
// DLBL VSESPUC,'VSESP.USER.CATALOG',,VSAM
// DLBL SPH1,'DWW.CICSVR12.CUSTOMER',,VSAM,CAT=VSESPUC
// DLBL LOG1,'DWW.LOGTS',,VSAM,CAT=VSESPUC,DISP=(OLD,KEEP)
// EXEC DWWCO,SIZE=4024K
    ALLOCATE LOG(LOG1)
    ALLOCATE SPH(SPH1)
    RECOVER NEWSPHERE(DWW.CICSVR12.CUSTOMER) -
        SPHERE(DWW.C.TS.CUSTOMER)
/*
* -----*
* STEP3: PRINT THE DATASET AFTER RECOVERY *
* -----*
// DLBL IN1,'DWW.CICSVR12.CUSTOMER',,VSAM,CAT=VSESPUC
// EXEC IDCAMS,SIZE=AUTO
    PRINT INFILE(IN1)
/*
```

---

Figure 17 (Part 1 of 2). DWWSAMPL - Running CICSVR/VSE

---

```

* -----*
* STEP4: BACKOUT DWW.CICSVR12.CUSTOMER BACKUP      *
* -----*
// ASSGN SYS003,SYSLST
// ASSGN SYS004,SYSLST
// DLBL VSESPUC,'VSESP.USER.CATALOG',,VSAM
// DLBL SPH1,'DWW.CICSVR12.CUSTOMER',,VSAM,CAT=VSESPUC
// DLBL LOG1,'DWW.LOGTS',,VSAM,CAT=VSESPUC,DISP=(OLD,KEEP)
// EXEC DWWCO,SIZE=4024K
    ALLOCATE LOG(LOG1)
    ALLOCATE SPH(SPH1)
    BACKOUT NEWSPHERE(DWW.CICSVR12.CUSTOMER) -
        SPHERE(DWW.C.TS.CUSTOMER)
/*
* -----*
* STEP5: PRINT THE DATASET AFTER BACKOUT          *
* -----*
// DLBL IN1,'DWW.CICSVR12.CUSTOMER',,VSAM,CAT=VSESPUC
// EXEC IDCAMS,SIZE=AUTO
    PRINT INFILE(IN1)
/*
/&
* $$ E0J

```

---

Figure 17 (Part 2 of 2). DWWSAMPL - Running CICSVR/VSE

---

## 7.5 Verifying the Data

Check the output of the DWWSBASE and the DWWSAMPL jobs. The following figures show the contents of VSAM data set before update, after forward recovery, and after backout.

---

```
LISTING OF DATA SET -DWW.CICSVR12.CUSTOMER
KEY OF RECORD -
000000  F0F0F0F1 F0          *00010          *

RECORD -
000000  F0F0F0F1 . . .      *00010ADAMS      WILLIAM      *
000020  4040F2F7 . . .      * 27 ELMSHAW ROAD *
000040  40404040 . . .      *                *

KEY OF RECORD -
000000  F0F0F0F2 F0          *00020          *

RECORD -
000000  F0F0F0F2 . . .      *00020PERCIVAL   J.B.         *
000020  4040F1F5 . . .      * 15 WILLOW CRESCENT *
000040  40404040 . . .      *                *

KEY OF RECORD -
000000  F0F0F0F3 F0          *00030          *

RECORD -
000000  F0F0F0F3 . . .      *00030SMITH      ALFRED       *
000020  4040F3F6 . . .      * 36 BRODIE AVENUE *
000040  40404040 . . .      *      03200000    *

KEY OF RECORD -
000000  F0F0F0F4 F0          *00040          *

RECORD -
000000  F0F0F0F4 . . .      *00040SMITH      CHRISTOPHER  *
000020  4040F5F4 . . .      * 54 CRAVEN WALK  *
000040  40404040 . . .      *                *

IDC0005I NUMBER OF RECORDS PROCESSED WAS 4
```

---

*Figure 18. Contents of VSAM Data Set Before Update*

---

LISTING OF DATA SET -DWW.CICSVR12.CUSTOMER

KEY OF RECORD -

000000 F0F0F0F1 F5                   \*00015                                   \*

RECORD -

000000 F0F0F0F1 . . .               \*00015JEFFRIES           CHARLES       \*  
000020 40F1F240 . . .               \* 12 HARDCASTLE STREET       \*  
000040 40404040 . . .               \*                                   \*

KEY OF RECORD -

000000 F0F0F0F2 F0                   \*00020                                   \*

RECORD -

000000 F0F0F0F2 . . .               \*00020PERCIVAL           JOHN BLAIR   \*  
000020 4040F1F5 . . .               \* 15 WILLOW CRESCENT       \*  
000040 40404040 . . .               \*                                   \*

KEY OF RECORD -

000000 F0F0F0F3 F0                   \*00030                                   \*

RECORD -

000000 F0F0F0F3 . . .               \*00030SMITH               ALFRED       \*  
000020 4040F3F6 . . .               \* 36 BRODIE AVENUE           \*  
000040 40404040 . . .               \*               03200000       \*

KEY OF RECORD -

000000 F0F0F0F7 F1                   \*00071                                   \*

RECORD -

000000 F0F0F0F7 . . .               \*00071COOPER             DONALD       \*  
000020 40F24040 . . .               \* 2 SPRINGFIELD ROAD       \*  
000040 40404040 . . .               \*                                   \*

KEY OF RECORD -

000000 F0F0F0F7 F2                   \*00072                                   \*

RECORD -

000000 F0F0F0F7 . . .               \*00072FLOWERS            F.T.         \*  
000020 40F1F140 . . .               \* 11 AMBLESIDE CLOSE       \*  
000040 40404040 . . .               \*                                   \*

KEY OF RECORD -

000000 F0F0F0F9 F0                   \*00090                                   \*

---

Figure 19 (Part 1 of 2). Contents of VSAM Data Set After Forward Recovery

---

LISTING OF DATA SET -DWW.CICSVR12.CUSTOMER  
 RECORD -  
 000000 F0F0F0F9 . . . \*00090BENSON MARY ANN \*  
 000020 4040F440 . . . \* 4 FAIRACRE LANE \*  
 000040 40404040 . . . \* \*

IDC0005I NUMBER OF RECORDS PROCESSED WAS 6

---

*Figure 19 (Part 2 of 2). Contents of VSAM Data Set After Forward Recovery*

---

LISTING OF DATA SET -DWW.CICSVR12.CUSTOMER  
 KEY OF RECORD -  
 000000 F0F0F0F1 F0 \*00010 \*

RECORD -  
 000000 F0F0F0F1 . . . \*00010ADAMS WILLIAM \*  
 000020 4040F2F7 . . . \* 27 ELMASHAW ROAD \*  
 000040 40404040 . . . \* \*

KEY OF RECORD -  
 000000 F0F0F0F2 F0 \*00020 \*

RECORD -  
 000000 F0F0F0F2 . . . \*00020PERCIVAL J.B. \*  
 000020 4040F1F5 . . . \* 15 WILLOW CRESCENT \*  
 000040 40404040 . . . \* \*

KEY OF RECORD -  
 000000 F0F0F0F3 F0 \*00030 \*

RECORD -  
 000000 F0F0F0F3 . . . \*00030SMITH ALFRED \*  
 000020 4040F3F6 . . . \* 36 BRODIE AVENUE \*  
 000040 40404040 . . . \* 03200000 \*

KEY OF RECORD -  
 000000 F0F0F0F4 F0 \*00040 \*

RECORD -  
 000000 F0F0F0F4 . . . \*00040SMITH CHRISTOPHER \*  
 000020 4040F5F4 . . . \* 54 CRAVEN WALK \*  
 000040 40404040 . . . \* \*

IDC0005I NUMBER OF RECORDS PROCESSED WAS 4

---

*Figure 20. Contents of VSAM Data Set After Backout*

# Reader's Comments

## Program Directory for IBM CICS VSAM RECOVERY VSE/ESA (CICSVR/VSE) Version 1 Release 2 Modification 0

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very satisfied	<----->				very dissatisfied	not applicable
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	Satisfaction					
Ease of product installation	1	2	3	4	5	N
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Installation Verification Programs	1	2	3	4	5	N
Time to install the product	1	2	3	4	5	N
Readability and organization of program directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Ease of getting the system into production after installation	1	2	3	4	5	N

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